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ABŪ ḤĀMID AL-ĠAZĀLĪ

The Intentions of the Philosophers
[*Maqāṣid al-falāsifa*]

Introduction, Translation, and Commentary

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ولم نستفد من بحثنا طول دهرنا
وكم قد رأينا من رجال ودولة
سوى أن جمعنا فيه 'قلت وقالوا'
فبادو جميعاً مسرعين وزالوا
وكم من جبال قد علت شرفاتها
وعال فزالت والجبال جبال

Faḥr al-Dīn al-Rāzī
apud Ibn Abī Uṣaybi'a, 'Uyūn al-anbā'

Ἔχει δ' ἐκάτερα χάριν. Τῶν μὲν γὰρ εἰ καὶ κατὰ μικρὸν ἐφαπτόμεθα, ὅμως διὰ τὴν τιμιότητα τοῦ γνωρίζειν ἥδιον ἢ τὰ παρ' ἡμῖν ἅπαντα, ὡσπερ καὶ τῶν ἐρωμένων τὸ τυχόν καὶ μικρὸν μόνιον κατιδεῖν ἥδιόν ἐστιν ἢ πολλὰ ἕτερα καὶ μεγάλα δι' ἀκριβείας ἰδεῖν. τὰ δὲ διὰ τὸ μάλλον καὶ πλείω γνωρίζειν αὐτῶν λαμβάνει τὴν τῆς ἐπιστήμης ὑπεροχήν, ἔτι δὲ διὰ τὸ πλησιαιτέρα ἡμῶν εἶναι καὶ τῆς φύσεως οἰκειότερα ἀντικαταλλάττεται τι πρὸς τὴν περὶ τὰ θεῖα φιλοσοφίαν.

Aristotle, *De partibus animalium* 644^b31-645^a4

le ombre che si nascondono
tra le parole, imprevedibili,
mai palesate, mai scritte

Eugenio Montale, *Botta e risposta III*

VOLUME 1

GENERAL PREFACE

THIS DISSERTATION offers the first complete English translation of Abū Ḥāmid Muḥammad ibn Muḥammad al-Ġazālī's (d. 1111) explicitly philosophical *summa*, the *Intentions of the Philosophers* [*Maqāṣid al-falāsifa*]. An encyclopaedia of Peripatetic philosophy in the version of Avicenna (Ibn Sīnā, d. 1037), the *Intentions of the Philosophers* covers in three main parts and fifteen total treatises the *Logic*, the *Metaphysics*, and the *Physics* of the Arabic Aristotelizing *falāsifa*. The Translation, conducted on the basis of the Arabic text edited by Sulaymān Dunyā, which was emended when necessary, is preceded by a large doctrinal and historical Introduction, which aims to situate the work in its context, shedding new light on its chronological collocation, its structure, and its several contexts of reception. In its first part, the Introduction considers at length the specific problems of al-Ġazālī's peculiar stance vis-à-vis philosophy, by addressing the issue of the deviations from Avicenna's alleged model that can be detected in the work, and by studying in detail the modality of the theologian's interplay with *falsafa* from the vantage point of a declaredly philosophical work of his. In a second part, the Introduction describes the history of the reception of the text of the *MF* in as diverse linguistic and cultural milieus as the Arabic, Latin, Hebrew, and Syriac ones, as well as in various vernacular contexts. In each of these different environments, al-Ġazālī's *summa* was read and studied with great care, and was overall held in remarkable consideration as a viable primer to Arabic Peripatetism, especially in Avicenna's version of it. This outstanding fortune in subsequent authors is a witness of the theoretical quality of the work, and represents in itself an irreplaceable historical document on the itineraries of Aristotelian philosophical culture from its Greek primeval origin, through the Arabic mediation, and up to its many different destinations in both the East and the West. The *Intentions* thus reveals itself as an extraordinary document of that huge cross-linguistic and cross-cultural movement of transmission of intellectual heritage which took place in the time-period of the European Middle Ages, and which still demonstrates its astonishing vitality many centuries afterwards. Besides the Introduction and the Translation, the thesis offers a running lemmatic Commentary on the entire text of the *summa*. The Commentary addresses philological, linguistic, philosophical, more generally doctrinal, as well as historical issues. As such, it aims to offer a tool not only for the better comprehension of the text of the *Intentions*, but also more generally for the academic study of Arabic philosophy, by making the specifics of the role of handbook played in history by al-Ġazālī's work more clear and accessible to contemporary readers. By its nature, the genre of the Commentary ends up reducing the holistic vitality of a work to an analytical dimension, in which individual problems are unpacked and discussed one by one. I feel however important to stress in these prefatory

remarks that one of the most relevant features of al-Ġazālī's work is precisely its synthetical presentation of an entire system of philosophy, in the wake of Avicenna's groundbreaking invention of the literary genre of the philosophical *summa*. With a subject-matter extending from the basic logic of expressions and propositions up to the intricacies of philosophical theology and cosmology, from syllogistics to meteorology, and from the Aristotelian categories to psychology, the interpretation of dreams and Islamic prophetology, the *Intentions* is able to offer in a nutshell a reliable glimpse of Avicenna's articulate system of thought, with the added sparkles and nuances given by the lively interaction between philosophy and theology, reason and revelation, at all levels of the text. A work on Avicenna written by his self-styled starkest adversary, a *summa* of philosophy penned by a Muslim theologian, and a rational exposition of a system of the world innervated from within by the tensions of revealed forms of knowledge, the *Intentions* is also a singular document of the intellectual, and even concretely existential, experience of al-Ġazālī, one of the most outstanding figures of Arabic-Islamic thought throughout its centuries-long history.

INTRODUCTION

THE TEXT AND ITS CONTEXT

The *Maqāṣid al-falāsifa* (henceforth *MF*) is an Arabic philosophical encyclopaedia, which covers in a synthetical, yet comprehensive and compelling way the three main philosophical sciences of Aristotelian tradition, *i.e.* logic, metaphysics, and physics. Its originality lies not so much in the doctrines it teaches – although there are, as we shall see, significant instances of conceptual maturity in al-Ġazālī’s thought as it is expressed in the text –, but more so in the historical and cultural circumstances of its drafting, as well as in its widespread, cross-cultural and cross-linguistical reception history. In what follows, I shall describe in detail such circumstances, explaining the role of the *MF* first as a meditated translation of Avicenna’s Persian *summa* of philosophy – the *Book of Science for ‘Alā’ ad-Dawlā* [*Dānešnāme-ye ‘Alā’ī, DN*] –, then as the first recognizable text of the genre that Frank Griffel recently labelled *ḥikma*, and finally as a useful textbook of philosophy, a handy companion and primer to Avicennan doctrines and thought.

This first main section of the *Introduction* will present the text in both its format and its content. First of all I will discuss the deceptively simple title of the work, with its possible renditions and their implications (§1.1). I will later address the thorny issue of the possible dating of the *MF*, in its relation with the publication of the refutative work *The Incoherence of the Philosophers* [*Tahāfut al-falāsifa, TF*] (§1.2). Afterwards, it will be necessary to assess, as a preliminary tool for any further discussion, the role of Avicenna’s *DN* as the main known source for the text of the *MF* (§1.3). Given this textual basis, crucial for the contents as well as for the articulation of al-Ġazālī’s text, I will discuss at length the atypical structure of the *MF*, directly derived from Avicenna’s Persian *summa* but rich in variations with respect to it (§1.4), and I will then present in some detail the philosophical contents of the work (§1.5). I will then provide a list of all the explicit quotations – both nominal and indefinite – that are to be found in the writing, stressing the similarities and the differences with respect to the exposition of philosophy contained in the *DN* (§1.6).

Against the background of this very general presentation, a second ideal part of this first section of the *Introduction* will consider the features that demarcate the *MF* from its Avicennan source. Such changes can be broadly summed up as consisting in a radical, yet curiously nuanced difference in understanding the relationship between reason and revelation, however still within the boundaries of the philosophical enterprise. A closer look at specific issues will be needed in order to better understand these Ġazālīan variations on Avicenna’s philosophical theme. Precisely in describing these phenomena, some fundamental elements of doctrinal originality, although concealed and sometimes disguised, will be unearthed. In particular, these regards issues of lexicon and terminology (§1.7), as well as the examples added by al-Ġazālī with respect to Avicenna’s text (§1.8). After this ample treatment, I will discuss the quotations of revealed authority – the Qur’ān, the *ḥadīth* tradition, and the concept of revealed law [*šar’*] – with which al-Ġazālī sometimes validates the philosophical authority of his source, and the theoretical reasonings he is time by time

illustrating (§1.9). Building on all this material, it will be possible to reassess in conclusion the *MF*'s role as the first text of the genre of *ḥikma* (§1.10), as recently suggested in scholarship.

1.1. Title

The Arabic title *Maqāṣid al-falāsifa* is a deceptively simple one¹. While the grammatical structure involved is a typical *idāfa* construction, with *maqāṣid* as *nomen regens* and *falāsifa* as *nomen rectum*, which as such does not posit any particular problem of translation, the first word appearing in the title requires a certain reflection to be properly grasped. Indeed, the actual meaning of the name of al-Ġazālī's book has long been – at least implicitly – a matter of debate among scholars, who have translated it in a surprisingly large number of different ways. More recently, thanks to a fine *mise à point* by Ayman Shihadeh, scholarly reflection on the best rendition of the title of al-Ġazālī's most philosophical work left the realm of merely concurring alternative translations and became more explicit².

The necessity to explain, or in some cases to paraphrase, the rendition of the title in a modern Western language was however vividly present since the beginning of modern scholarly study on al-Ġazālī's *MF*, as both Duncan Macdonald's and Dominique Salman's pioneering contributions on the work – respectively on its Arabic original, in English, and on its Latin translation, in French – clearly indicate. While Salman's attention to the inherent difficulty in the translation of the title only expresses itself in his suggestion of three different alternatives for it (on which we shall return in what follows)³, Macdonald has for the title an interesting lexical explanation, which tries to establish the precise semantics of the word *maqāṣid* as a tool to highlight an aspect of content, *i.e.* the uncommitted account of the theses of the philosophers brought about by al-Ġazālī:

¹ For some uncertainties on the definitive form of the title in the Arabic tradition cf. BOUYGES 1959: 23 fn. 5, who cites the forms *al-maqāṣid fi bayān i'tiqād al-awā'il wa-huwa maqāṣid al-falāsifa* (reported by al-Subkī) and *al-maqāṣid fi bayān i'tiqād al-awā'il wa-huwa i'tiqād al-falāsifa* (reported by al-Qabbānī, who later mentions *Maqāṣid al-falāsifa* as the title of a different work). MS Vatican City, Biblioteca Apostolica Vaticana, Ar. 357 – recognized by BOUYGES 1927: xvi as a copy of the *MF*: «ce n'est pas un Tahāfot...c'est un Maqāṣid al-Falāsifat (même *incipit* que dans le ms arabe de Berlin n° 5059 d'Ahlwardt)», titles the work *al-Maqāṣid fi 'ilm al-kalām* (the same title of al-Taftāzānī's treatise on theology, for which cf. *infra* in this section). On the basis of Bouyges' observations, as well as on the alleged similarity of the Latin title *Summa theoricæ philosophiæ* with the title of Avicenna's Persian *summa Dānešnāme-ye 'Alā'ī* (on which see *infra*, §1.3. *A Translation from Persian*), JANSSENS 2001: 13 and fn. 36 even advanced the hypothesis that *Maqāṣid al-falāsifa* might not be the original title of the work (and that, presumably, it was changed when al-Ġazālī decided to readapt the *MF* as preparatory to his *Tahāfut al-falāsifa*, in keeping with Janssens' own reconstruction of the relative chronology of the two works). For arguments against Janssens' overall reconstruction, and thus implicitly also directed against his hypotheses concerning the title, cf. *infra*, §1.2. *Chronological and Doctrinal Collocation*.

² SHIHADÉH 2011: 90. Cf. *infra* in this section for further discussion.

³ SALMAN 1935-1936: 103 fn. 1: «Les Tendances (ou les Vues Essentielles, ou les Objectifs) des Falâçifa, auquel correspond l'Effondrement des Falâçifa. La grammaire exigerait donc que l'on dise au pluriel *les Maqâçid*: il a cependant semblé préférable de maintenir au singulier un titre dont rien n'indique, pour des oreilles françaises, qu'il exprime un pluriel». The problem of singular or plural does not arise when writing in English, since grammar prescribes verbal agreement in the singular for titles of single entities, even if they are morphologically plural. ZEDLER 1961: 5: appears to be translating almost literally Salman's three alternatives when she gives as renditions of *Maqāṣid al-falāsifa* the English «Tendencies, Intentions, or Essential Views of the Philosophers». Cf. *infra* in Table 1.

For the book most emphatically is not Al-Ghazzālī's Metaphysics but is an objective statement by him of what the Neoplatonic-Aristotelian philosophers of Islam meant in their books. The word "meanings" in its title is used much in the same way as in the title of Charles Kingsley's pamphlet "What, then, does Dr. Newman mean?"⁴. This is what the philosophers meant. A *maqṣad* is what is intended or meant. *Maqṣad al-kalām* is "the intended sense of the saying." The word is thus a synonym of *ma'nā* in the sense "meaning" or "idea".⁵

Macdonald's explanation, which appears to be based on the corresponding lexicographical entry by Edward Lane⁶, has been finely contested by Shihadeh on the grounds that it unduly extends the meaning of a specific and admittedly common – but by no means exclusive – collocation of *maqṣad* as *nomen regens* of *al-kalām* to the general meaning of the word *maqṣad* in itself, as if it should always convey the subjective idea of 'meaning' or 'intention', rather than the more neutral one of 'objective', 'destination'⁷.

As can be seen from Table 1 below, the rendition «meanings»⁸ for *maqāṣid* was adopted after Macdonald by the student of Jewish philosophy George Chertoff, by the leading scholar of Latin Aristotelianism Charles Lohr, as well as more recently by Robert Podkoński and Henrik Lagerlund⁹. A similar choice is represented by Dimitri Gutas' original,

⁴ The reference is to the controversy between the Anglican priest Charles Kingsley (1819-1875) and John Henry Newman (1801-1890, later cardinal of the Catholic Church, canonised as saint in 2019 by Pope Francis), following the latter's conversion to the Catholic faith. In particular, Kingsley had criticised Newman for his alleged lack of appreciation for truth as a Christian virtue, which had elicited Newman's response with the publication *Mr Kingsley and Dr Newman: a Correspondence on the Question whether Dr Newman teaches that Truth is no Virtue* (1864). In the same year, Kingsley had answered with the pamphlet recalled by Macdonald in this passage. The entire debate also prompted Newman to publish his religious best-selling autobiography *Apologia pro vita sua*. For an analysis of the Kingsley-Newman controversy see ROBERTSON 1954. For better understanding the reasons of this surprising reference on Macdonald's part, it is important to stress his own militant aversion to scholasticism, as expressed for instance in MACDONALD 1899: 122: «What happened in Europe when the yoke of medieval scholasticism was broken, what is happening with us now, happened in Islām under his [*i.e.* of al-Ġazālī] leadership». This statement is interpreted by GARDEN 2014^b: 68 as a «specifically Protestant» feature of Macdonald's intellectual stance. While public reaction to the Kingsley-Newman controversy demonstrably sided with Newman rather than with the Anglican Kingsley, Macdonald's implicit comparison of al-Ġazālī with the latter (and conversely of Newman with the *falāsifa* whose «meanings» are to be reported) should thus not sound as critical as it might have been if it came from a differently oriented scholar. It is curious, at any rate, to remark how often in history al-Ġazālī's intellectual figure was used as a touchstone for comparison with Christian scholars, or even as a polemic tool in specifically Christian debates: cf. on this the well-balanced observations by GARDEN 2014^b: 68, who quotes to this effect studies such as FIELD 1909 (a translation of al-Ġazālī's *Al-Munqid min al-ḍalāl* explicitly titled after Augustine's *Confessions*), ZWEMER 1920, ASÍN PALACIOS 1934-1940, WATT 1964, POGGI 1967, MCCARTHY 1980. To this already long list, composed of both Protestant (Zwemer, Watt) and Catholic clergymen, one might also add FRICK 1919, explicitly Augustinian in spirit although Ġazālīan in topic.

⁵ MACDONALD 1936: .

⁶ See LANE: 2532^c: s.v. *maqṣad al-kalām*: «مَقْصَدُ الْكَلَامِ means the intended sense of the saying; the meaning thereof: (see مَقْصُودٌ in art. مَعْنَى being an inf. n. used as in the sense of the pass. part. n. of its verb, i. e. in the sense of مَقْصُودٌ; like as is generally said of its syn. مَعْنَى, of which مَقْصُودٌ is one of the explanations: hence it has a pl. مَقْاصِدُ [...]) And in like manner مَقْصَدٌ signifies also A thing aimed at, intended, or purposed; an object of aim or pursuit».

⁷ Indeed, Lane seems in part to allow for such an extension, although Shihadeh's arguments *contra* appear conclusive: cf. *infra* in the text for further discussion.

⁸ The German *Meinungen* employed as a translation of the title in LOHR 2005 also appears as a rendition of Macdonald's original 'meanings'.

⁹ Actually, Lagerlund erroneously translates the first word of the title in the singular, giving the wrong rendition

though periphrastic, translation *What the Philosophers Mean*¹⁰, which seems indeed indebted to Macdonald's explanation (and even more so to the latter's idiosyncratic reference to Kingsley's booklet against Newman). After Macdonald, the most popular English translations of the title have however certainly been (i) *The Aims of the Philosophers* (adopted by Arabists such as Michael Marmura and Wilferd Madelung, as well as by scholars of medieval Latin thought such as Ann Giletti and Thomas Hanley), and (ii) *The Intentions of the Philosophers* (the choice made by a great many scholars of medieval Arabic and Jewish culture, such as the 19th century codicologist Adolf Neubauer, as well as the contemporary leading historians Alfred Ivry, Y. Tzvi Langermann, Alexander Treiger, Frank Griffel in his 2009 monograph on al-Ġazālī, and many others).

The rendition *Intentions of the Philosophers* deserves specific attention, because it clearly corresponds to, and likely derives from, the Latin translation of the title – *De philosophorum intentionibus* – as presented in the sole known witness of the Latin prologue of the *MF*, ms. Paris, BNF lat. 16096, as edited by Salman¹¹. The same word is also adopted as the equivalent of *maqāṣid* in other languages: French *intentions* was chosen by Georges Vajda¹²; Italian *intenzioni* appears in Amos Bertolacci's articles on the reprises of Avicenna by Albert the Great (as well as in entries on al-Ġazālī in the authoritative Treccani encyclopaedia); Spanish *intenciones*, finally, was prominently chosen as the best rendition of the title by Manuel Alonso Alonso, in his landmarking translation – the sole integral one in any modern Western language up to this dissertation – of the *MF*¹³. To the same category there probably pertains also the German rendition *Absichten*, often used in recent German studies (for instance those by Frederek Musall and Khalid El-Abdaoui), which would normally translate to 'intentions' / 'intenzioni' / 'intentions' in English, Italian, and French. Most notably, the rendition *Absichten* has also been used for *maqāṣid* in the entry on al-Ġazālī prepared by Ulrich Rudolph for the new, prestigious edition of the *Grundriss der Geschichte der Philosophie* initiated by Friedrich Ueberweg¹⁴.

At first glance, other 'teleological' translations of the title attested in scholarship also seem to be perfectly in keeping with the rendition *intentions*, thus making it by far the most common way of rendering the title in Western languages. To this teleological category there would indeed also belong translations such as the widespread, and already mentioned, English *aims*, the popular French rendition *tendances* (Salomon Munk, Bernard Carra de Vaux, Dominique Salman), as well as the less commonly used *buts* (Damien Travelletti) and

«The Meaning of the Philosophers» (LAGERLUND 2010: 193).

¹⁰ GUTAS 1993.

¹¹ SALMAN 1935-1936: 125: «Incipit liber Algazelii quem intitulavit *De philosophorum intentionibus* et primo de Logica» (rubricated). As noticed by SALMAN: *ivi* fn. 1, the same title is repeated once more in black ink in the lower margin of the page. Cf. also SIGNORI 2020^b: 162-163.

¹² VAJDA 1977.

¹³ The Turkish translation of the *MF* published in 2002 by Cemalettin Erdemci, with preface by Sulaymān Dunyā, bears the title *Felsefenin Temel İlkeleri*, which roughly translates to *The Basic Principles of Philosophy*. This title curiously repeats the Turkish rendition of the best-known book by the French Marxist philosopher (of Hungarian Jewish origin) Georges Politzer, the *Principes élémentaires de philosophie*, published posthumously in 1946 on the basis of notes taken by a student at a course taught by the author at the Université ouvrière in Paris. Interestingly, the Turkish version of Politzer's *Principes élémentaires de philosophie* was the first book to be banned by the military élite after the 1980 coup d'état in Turkey. Reaction to this could perhaps explain Erdemci's atypical choice for the title of his translation of the *MF*.

¹⁴ Cf. RUDOLPH 2021.

objectifs (one of the alternatives offered by Salman)¹⁵. Likewise, Italian *intenti* (Anna Pozzobon) merely looks like a variation – perhaps not entirely felicitous – on the more common *intenzioni*, while Mauro Zonta’s adoption of *tendenze* appears to echo the ample diffusion of the French *tendances*¹⁶. Finally, German *Ziele* (chosen by Josef Hansen¹⁷ and Ernst Behler) translates again to ‘aims’ or ‘goals’, in keeping with the aforementioned observations¹⁸.

In his 2011 article, Ayman Shihadeh reacted against the commonplace of this teleological and subjectively connotated translation of the title of al-Ġazālī’s work, by arguing first of all that such a rendition would apply to the plural of the passive participle *maqṣūd* (which should however be *maqāṣīd*, and not *maqāṣid*) rather than to that of the noun of place *maqṣad*, which is the veritable singular for al-Ġazālī’s expression. Shihadeh is very clear, against Macdonald, that *maqṣūd* is neither a perfect equivalent of *ma’na* (because unlike the latter it may not only apply to a text, but also to the mind of its author), nor of *maqṣad*, which does not bear in itself any subjective («an interpretive connotation», in Shihadeh’s words) nuance¹⁹. Moreover, Shihadeh is able to provide a series of compelling parallels to the effect that *maqṣad*, in theology and other disciplines, is most often used in the sense of ‘topic’, or even more technically of ‘doctrine’, ‘thesis’²⁰. Applied to the case of al-Ġazālī’s *MF*, all this results in the proposal of translating the book’s title as *Doctrines of the Philosophers*, a rendition which recently encountered the favour of another leading scholar of al-Ġazālī, Frank Griffel²¹.

This more ‘material’, as it were, characterisation of the meaning of the title would thus relate to a descriptive and objective content of the philosophers’ teachings, rather than to the subjective aims, or goals, of those teachings. Shihadeh explicitly links his understanding of the title to the other, more common Latin denomination of al-Ġazālī’s book, *i.e.* *Summa theoricæ philosophiæ*. Despite being in itself less literal than the rendition adopted in the Prologue (*De philosophorum intentionibus*), this successful translation of the title certainly captures effectively the gist of al-Ġazālī’s work, aptly describing it as a repository of doctrines pertaining to theoretical (*i.e.* not practical) philosophy²². Apart from the very early example of the Latin text²³, it is important to notice that such a content-based rendition of *maqāṣid* had also been adopted, though perhaps less consciously than Shihadeh does, by

¹⁵ A Francophone scholar such as Yahyà Michot appears to have plainly transferred to English the French *objectifs* when he renders with «objectives pursued by the philosophers» the phrase *maqāṣid al-falāsifa* occurring in a passage of Ibn Taymiyya’s *Buġyat al-murtād* [*The Goal of the Explorer*]: cf. MICHOT 2015: 355.

¹⁶ Since the pathbreaking MUNK 1857.

¹⁷ Hansen’s rendition *Ziele der Philosophie* misinterprets *al-falāsifa* as if it were *al-falsafa*, and is thus particularly wrong.

¹⁸ AHLWARDT 1892: 394^a (n. 5059), in his codicological description of MS Berlin, Or. Qu. 59 – an ancient witness of the Arabic *MF* – gives as paraphrastic rendition of the title the German *Zielpunkte*, which is akin to *Ziele* in both etymology and actual meaning.

¹⁹ SHIHADDEH 2011: 91.

²⁰ SHIHADDEH 2011: 91 and fnn. 38-39.

²¹ GRIFFEL 2021.

²² For the distinction between a theoretical [*naẓariyya*] and a practical [*amaliyya*] part of philosophy cf. *infra*, Translation, *Metaphysics*, First Premise, §93. On the structure of the *MF* as a *summa* of theoretical philosophy see also the Introduction, §1.4.1. *Divisio textus*.

²³ JANSSENS 2011^b (and see also JANSSENS 2015: 327) is convinced that the Latin version of the Prologue dates from the 13th century, although there is no clear evidence on this; more information *infra* in §2.2, on the Latin reception of the *MF*.

some modern interpreters. The most ancient example of this trend in scholarship is probably to be recognized in Georg Beer's pathbreaking German translation of the Arabic Prologue (together with the first two treatises of the *Logic* of the *MF*), which was published by Brill back in 1888. In this version, the term *maqāṣid* is consistently and sensibly rendered as *Hauptlehren* ('fundamental', or 'principal', 'doctrines', or 'teachings')²⁴. Likewise, one of the three alternative translations provided by Salman was *vues essentielles* ('essential views')²⁵, which clearly departs from his more teleological choices (*tendances*, *objectifs*) and which might in fact own more than something to Beer's happy choice of *Hauptlehren*. More recently, and perhaps already under the influence of Shihadeh's powerful argument, Loris Sturlese has translated the title of al-Ġazālī's work in Italian as *Tesi dei filosofi*²⁶.

The overview of scholarly renditions of the title of the *MF* discussed in what precedes is summarised in the following Table 1, which lists all the translations of the title I was able to find in scholarship on the work.

TABLE 1. *Translations of the title Maqāṣid al-falāsifa in previous scholarship*

	LANGUAGE	TRANSLATION	REFERENCES
1	English	Aims of the Philosophers	VAN DEN BERGH 1978 ³ ; HANLEY 1982; MARMURA 2000; BURNETT 2005; GILETTI 2014
1 ^b	English	Book of the Aims of the Philosophers	MADELUNG 2015
2	English	Aspirations of the Philosophers (as translation of the Russian: cf. [25])	MILKOV 2016
3	English	Doctrines of the Philosophers	SHIHADDEH 2011; GRIFFEL 2021
4	English	Essential Views of the Philosophers	ZEDLER 1961
5	English	Intentions of the Philosophers	NEUBAUER 1886; ZEDLER 1961; HARVEY 2001; REYNOLDS 2002; GRIFFEL 2009; AL-AKITI 2009; MCGINNIS 2010 ^a ; TREIGER 2012; GUTAS 2014; IVRY 2015; TZVI LANGERMANN 2018
6	English	Meanings of the Philosophers	MACDONALD 1936; MACDONALD 1937; CHERTOFF 1952; LOHR 1965; PODKOŃSKI 2006; LAGERLUND 2010
7	English	What the Philosophers Mean	GUTAS 1993
8	English	objectives pursued by the philosophers	MICHOT 2015
9	English	Opinions of the Philosophers	MANEKIN 2007

²⁴ BEER 1888.

²⁵ Cf. *supra*, fn. 14.

²⁶ STURLESE 2014.

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	LANGUAGE	TRANSLATION	REFERENCES
10	English	Tendencies of the Philosophers	ZEDLER 1961
11	French	Tendances des philosophes	MUNK 1857, 1988 ² ; CARRA DE VAUX 1902; SALMAN 1936; PARAIN 1939
12	French	Vues Essentielles [des philosophes]	SALMAN 1936
13	French	Objectifs [des philosophes]	SALMAN 1936
14	French	Intentions des philosophes	VAJDA 1977; VAN RIET 1972; VAN RIET 1999
15	French	Buts des philosophes	TRAVELLETTI 2011
16	German	Hauptlehren der Philosophen	BEER 1888
17	German	Intentionen der Philosophen	HANA 1972
18	German	Zielpunkte	AHLWARDT 1892
18 ^b	German	Ziele der Philosophie	HANSEN 1952
18 ^c	German	Ziele der Philosophen	BEHLER 1965
19	German	Absichten der Philosophen	MUSALL 2016; EL-ABDAOUI 2017; RUDOLPH 2021
20	German	Meinungen	LOHR 2005
21	Hebrew	כוונות הפילוסופים Kavvānōt ha-filōsōfim	Judah ben Solomon Nathan; Anonymous translation
22	Hebrew	דעות הפילוסופים De'ot ha-filōsōfim	Isaac Albalag
23	Italian	Intenzioni dei filosofi	BERTOLACCI 1998; TRECCANI <i>ONLINE</i> ; VENTURA 2018
23 ^b	Italian	Intenti dei filosofi	POZZOBON 2013
24	Italian	Tendenze dei filosofi	ZONTA 1997
25	Italian	Tesi dei filosofi	STURLESE 2014
26	Latin	De philosophorum intentionibus	Prologue
27	Latin	Summa theoricæ philosophiæ	Latin MSS
28	Russian	Стремления философов Stremleniya filosofov	MILKOV 2016
29	Spanish (Castilian)	Intenciones de los filósofos	ALONSO 1963
30	Spanish (Catalan)	Tendencias dels filòsops	RUBIÓ I BALAGUER 1913-1914

	LANGUAGE	TRANSLATION	REFERENCES
31	Turkish	Felsefenin Temel İlkeleri	ERDEMCI 2002

The word *maqāšid* appears five times in the text of the *MF*, four of which in the sole Prologue. Moreover, also the passive participle of the same triliteral root, *maqšūd*, is employed abundantly throughout the text (13 sure occurrences, to which two further ones might be added)²⁷. Also the proper singular of *maqāšid*, the noun of place *maqšid*, is employed twice in the text. In the following Table 2, I have listed all the occurrences of *maqāšid* and his cognate terms in the *MF*, providing the indication of the place in the text in which they occur, as well as a brief excerpt of the passage in which they are embedded.

TABLE 2. Occurrences of *maqāšid* and its cognates in the text of the *MF*

	ARABIC	LATIN	LOCUS	CONTEXT OF OCCURRENCE
1	<i>maqāšid</i>	<i>intentionum</i>	Prologue, §1, DUNYĀ 1961: 31.11 = SALMAN 1936-1937: 125.16	[a speech] containing the account of their intentions concerning their sciences
2	<i>maqāšid</i>	<i>intentionibus</i>	Prologue, §1, DUNYĀ 1961: 31.14 = SALMAN 1936-1937: 126.20-21	without being prolix with the mention of what is analogous to an interpolation and to appendages extraneous to the intentions
3	<i>maqāšid</i>	<i>intentionibus</i>	Prologue, §1, DUNYĀ 1961: 31.17 = SALMAN 1936-1937: 126.24	The aim [cf. 6] of the book is the account of the <i>Intentions of the philosophers</i> , and this is its title
4	<i>maqāšid</i>	<i>intentionibus</i>	Prologue, §1, DUNYĀ 1961: 32.7 = SALMAN 1936-1937: 126.37	The Aš'arites are at variance with them only because of the technical terms and the adductions [of proofs], and not [because of] the concepts and the intentions
5	<i>maqāšid</i>	<i>intentionibus</i>	Preface to <i>Metaphysics</i> , §91, DUNYĀ 1961: 133.8 = MUCKLE 1933: 1.11	We will present in detail the account of the intentions of this science in two premises and five treatises
6	<i>maqšūd</i>	<i>hoc enim intenditur</i>	Prologue, §1, DUNYĀ 1961: 31.17 = SALMAN 1936-1937: 126.24	The aim of the book is the account of the <i>Intentions</i> [cf. 3] of the <i>philosophers</i> , and this is its title

²⁷ These are number [19] in Table 2 *infra*, in which *maqšūd* only appears in the variant reading provided by ms. *Y* (*yatimmu l-ğarađ^u* Dunyā, *yatimmu l-ğarađ^u wa-l-maqšūd^u* *Y*), and of number [22], in which the past participle appears in the feminine [*maqšūda*], and with an adjectival function partly different than the normal usage of it in the text (occurrences [6]-[18] in Table 2).

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	ARABIC	LATIN	LOCUS	CONTEXT OF OCCURRENCE
7	<i>maqṣūd</i>	<i>intentionis</i>	Preface to <i>Logic</i> , §4, DUNYĀ 1961: 37.14 = LOHR 1965: 242.100	As for the parts of logic and their order, they are explained by the mention of its intent
8	<i>maqṣūd</i>	<i>intentio</i>	<i>Logic</i> IV, §34, DUNYĀ 1961: 66.4 = LOHR 1965: 258.3	This is the intent
9	<i>maqṣūd</i>	<i>id de quo agitur</i>	<i>Logic</i> IV, §36, DUNYĀ 1961: 68.12 = LOHR 1965: 259.41	That which becomes subject in the conclusion that follows, namely the intended [thing] of which it is predicated, is called «minor term»
10	<i>maqṣūd</i>	<i>intendo</i>	<i>Logic</i> IV, §64, DUNYĀ 1961: 104.16 = LOHR 275.589	the intent [here] is the example
11	<i>maqṣūd</i>	---	Preface to <i>Metaphysics</i> , §91, DUNYĀ 1961: 133.7	We, however, will adduce during the speech [those parts] of the natural [science] from which the understanding of our intent depends
12	<i>maqṣūd</i>	<i>nos intendimus</i>	<i>Metaphysics</i> II.10, §187, DUNYĀ 1961: 216.22 = MUCKLE 1933: 57.20	the intent [here] is [just] to make understand
13	<i>maqṣūd</i> [<i>quṣūd</i> D]	---	<i>Metaphysics</i> III.b.7, §217, DUNYĀ 1961: 237.11	in the realization of our intent
14	<i>maqṣūd</i>	<i>id de quo intendimus</i>	<i>Metaphysics</i> III.b.11, §234, DUNYĀ 1961: 247.22 = MUCKLE 1933: 84.34	We return then to the intent
15	<i>maqṣūd</i>	<i>hoc solum intendimus</i>	<i>Metaphysics</i> III, Epilogue, §240, DUNYĀ 1961: 251.1 = MUCKLE 1933: 87.26	The intended [thing] is that you cannot understand anything of God Most High but by way of the comparison to something which is in yourself
16	<i>maqṣūd</i>	<i>nihil aliud intendimus nisi</i>	<i>Metaphysics</i> IV.b.1.4, §261, DUNYĀ 1961: 264.3 = MUCKLE 1933: 99.32	The intent is that we clarify that every composed body is susceptible of the movement
17	<i>maqṣūd</i>	<i>id quod intenditur</i>	<i>Metaphysics</i> IV.b.3.1, §285, DUNYĀ 1961: 281.4 = MUCKLE 1933: 113.17	it is also necessary that the obedient has a goal in his obedience, that goal being his intended [thing]
18	<i>maqṣūd</i>	<i>intentio</i>	Preface to <i>Physics</i> , §315, DUNYĀ 1961: 303. = MUCKLE 1933:	Its intent is concentrated in four treatises
19	<i>maqṣūd</i> [Y]	<i>intentio</i>	Preface to <i>Physics</i> , §315, DUNYĀ 1961: 303.5 = MUCKLE 1933: 131.6	the goal [and the intent Y] is completed

	ARABIC	LATIN	LOCUS	CONTEXT OF OCCURRENCE
20	<i>maqšid</i>	<i>inquisicionis</i> (!)	Preface to <i>Metaphysics</i> , §91, DUNYĀ 1961: 133.5 = MUCKLE 1933: 1.6	it is the goal of the sciences and their aim
21	<i>maqšid</i>	<i>id quod intenditur</i>	<i>Physics</i> V.3, §428, DUNYĀ 1961: 373.21 = MUCKLE 1933: 185.23	as a ride carrying to the destination
22	<i>maqšūda</i>	[<i>a parte</i>] <i>ad quam accedit</i>	<i>Metaphysics</i> IV.b.1.1, §250, DUNYĀ 1961: 257.6 = MUCKLE 1933: 93.15	the fled direction is different than the intended direction

The analysis of the occurrences of participles and deverbal nouns of the root *q-š-d* in the *MF* shows a diversified, but all in all compact, landscape. Unsurprisingly, the root is employed with particular frequency in introductory, or in any case programmatic, sections of the texts such as the prefaces to the various parts of the encyclopaedia, or the epilogues to some specific discussions. This is the case with the five occurrences of the root that are to be found in the sole *Prologue* ([1]-[4] and [6] in the preceding Table 2), as well as with occurrences number [5] (the fifth and last occurrence of *maqāšid* in the plural, which is to be found in the Preface to the section on *Metaphysics*); number [7], from the Preface to *Logic*; [11] and [20], again from the Preface to *Metaphysics*; [15], from the Epilogue to the Third treatise of *Metaphysics*; and [18]-[19], from the Preface to *Physics*. Globally, 12 cases out of the total 22 come from these liminary – introductory or conclusive – sections of the text, which comprehensibly emphasize the programmatic (or, respectively, achieved, in the case of the conclusive statements) ‘intent’ of the philosophical discussion.

In all the occurrences of the past participle *maqšūd* in the text (numbers [6]-[19] in Table 2), the teleological meaning of the root is very well perceivable. This circumstance could be seen *prima facie* as a strong reason for a similarly teleological reading of *maqāšid* as it occurs in the title, but this – as we have begun to see – would be a hasty conclusion. Indeed, while the Latin translators arguably treated *maqšūd* as the singular of *maqāšid*, and accordingly rendered it as *intentio* in many occurrences²⁸, it seems now safe to exclude that *maqāšid* could be taken as the plural of the participle. The pattern *mafā‘il* rather belongs to the plural of nouns of place: our singular must then be *maqšid* (or *maqšad*) and not *maqšūd*. Thus, it is important to turn the attention to the two occurrences of *maqšid* – numbers [20] and [21] in Table 2 – which are to be found in the *MF*. In [21] the context is very concrete, because an actual – though metaphorical – journey is at stake. There, *maqšid* represents the journey’s destination (*i.e.* the actual place where the journey tends and ends). This is

²⁸ Compare *supra*, Table 2, numbers [8], [18], and probably also [19] (*intentio* being a closer rendition of *maqšūd* than of *ğarađ*: cf. *supra*, fn. 26, and *infra*, Commentary, ad §315 for the details). In many other cases, the Latin rendition of *maqšūd* is verbal and periphrastic, with occasionally complex translative formulas like *nihil aliud intendimus nisi* ([16]) for the simple nominalized [*al-*]*maqšūd*.

the concrete meaning from which the metaphorical sense of ‘intent’ presumably derived. Occurrence [20] shows instead this second, clearly teleological sense of *maqṣid*, because the term is there paired with the unmistakably teleological word *ġaraḍ*, ‘goal’.

The analysis of the proper singular of *maqāṣid* as it appears in the text of the *MF* seems thus to confirm the teleological sense also conveyed by the passive participle. It remains true, however, that the plural *maqāṣid* has in its five occurrences a clearly more substantive and objective connotation than the one enjoyed by its singular. A possible test for this assessment would be to replace my rendition ‘intentions’ with the alternative one ‘doctrines’ in occurrences [1]-[5] in Table 2. In doing the experiment, it is easy to acknowledge that all the sentences would in general preserve, and in some cases even seemingly improve, their meaning. However, a careful reading *inter alia* of sentence [2] can give us a better grasp of the proper meaning assumed by the title-word *maqāṣid* in the *Prologue*. There, as a matter of fact, al-Ġazālī writes that he wants to present his topic «without being prolix with the mention of what is analogous to an interpolation and to appendages extraneous to the intentions [*maqāṣid*]». In this specific text, the plain substitution of ‘intentions’ with ‘doctrines’ would not quite work. Indeed, the content of the text has already been described in [1] as the «account» of the *maqāṣid* of the philosophers. If then *maqāṣid* had a meaning as generic as ‘doctrines’, it would make poor sense to speak in [2] of interpolations and additions to these *maqāṣid*, read under this hypothesis as generic doctrines which could encompass, in principle, the entirety of the philosophers’ arguments. Rather, it seems that the meaning must be here more restricted, as in ‘main doctrines’, *i.e.* the crucial tenets or teachings of the philosophers – a sense perfectly captured by translations such as German *Hauptlehren*, or French *vues essentielles*²⁹. In this sense, statement [2] by al-Ġazālī constitutes an important programmatic affirmation, aimed at restricting the scope of the following encyclopaedia to the sole principal topics touched upon by the *falāsifa*, without concern for the many secondary rivulets in which the enterprise of philosophy can be channeled and dispersed.

Bearing this important nuance in mind, the tension between the sense of «doctrines» and that of «intentions» can probably be further recomposed by considering that «intentions» does not need to have a subjective or connotative sense which univocally reports it to the subjective goals of the philosophers. With an only partial stretch, and recalling its etymology, it can rather designate their theoretical ‘destinations’, *i.e.* the philosophical places in which their teachings end up: in short, their – objectively considered – main tenets, which can of course be paraphrased also as «doctrines», but which also keep the sense of objective goals of the philosophical enterprise. This content-like sense of the word «intention» is also contemplated in English, as the sixth meaning reported by the leading English dictionary Merriam-Webster under the entry *intention* appears indeed to confirm: «6: CONCEPT | especially: a concept considered as the product of attention directed to an object of knowledge». The *maqāṣid al-falāsifa* which al-Ġazālī aims to present are thus the main theses of the philosophers, because they represent the main and direct ‘destinations’ of the

²⁹ This semantic aspect of ‘principal’ or ‘main’ (tenet) is attested for the root *q-ṣ-d* also in other patterns, such as in the expression *bayt al-qaṣid*, which WEHR: 898^a glosses as ‘the main point, the principal part, the essence, the core, the gist, the best, the hit, the climax of sth.’, from a basic sense of *qaṣid* as ‘aspired, desired, aimed at, intended’.

project of *falsafa* in its various pathways to knowledge³⁰. As opposed to the certainly pertinent, but less specific rendition ‘doctrines’, the term ‘intentions’ – with its etymological reference to the idea of ‘tending to’ – aims to exclude from this straight philosophical path the intermediary steps, the detours, the digressions which al-Ġazālī calls in the Prologue «appendages» and «interpolations». While these detours are certainly involved and inevitable in any philosophical journey (and especially in one as long and as complex as that of Avicenna), they are inessential to the actual target of the inquiry.

This specific reading of ‘intention’ as ‘(theoretical) place of destination’ seems suitable also for other occurrences of *maqāṣid* in different authors than al-Ġazālī. For instance, the second part of the title of ‘Allāma al-Ḥillī’s³¹ (d. 1325) *Marāṣid al-tadqīq wa-maqāṣid al-tahqīq*³² – translated as *The Observatory of Precision and the Ends of Verification* by Khalid El-Rouayheb³³ – might well be rendered also as ‘the intentions of the verification’, if we take ‘intention’ in the sense of the metaphorical places in which the rational process of ascertainment called *tahqīq* ends up, and achieves its (final) results³⁴. Common renditions of the title of Sa’d al-Dīn al-Taftāzānī’s (d. 1390) *Šarḥ al-Maqāṣid fī ‘ilm al-kalām* in English-speaking scholarship are also teleological, and they can probably be interpreted as well in a way similar to the one described here³⁵. Interestingly, in Avicenna’s *Kitāb al-‘Ibāra* [*Book of the Expression*] – the part of his *K. al-Šifā’* corresponding to Aristotle’s *De interpretatione* – the phrase *maqāṣid li-l-nafs* is said to be equivalent to *ma‘ānī*, ‘concepts’³⁶. If we take *maqāṣid li-l-nafs* to mean ‘the places of destination of the soul’ (in her rational capacity), *i.e.* the places to which the soul tends in her path to knowledge, such a definition appears altogether not far from the one of the Merriam-Webster dictionary quoted above. Indeed, in a wider historical perspective, the rendition of *ma‘nā* with *intentio* in Arabic-Latin medieval translations might be seen as governed by a similar, if not even identical, rationale³⁷. All in all, it would thus seem that a certain semantic shift of finalistic terms such as intention, aim, or goal from their primary teleological and subjective sense to the objective, content-like one is a general and even cross-linguistic feature. This likely happens because the goals of a theoretical or intellectual enterprise are indeed nothing else than the individual results of that inquiry. Thus, it makes good sense for them to be single pieces of doctrine yielded by the theoretical investigation as definite, recognisable outcomes.

³⁰ The idea of the ‘direct’ or ‘straight’ way to a destination is captured by the active participle *qāṣid*, from the same trilateral root of *maqāṣid*: cf. WEHR: 898^b, *sub voce*.

³¹ Ḥasan bin Yūsuf bin al-Muṭahhar al-Ḥillī.

³² Arabic edition in AL-ḤILLĪ 2017.

³³ EL-ROUAYHEB 2019: 69.

³⁴ Rather, ‘doctrines of the verification’ would not quite work.

³⁵ MORRISON 2021: 311-312 uses the rendition «Commentary on the Goals» for the *Šarḥ*, and «The Goals of *Kalām*» for Taftāzānī’s own brief treatise *al-Maqāṣid fī ‘ilm al-kalām*, on which the monumental commentary is built. As an alternative reference title for the work, Morrison mentions the interesting form *Maqāṣid al-Maqāṣid* (rendered *ivi* as «The Goals of the Goals»), which is only understandable on the basis of a teleological interpretation of *maqāṣid*. In a similar vein, JANOS 2020: 250 renders the title of the *Šarḥ* as *Commentary on the Aims of the Science of Theology*.

³⁶ *Ibāra* 1.1, p. 3.2. Cf. also SABRA 1980: 753 fn. 4.

³⁷ The theoretically fundamental further development of the medieval Latin notion of *intentio*, through the philosophies of Brentano and Husserl, to become a key-concept of contemporary phenomenology lies of course far beyond the Arabic semantic problem from which we took the move. For an orientation in the ancient and medieval background of the modern notion of intentionality, cf. PERLER 2001.

This semantic interpretation appears also confirmed by the parallel case of al-Fārābī's well-known little treatise *On the Goals of Aristotle's Metaphysics*, normally quoted in scholarship with its shortened Arabic title *Fi Aqrād*³⁸. Similarly to the *MF*, al-Fārābī's work is also titled with an apparently finalistic word, *ġaraḍ* 'goal' (a term which, as we have seen, is also paired with the root *q-ṣ-d* in the *MF*)³⁹. Despite this explicitly teleological title, al-Fārābī's text, in its concrete buildup, does not describe any subjective goal allegedly entertained by Aristotle in writing his *Metaphysics*, nor any 'external' aim with respect to the theoretical project of a first philosophy. Rather, the treatise consists *in concreto* in a summary, subdivided by books, of the main tenets and the pivotal doctrinal achievements of Aristotle's metaphysical discussion. The *aqrād* of al-Fārābī's title thus appear, in the substance, remarkably similar to the *maqāṣid* of al-Ġazālī's one, in that (i) they are both *prima facie* teleological terms, (ii) they both refer to philosophers and/or their works (Aristotle's *Metaphysics* in al-Fārābī; the *falāsifa* as concealing the main name of Avicenna in the *MF*), and (iii) they both reveal a very clear objective sense under the possibly misleading patina of their finalistic, subjective meaning.

In consideration of all the above, I take the meaning of the title *Maqāṣid al-falāsifa* to be, quite literally, that of 'destinations of the philosophers', in the sense of 'theoretical places in which the philosophers end up' in the (metaphorical) journey of their intellectual inquiry. While I perfectly agree with previous scholarship that this meaning is similar to the one captured by a word such as 'doctrines' (or, for instance, 'theses'), I am also persuaded that the traditional rendering 'intentions' has its own merits, as well. This is, (1) first of all, because it properly captures the principal meaning of the Arabic root *q-ṣ-d*, with its etymological reference to the idea of 'tending to'; (2) second, because its English usage admits of an objectively connotated sense such as 'concept', and not only of a subjective, teleological meaning, much like the original Arabic; (3) third, because its relative rarity (as opposed to the rather generic 'doctrines') allows more easily for a technical understanding of it in the sense of 'main theses', which seems required by the *Prologue* of the *MF*; and finally, (4) fourth, because it is firmly established in the translations – dating from the Latin *De philosophorum intentionibus* –, and consequently also in available scholarship on the *MF*.

³⁸ Cf. the English translation and detailed discussion of the text provided by BERTOLACCI 2006: 65-95. Bertolacci draws parallels between the *prolegomena* to the commentary on the *Metaphysics* by Ammonius son of Hermias, in the *reportatio* by Asclepius (however not translated into Arabic), and al-Fārābī's treatise. In particular, the Fārābīan notion of *ġaraḍ* appears to correspond to the Greek prolegomenic concept of *σκοπός* of a commented work, which also has an objective sense, since it usually refers to the contents of the work at stake: cf. *e.g.* the passages by Ammonius translated in BERTOLACCI 2006: 80-82.

³⁹ Cf. Table 2, esp. [19] and [20].

1.2.

Chronological and Doctrinal Collocation

The issue of the dating of the *MF* has long been discussed in scholarship, partly because of the connections it seems to have with the various phases of al-Ġazālī's intellectual career, and especially with his study of (Avicennan) Peripatetic philosophy [*falsafa*], and partly for the long-standing assumption of its tight relation with the *Tahāfut al-falāsifa* [*The Incoherence/Precipitance of the Philosophers*], al-Ġazālī's best-known work of refutation of Avicennan *falsafa*⁴⁰. The connection of the two works is indeed explicitly made in the *Prologue* and the *Epilogue* of the *MF*⁴¹. However, the issue is further complicated by the necessity to take into account the possibility that those liminary texts are insincere because apologetic in nature, and/or that they might have been added in a later time with respect to the composition of the main text⁴². All these intertwined aspects make a balanced evaluation of the various available hypotheses on the dating of the *MF* extremely arduous for the interpreter. In what follows, I will therefore limit myself to present some preliminary data to address these closely interrelated problems, which will be discussed in greater detail in a forthcoming article on the dating of the *MF* that Ayman Shihadeh and I currently have in preparation. Much of what I will say in what follows presupposes, and conversely finds support in, subsequent sections of this same *Introduction*, a circumstance which forces me to provide very often forward references to the specific treatment of the various topics I touch upon. Nonetheless, I resolved to deal with the important issue of the dating of the *MF* in a preliminary section of my analysis, in the persuasion that it was important to provide since the beginning of the discussion a general picture of the chronological and doctrinal collocation of the work, before treating particular aspects of this general picture in greater detail.

From a very basic point of view, one could think in principle of two possible datings of the *MF* with respect to the *TF*, *i.e.* before or after the refutative work. As opposed to the total absence of sound chronological data for the *MF*, we do have an absolute date for the completion of the *TF*, 11 Muḥarram 488/21 January 1095 – when al-Ġazālī was about forty, and certainly mature from both a professional and an intellectual point of view. Each of these broad datings (before or after 1095) could be further tentatively specified in terms of temporal contiguity to the *TF*, thus giving the following four basic alternatives for the collocation of the drafting of the *MF* within al-Ġazālī's life (1056-1111) and career⁴³.

- (a) early dating (long before the *TF*)
- (b) early-middle dating (short before the *TF*)

⁴⁰ The Arabic text of the *TF* was critically edited in BOUYGES 1927, and translated into English, with facing Arabic text, by MARMURA 2000. All subsequent quotations will be taken from the latter edition.

⁴¹ Cf. *infra*, §1 and §455 of my Translation; see also the Commentary *ad locos*.

⁴² The latter possibility was suggested with particular emphasis by HANA 1972: 894, on the grounds that the style of the Preface – according to him full of repetitions – would contrast with al-Ġazālī's attention to the 'purity of style'.

⁴³ For the most recent biography of al-Ġazālī, which also contains the persuasive proposal of setting his date of birth to 1056, see GRIFFEL 2009: 19-59.

- (c) late-middle dating (short after the *TF*)
- (d) late dating (long after the *TF*)

Schematically, it could be argued that option (b) is the most traditional understanding of the relationship between the philosophical and the refutative work, which sees the former as preparatory to the study of the latter, thus taking more or less at face value the authorial indications contained in the *Prologue* of the *MF*⁴⁴. An enriched variant of alternative (b) is the oft-called «tripartite scheme», according to which (i) the *MF* would constitute the neutral presentation and exposition of Avicenna's philosophy, (ii) the *TF* would be the refutation of that system, and (iii) a third work – the precise identification of which remains debated – would finally provide the rebuilding of a sound system of knowledge. Ground for this tripartite scheme is the combination of the reading of the *MF* as *muqaddima* to the *TF* (as based on a strict interpretation of the *Prologue* and the *Epilogue*) with an interesting, but ambiguous statement that is to be found at the end of the First Discussion of the *TF*.

TEXT 1. al-Ġazālī, *TF*, Discussion 1, transl. MARMURA 2000: 46, modified

We have not endeavored to defend a particular doctrine, and as such we have not departed from the objective of this book. We will not argue exhaustively for the doctrine of the temporal origination [of the world], since our purpose is to refute their claim of knowing [its] pre-eternity.

As regards the establishment of the true doctrine [*itbāt al-madhab al-ḥaqq*], we will write a book concerning it after completing this one – if success, God willing, comes to our aid – and will name it *The Foundations of Beliefs* [*Qawā'id al-aqā'id*]. We will engage in it in establishing [*itbāt*], just as we have devoted ourselves in this book to destruction [*hadm*].

The first version of the tripartite scheme – clearly modelled on a flat historical understanding of Hegel's triadic scheme of thesis, antithesis, and synthesis – was proposed to the best of my knowledge by Duncan Macdonald in a 1899 paper⁴⁵. Basing himself also on the terminology employed in Text 1, Gabriel S. Reynolds gave in 2002 a classic presentation of this

⁴⁴ See the chronology proposed for the *MF* in BOUYGES 1959: 23 (and cf. also BOUYGES 1927: ix). The same hypothesis is also retained by HOURANI 1959: 227 (revised edition, with no variation concerning the *MF*, in HOURANI 1984: 292), who proposed for the *MF* a drafting comprised between 1091-1092 (484 H) and 1093-1094 (486 H), and by BADAWĪ 1977: 53-62 (see also, for these data, SHIHADEH 2011: 78 and fnn. 4-5). BERNAND 1990: 228 gives for the *MF*, without justification, the date of 487 H (the year before the *TF*); the same appears to be the position held by LAZARUS-YAFEH 1975: 46-48, and, following her, by HARVEY 2001: 361. The editor of the Arabic text Sulaymān Dunyā represents, moreover, a paradigmatic case of this tendency in scholarship, as he even makes the formula *Muqaddima Tahāfut al-falāsifa* [«The Premise of the Incoherence of the Philosophers»] precede the title *Maqāšid al-falāsifa* in his edition of al-Ġazālī's work (see DUNYĀ 1961, frontpage), thus making his interpretation of the relation between the two works interfere with his own editorial choices. The same is held very clearly by PODKOŃSKI 2006: 618, who speaks explicitly of the *MF* as «the first part of a two-part work», concluded by the *TF*. For a synthesis of this traditional position in scholarship cf. GRIFFEL 2006: 9: «From the word in the introduction and *khātima* of the *Maqāšid*, Bouyges (and others before him) assumed that the writing of *Maqāšid al-falāsifa* immediately preceded the work on *Tahāfut al-falāsifa*. From a note in MS Istanbul, Fatih 2921, Bouyges concluded that al-Ghazālī finished working on *Tahāfut al-falāsifa* on 11 Muḥarram 488/21 January 1095. It was assumed that the *Maqāšid* had been written in the months or years before. This has always been the standard account».

⁴⁵ MACDONALD 1899.

simplified view of al-Ġazālī's intellectual development in terms of «construction» (*MF*), «destruction» (*TF*), and «reconstruction» (the third work mentioned in the *TF*) of a consistent system of thought⁴⁶. Michael Marmura himself, in the preface to his English translation of the *TF*, identified the 'affirmative' writing mentioned in Text 1 with al-Ġazālī's theological work *al-Iqtisād fi al-I'tiqād* [*Moderation in Belief*], despite acknowledging that *Qawā'id al-'aqā'id* – which he translates as *The Principles of Belief*⁴⁷ – is actually the title of an important section of al-Ġazālī's religious masterpiece *Ihyā' 'ulūm al-dīn* [*Revival of the Religious Sciences*]⁴⁸. More recently, Muḥammad Afifi al-Akiti suggested instead that *Qawā'id al-'aqā'id* might be «a generic title for al-Ghazālī's theological project – a set of works that includes the *Maḍnūn* writings»⁴⁹. This is done in the framework of al-Akiti's proposal of reading the *MF* as expressing the 'ugly', the *TF* as the 'bad', and the *Maḍnūn* – a composite set of esoteric writings of debated attribution to al-Ġazālī – as the 'good' of *falsafa*⁵⁰. This latter suggestion, albeit certainly erudite in certain of its underpinnings, is not devoid of the dangers always implicit when one tries to force the living dimension of history into a constrictive scheme, invented pretty much *a priori*. But even if one is willing to disregard this important, general reason of caution against too rigid tripartite patterns, the variety of the opinions just mentioned shows that there is still no scholarly consensus about the identification itself of the work that should form the *pars construens* of al-Ġazālī's philosophico-theological project. One could further argue that the need itself of positing the existence of such a *pars construens* is at best dubious, since both the *MF* and the *TF* seem to include at least some 'positive' teachings, and not just neutral or – what is worse – negative and destructive ones. The tripartite scheme, as fascinating as it might seem at first glance, appears thus to fall apart very soon when closely inspected.

As for option (a), namely the drafting of the *MF* in a juvenile phase of al-Ġazālī's career, it was brought to the fore – sometimes, implicitly but erroneously, as if it were the only possible alternative to option (b) – by Erwin Gräf⁵¹ and, in more recent years, by Jules

⁴⁶ REYNOLDS 2002: 34-37. Reynolds there gives also arguments against this simplified triadic presentation of the evolution of al-Ġazālī's thought.

⁴⁷ But *'aqā'id* is the plural of *'aqīda*, and will then have the value of 'beliefs', or even more precisely of 'articles', 'tenets of faith'. As for *qawā'id*, it is the plural of *qā'ida*, which is used in the *MF* to introduce the complex final reasoning of the First treatise of *Metaphysics*, which concerns the eternity of the world: see *infra*, Translation, §171 (and ff.), and see the Commentary *ad loc.* for some hypotheses on the occurrence of this characteristic term in that context. For the ambiguous stance displayed by the *MF* with regard to the issue of the eternity or origin in time of the world cf. also *infra*, §1.8.2. *Anti-Eternalist Examples: Changing Avicenna from Within*.

⁴⁸ Cf. MARMURA 2000: xviii: «[...] a sequel to the *Tahāfut*, is his *Al-iqtisād fi al-i'tiqād* (*Moderation in belief*), an exposition of Ash'arite theology. In the *Tahāfut* al-Ghazālī intended to refute and negate; in the *Iqtisād*, to build and affirm what he declared to be true doctrine»; and see also his more diffused statements concerning the identification of the *Qawā'id* with the *Iqtisād* in MARMURA 2000: xxiii-xxiv.

⁴⁹ See AL-AKITI 2009: 89-90 and fn. 87. For further information on the problematic issue of the *Maḍnūn* («restricted») corpus of writings, cf. the brief outline of the scholarly discussion presented *infra*, §2.1.2.

⁵⁰ AL-AKITI 2009: 52; and cf. *infra*, §2.1.2. *The Maḍnūn Corpus*.

⁵¹ GRÄF 1960 (o 1961?): 163: «Aus all diesen Beobachtungen geht hervor, daß die *Maqāsid* nicht als philosophische Propädeutik zum *Tahāfut* konzipiert worden sind. Sie stammen wohl sicher von Ġazzālī, aber aus der Zeit seines Philosophiestudiums, in der ihm dessen Fruchtlosigkeit noch nicht ausgegangen war [...]». I owe the quotation to GRIFFEL 2006: 10 fn. 31; a longer extract of Gräf's assessment is also to be found in TREIGER 2012: 117 n. 20.

Janssens⁵² and Alexander Treiger⁵³. Option (a) is almost inextricably connected, in Janssens' paradigmatic presentation of it, to the assumption of a genuinely 'philosophical' phase of al-Ġazālī's intellectual path, during which the future great theologian would have full-heartedly adhered to the enterprise of *falsafa*. There is however no proper historical evidence for such a phase⁵⁴. Moreover, Gräf, Janssens, and Treiger all hypothesise that the *Prologue* and the *Epilogue* of the *MF* were added to the text in a later phase than the drafting of the core of the work, for variously conceived apologetic purposes which would have been developed by the mature theologian with respect to his earlier (and at this later point perhaps somewhat embarrassing) adherence to *falsafa*⁵⁵.

While critically retracing the history of options (a) and (b), in a 2006 paper Frank Griffel advanced – for the first time to the best of my knowledge – the opposite hypothesis (d), *i.e.* the possibility of assigning to the *MF* a later dating than the *TF*, and more specifically a drafting close to the end of al-Ġazālī's career. Griffel maintained his novel hypothesis on the grounds that the *MF* refers to the *TF* (but not vice versa)⁵⁶, and that some formulations of the *Prologue* of the *MF* strongly resemble al-Ġazālī's late autobiography *al-Munqidh min*

⁵² JANSSENS 2003^b: 48 argues that the *MF* was likely composed many years before the *TF* «by the young al-Ġazzālī in his student days», and states that the theologian-to-be back then was «probably an adept of the (Avicennian inspired) *falsafa*-school of his time». Cf. also JANSSENS 2001: 13: «I believe that I can now affirm without any reserve that the *Maqāṣid* was not written as a preparatory work to the *Tahāfut*, and that therefore there is no direct link between the two works».

⁵³ Quoting JANSSENS 2003^b: 43 and 48 (on which see also *supra*), TREIGER 2012: 3 states that «it has been proposed, in my view quite convincingly, that al-Ghazālī wrote the *Intentions* in his youth, as a philosophical “dissertation” or *taʿlīq*. If this is the case, the *Intentions* did not originally include its current introduction, for at the time of its composition no refutation of philosophy had yet been envisioned». In the chronological table he offers of al-Ġazālī's writings, Treiger further writes about the *MF*: «Belongs to the early period of philosophical studies, certainly before the *Tahāfut*, with the introduction probably added later, close to the time of the *Munqidh*» (TREIGER 2012: 11). Cf. also TREIGER 2012: 117 n. 20 for Treiger's rejection of Griffel's position expounded *infra*.

⁵⁴ GRIFFEL 2006: 10: «There is, however, little evidence for such a period in al-Ghazālī's life. Neither he himself nor his biographers refer to it». TREIGER 2012: 117 n. 20 however quotes as a possible hint in this direction a passage attributed to Abū ʿAbd Allāh Muhammad b. ʿAlī b. ʿUmar al-Māzarī (d. 1141) by Muḥammad ibn Muḥammad Murtaḍā al-Zabīdī (d. 1790), in his commentary on al-Ġazālī's *Iḥyāʾ ʿulūm al-dīn* [*Revival of the Religious Sciences*] titled *Iḥāf al-sadāt al-muttaqīna bi-ṣarḥ iḥyāʾ ʿulūm al-dīn*. According to al-Zabīdī, al-Māzarī al-Imām would have said that al-Ġazālī «read the science of philosophy [*ʿilm al-falsafa*] before his thorough study [*istibḥār*] in the field of the principles [of religion and law] [*ʿilm al-ḥikma al-ʿarabiyya*]» (my translation from the transliterated Arabic text reported by Treiger). This witness seems however extremely fragile, given the enormous chronological distance that separates the reporter from the (alleged) reportee; moreover, as noticed by Treiger himself, the context of al-Māzarī's statement was heavily polemic against al-Ġazālī, and is thus even more difficult to take at face value. For more context on the Sicilian al-Māzarī's polemic against al-Ġazālī see GRIFFEL 2009: 199-200. Griffel 2009: 339 n. 138

⁵⁵ As also noticed by SHIHADDEH 2011: 79, supporters of this later addition of *Prologue* and *Epilogue* cite sometimes the Latin tradition – which mainly does not transmit them, but with important *caveats* to be made: cf. *infra*, §2.2. *Latin* – as proof of their thesis. Cf. for instance REYNOLDS 2002: 43-44: «With the exception of the preface and the conclusion, the *Intentions* reads as a systematic and faithful exposition of philosophy. The preface and conclusion read as somewhat awkward appendices. Could they be the work of a later redactor who sought to set the *Intentions* within the greater context of Ghazzālī's career? Proof of this perhaps lies with the Latin manuscripts, which by and large do not contain these appendices, most likely because the *Intentions* was translated before they were added».

⁵⁶ And this despite the fact that the *TF* does refer to many other works of al-Ġazālī's, not including however what would have been the most obvious reference, had the *MF* really been written as a preparatory work for the refutation.

al-ḍalāl [*The Deliverer from Error*], written around 1107⁵⁷. The following Texts 2.a and 2.b provide a comparison of what is probably the clearest parallel between *MF* and *Munqid*. In the two texts, the recurrence of the highly stylistic words *ramy* ('throwing') and '*amāya*' ('blind folly', from the trilateral root of 'blindness') is particularly noteworthy. The cogency of the parallel with the *Munqid* is moreover sealed, from the side of the *MF*, by the presence of the word *ḍalāl* – the very existential 'error' from which the protagonist of the autobiography is saved or delivered – next to '*amāya*' as a description of just how wrong criticizing without knowing can turn out to be.

TEXT 2.a.

al-Ġazālī, *MF*, *Prologue*

[= *infra*, Translation §1]

The inquiry into the corruption of their doctrines before the full comprehension of their attainments [*qabla l-iḥāṭa bi-madārik-hā*] is impossible, or rather it is to throw [*ramy*] in blind folly and in error [*fi l-'amāya wa-l-ḍalāl*].

TEXT 2.b.

al-Ġazālī, *Munqid*, ed. BiĠŪ 1992:

41.14-15

I realized that to refute a school of thought [*radd al-madhab*] before understanding it [*qabla fahm-hi*] and becoming acquainted with its core [*iṭlā' alā kunh-hi*] is to throw [*ramy*] in blind folly [*fi 'amāyat^m*].

A further, strong reason for Griffel's hypothesis (d) is the alleged terminological and thematic discrepancy between the *MF* and the *TF*. The assumption of this discrepancy is borrowed from a previous contribution by Jules Janssens, which mainly concerns al-Ġazālī's interplay with Avicennan texts, but which also touches on the topic of the relation of the philosophical and the refutative work⁵⁸. In that contribution, Janssens raised, although fleetingly, the issue that the doctrines expounded in the *MF* do not seem to be the same critically addressed in the *TF*, or at any rate that the philosophical discussion of the *MF* fails to be mentioned in the *TF* also in cases in which a cross-reference would have seemed not only reasonable, but even advisable⁵⁹. The main part of Janssens' analysis is however devoted to terminology, as he discusses at length the case of the vocabulary used in various Ġazālīan works – and among them most notably the *TF* and the *MF* – as far as Avicenna's internal senses are concerned.

In particular, Janssens detects an evolution from the *MF* to the *TF* in the way in which

⁵⁷ The *verbatim* coincidence between *Munqid* and *MF* had already been noticed and emphasised by HANA 1972: 890-894. Under the unwarranted assumption that the insertion of the autobiographical extract in the *MF* must be ascribed to a later author different than al-Ġazālī, Hana used it to cast doubts on the very attribution of the *MF* to the theologian. This bizarre conclusion was already criticised by JANSSENS 2003^b: 45 fn. 22, who rightly noticed not only that no doubts on the autography of the *MF* can reasonably subsist, but also that the direction of the textual reprise needs not necessarily be the one *Munqid* > *MF*, but could also be the reverse (*MF* > *Munqid*). Cf. also *infra* in this section for a brief discussion of these possible directions of dependence.

⁵⁸ JANSSENS 2003^b; see also JANSSENS 2001.

⁵⁹ See JANSSENS 2003^b: 44: «Furthermore, it is worthwhile to mention that al-Ġazzālī, when he completed the exposé on the soul in the beginnings of this question 18 of the *Tahāfut*, stated, or even insisted that this philosophical doctrine of the soul is not open to rejection, since it is based on facts one may observe, and that it contains nothing contrary to Revelation. Precisely this latter assessment makes it difficult to understand why al-Ġazzālī does not repeat, or, at least, refer to what he has already brought to the fore on these matters in the *Maqāṣid*, if the latter has been meant as an introduction to the former?».

the terminology of the inner senses is used, despite the different Avicennan sources that, according to him, are at stake in the two cases: the *MF* would be more faithful to its Avicennan source (the *DN*) than the *TF* is to its own, still Avicennan, source (the *K. al-Nafs* of the *K. al-Šifāʾ*). This variation is taken by Janssens to be a sign of evolution, from a greater to a lesser allegiance with respect to Avicenna, and thus from an early, scholastic work (the *MF*)⁶⁰ to a definitely mature text (the *TF*). To this effect, in particular, Janssens individuates in the *TF* «an important innovation, insofar as the faculty of representation is now designated by the notion of *ḥāfiẓa*» – a term⁶¹ used by Avicenna only for memory, and not for the retentive faculty of forms (= «faculty of representation» in Janssens' formulation). It is especially on this basis, as it seems, that Janssens develops his own adherence to thesis (a) as mentioned above, *i.e.* to the early drafting of the *MF*, since he writes: «If there does exist only a small interval of time between the two works [*scil.* the *MF* and the *TF*], why then has al-Ġazzālī taken another Avicennian text as basis, and, *above all*, why has he introduced terminological innovations?»⁶². Therefore, Janssens' proposal of an early dating for the *MF* appears chiefly intended as a way of detaching the drafting of the philosophical work from the time of composition of the *TF*, in order to make more easily explicable the lexical differences he detects between the two.

The «terminological innovations» allegedly separating the *MF* and the *TF*, however, are emphatically not such. The feminine active participle *ḥāfiẓa*, as a matter of fact, is used for the retentive faculty of forms not only in the *TF*, but also in the *MF* itself, in two close but unrelated occurrences located in the Fifth treatise of the *Physics* of the *MF* (§435⁶³ and §437⁶⁴ of my Translation)⁶⁵. Moreover, the verbal noun *ḥifẓ* ('retention'), of the same trilateral root, is used in the same sense of 'retaining faculty of forms' (and not of concepts) three more times in the same section of the *Physics* of the *MF* (§436, §439, §441 of the Translation)⁶⁶. Since Janssens is certainly right in stating that the term *ḥāfiẓa* is rather used to designate the faculty of memory in Avicenna's psychology, al-Ġazzālī's usage – in both the *MF* and the *TF* – of the root *ḥ-f-ẓ* as antonomastically referring to the retentive faculty of forms (*i.e.* the *muṣawwira* or *mutaṣawwira*) rather than to memory seems to be a noteworthy, specific feature of the theologian's own – and likely mature – philosophical lexicon. This technical usage is by the way perfectly explainable on the basis of the generic sense of the word

⁶⁰ Written by al-Ġazzālī «in his student days» (JANSSENS 2003^b: 43).

⁶¹ And not «a notion», as Janssens misleadingly puts it, since what is at stake is precisely the linguistic expression, and not the concept, or notion.

⁶² JANSSENS 2003^b: 44-45 (emphasis added). From the quoted passage it also emerges clearly that Janssens does not conceive at all for the *MF* the possibility of a later dating than the *TF*.

⁶³ *Physics* V.5, Translation, §435: «If then that form [*šūra*] is a particular [form] which falls in the soul from the conception, [if] the retaining [faculty] [*ḥāfiẓa*] retained it [*scil.* the «form» mentioned *supra*] according to its way, and [if] the imaginative faculty, which imitates the things by virtue of the representation, has not acted without restriction, then this vision is truthful and does not need an interpretation».

⁶⁴ *Physics* V.6, Translation, §437: «When the imaginative [faculty], with its restlessness, has already strengthened for a [certain] cause, then it does not cease to imitate and contrive forms [*šuwār*] which have no existence and which remain in the retaining [faculty] [*fi l-ḥāfiẓat*] until the sleeping [person] wakes up».

⁶⁵ Janssens does not consider any of these occurrences, probably because he only focuses on the explicit formulation of the doctrine of the internal senses in *Physics* IV.2.2 (§§394-401 of my Translation), and not on the many other cases in the *MF* in which an inner sense is mentioned outside that specific section.

⁶⁶ Cf. *infra* the Commentary *ad locos* for more specific indications of the context(s) in which the expressions occur.

ḥāfiẓa, which in itself only means ‘retaining’ or ‘retentive’. Al-Ġazālī’s application of it to the retentive faculty of forms [*ṣuwar*] is thus not more arbitrary than Avicenna’s own restricted application of the same term to the retentive faculty of concepts [*ma‘ānī*] (*i.e.* memory), and only the preconceived assumption of an utter lack of philosophical sensitivity on the part of al-Ġazālī could justify an interpreter’s resistance to acknowledge as much. Far from being a decisive ground of separation between the *MF* and the *TF* – accordingly useful to assess the presumed chronological distance between the two texts, as per Janssens’ reconstruction –, the terminology of the inner senses appears, on the contrary, as an important connective ground between al-Ġazālī’s expository and his refutative work. Apart from the internal senses, moreover, other positive similarities between the formulations of the *MF* and the *TF* can be detected elsewhere in the two texts, from the widespread common usage of the lexicon of angels – documented in detail in a subsequent section of this Introduction⁶⁷ – and up to the presence, in the two works, of identical phrases and tournures⁶⁸. Among these similarities, it is extremely noteworthy that al-Ġazālī gives, as examples for logical matters he expounds in the *MF*, precisely the three doctrines the rejection of which he charged of unbelief [*kufr*] in the *TF*, namely the origin in time of the world, God’s knowledge of particulars, and the resurrection of bodies⁶⁹.

What precedes, if it is warranted, also goes – at least in part – against Griffel’s own way of addressing the problem of the dating, inasmuch as Griffel takes Janssens’ conclusion on the discrepancy between *TF* and *MF* for granted, and simply proceeds to solve the conflict which (allegedly) results from it the other way round – that is, not by presupposing an early dating, but, on the contrary, by envisaging a very late one, which would equally allow for a long interval of time between the two works. The occurrence of the ‘conjunctive’, idiosyncratic term *ḥāfiẓa* in the sense of ‘faculty of forms’ in both the *MF* and the *TF* seems however to dissolve the gist itself of the argument for separation as advanced by Janssens, thus also dissolving, in turn, the strongest reason for assuming a chronological distance between the two works. Admittedly, however, Griffel’s position is much finer and more nuanced than Janssens’ one, both because (i) he relies more on the content discrepancy (*i.e.* the difference in the reported/criticised teachings) than on the terminological distinction (as opposed to Janssens’ emphasis on the lexical issue)⁷⁰, and because (ii) his explanation allows to account

⁶⁷ Cf. *infra*, §1.7.2. *Angels and Intellects*; see in particular Tables 13 and 14 on the angelic lexicon in the *MF* and the *TF*.

⁶⁸ Some similarities between the treatment of God’s knowledge of particulars in *MF*, *Metaphysics* III.b.6 (cf. *infra*, Translation, §§212-213) and the Thirteenth discussion of the *TF* are also noticed by AL-AKITI 2009: 65-66 fn. 34, in explicit contrast to Janssens’ theses as expressed in JANSSENS 2001: esp. 10. Some arguments advanced by al-Akiti are however based on his debatable assumption that the work found in the London manuscript and studied by GRIFFEL 2006 is a further version of the *MF*, based however on the *Šifā’* rather than the *MF*. Some further information on the complex issues relative to the so-called *Maḍnūn* corpus of al-Ġazālī’s writings will be given *infra*, §2.1.2.

⁶⁹ The pivotal presence of these examples, immediately relatable to the *TF*, was already noticed in several contributions (cf. in particular BERNAND 1990: 232-233; SHIHADAH 2011: 88; SIGNORI 2018: 370-371). I further discuss this important evidence for an underlying anti-Avicennan spirit of the *MF* below, in section §1.8.2, on *Anti-Eternalist Examples: Changing Avicenna from Within*.

⁷⁰ See GRIFFEL 2006: 9: «A critical comparison reveals, however, that the two texts use different terminology and that the teachings presented in the *Maqāṣid* are not in line with those reported and criticized in the *Tahāfut*. Ibn Rushd already complained about this discrepancy. The *Maqāṣid* does not offer adequate assistance to students looking to understand al-Ghazālī’s *Tahāfut*. The *Maqāṣid*’s reports of philosophical teachings show no

more naturally for the absence of any mention of the *MF* in the *TF* – in Griffel’s reconstruction, the *MF* would simply not have yet been written at the time of composition of the refutative work.

This second reason (ii) for a later dating of the *MF* than the *TF* seems to me very strong, and in itself difficult to counter unless through some further, and onerous, assumptions. However, it does not seem to me as necessary to also assume a *much* later dating than the *TF*, as per Griffel’s hypothesis (d). As a matter of fact, the materials discussed above, as well as the overall analysis of the text of the *MF* conducted in this dissertation (and documented in the following sections of this Introduction), persuaded me that a proper gap between the *MF* and the *TF* needs not be assumed. Rather, after careful scrutiny the two works appear to me remarkably close, from both a thematic and a stylistic point of view, while not of course from other admittedly important aspects such as the organization of the subject-matter⁷¹, or the (declared) overall attitude towards *falsafa* as a cultural discourse. The fact that the *MF* presents itself as a mere *reportatio* of the doctrines of the philosophers, while the *TF* spells out its refutative stance, should indeed not obscure the observation that the *TF* does not reject each and every aspect of the theses of the philosophers, but merely aims at showing that these are not necessarily (that is, apodictically) true. At the same time, the *MF* contains subtle – but not less clear and important – statements which reveal al-Ġazālī’s own nuanced (and certainly not slavish) stance apropos some of Avicenna’s doctrines⁷². Under this novel perspective, even one of the most apparent differences between *TF* and *MF* – the presence in the latter of a section on logic, entirely absent in the former – could turn out to be a similarity, since al-Ġazālī is clear in the *Prologue* of the *MF* that he – as an Aš‘arite theologian – has no substantial quarrel with Peripatetic logic⁷³. With a change of the literary genre, this very attitude could well translate into the utter lack of logical refutations in the *TF*, without having to assume any more profound modification in al-Ġazālī’s doctrinal position.

All this considered, alternative (c) sketched above – *i.e.* the possibility of assigning to the *MF* a dating close to the *TF*, but still chronologically later than the refutative work – might look as an appealing way out of the maze of intertwined possibilities hitherto described. Even though no scholar to date seems to have seriously entertained that possibility, option (c) would indeed allow to easily explain the absence of any mention of the *MF* in the *TF*, without however the onerous, and possibly plainly false, assumption of a wide gap – thematic, and in turn also chronological – between the two works. Moreover, hypothesis (c) allows one to keep it in principle undetermined whether the *Prologue* and the *Epilogue* were

evidence of being composed in the perspective of the *Tahāfut*».

⁷¹ The primary level of the organization of the subject-matter heavily differs in the two works: the material of the *TF* is arranged in twenty discussions (sixteen of metaphysical, and four of physical topic), as opposed to the three treatises on logic, metaphysics, and physics (with a great many further subdivisions) in which the *MF* is divided. The important issue of the table of contents of the *MF* is discussed in detail *infra*, §1.4.1, *Divisio textus*, but the entire section §1.4 of this *Introduction* deals with the *Structure* of the *MF*, taking into account its specificities, its models and its consequences.

⁷² On this important issue cf. the most recent reappraisal given by GRIFFEL 2021:

⁷³ This being a statement contained in the *Prologue*, it has less power than the other reasons sketched above for the sake of my overall argument, which tries to do, at least in principle and up to this point, without *Prologue* and *Epilogue* in order to assess the relation of the *MF* to the *TF*, and consequently also the most likely chronology of the former. But cf. *infra* for further discussion, also entailing an argument for the belonging of preface and conclusion to the first and only version of the *MF*.

drafted together with the rest of the work, or rather they were added to the text in a subsequent moment in time. As a matter of fact, hypothesis (c) is in principle not affected by the statements contained in those texts, since it is merely based on (i) the absence of any mention of the *MF* in the *TF*⁷⁴, and (ii) the novel recognition, against the supporters of options (a) and (b), of a positive, constructive similarity between the two works.

An independent argument for the drafting of *Prologue* and *Epilogue* together with the main text of the *MF* could however be advanced, thus further corroborating hypothesis (c)⁷⁵. As first noticed by Ayman Shihadeh, indeed, the *MF* does contain within its core text some signs of the same detached attitude towards the theses of the philosophers that is declared *expressis verbis* in the *Prologue*, and then again in the *Epilogue* of the work⁷⁶. In the presence of such statements deployed within the text, Shihadeh argues, an analogous stance in the introductory remarks appears not only credible, but even in some sense necessary, since it would have been bizarre for al-Ġazālī to slightly, and only surreptitiously, detach himself from the teachings of the philosophers within the text, without a preliminary and programmatic explanation given to the reader in some sort of introduction or preface. To corroborate his argument, Shihadeh refers in particular to a passage located at the end of *Logic* (V.4, §90 in my Translation), and to a second text belonging to the Preface to *Metaphysics* (§91 in my Translation). While both cases do entail, indeed, an implicit reference to the philosophers, quoted indefinitely in the plural of the third person («according to them» [*indahum*] in *Logic*; «their current habit» [*‘ādat^u-hum*] in *Metaphysics*), it is important to stress that the content of al-Ġazālī’s Preface to *Metaphysics* actually comes from Avicenna, since it is a reworking of the analogous statements of the General Preface to the *DN*⁷⁷. Thus, while al-Ġazālī is certainly displaying there as well his attitude of non-commitment towards the philosophers’ theses⁷⁸, it is however true that he is also reproducing a stance ultimately deriving from Avicenna himself as a *ḥaylasūf*, who had deemed it necessary to remark on the atypical ordering of the sciences he was following in the *DN*⁷⁹. This reason of caution notwithstanding, my analysis of the text uncovered in the *MF* several further examples of the very same attitude singled out by Shihadeh. In particular, al-Ġazālī uses many times verbs in the plural third person – such as, most notably, the formula «they said» [*qālū*] – in order to refer to theses of the philosophers. Even more to the point, he sometimes pairs this

⁷⁴ The mirror mention of the *TF* in the *Prologue* and the *Epilogue* of the *MF*, however, would certainly be a further, strong argument for the later dating of the *MF*, if the pertinence of those texts to the core part of the philosophical *summa* were to be ascertained. It is important to stress however that this (i) neither leads us directly into alternative (d) (*i.e.* a very late dating, towards the end of al-Ġazālī’s life), nor (ii) does it imply that alternative (c) for the dating only rests on the hypothesis that *Prologue* and *Epilogue* were written together with the main text. This latter circumstance, for which I give *infra* some arguments, would merely strengthen the overall reasoning here conducted.

⁷⁵ A further, slightly weaker argument for the unity of composition of the paratexts with the main text might be given by the recurrence, in the *Prologue* and in two further places within the core text, of the rare and highly stylistic Arabic expression *mazilla* [or: *mazalla*] *qadam*, for which (and for whose Latin translations, in turn interesting) cf. also *infra*, §2.2. *Latin*.

⁷⁶ SHIHADDEH 2011: 84-87.

⁷⁷ Cf. *infra*, §1.4.2. *The Order of the Sciences*, for a discussion of both Avicenna’s and al-Ġazālī’s passages. SHIHADDEH 2011: 85 fn. 21 also remarks on the Avicennan provenance of «key elements» of al-Ġazālī’s passage.

⁷⁸ As SHIHADDEH 2011: 85 himself aptly remarks.

⁷⁹ The issue of this atypical ordering in both *MF* and *DN* is touched again in §1.3. *A Translation from Persian*, and more explicitly and abundantly in §1.4.2. *The Order of the Sciences*.

attitude with the very characteristic technical verb *iṣṭalahū* («they have technically/conventionally adopted»), which suggests a sharper, semi-critical detachment from the doctrinal tenets there expounded. Finally, al-Ġazālī also uses the term *qawm* («group») to refer jointly to the *falāsifa*, thus emphasising the common belonging of the Peripatetic philosophers to a tradition of thinking in all likelihood not fully endorsed by the writer of the *MF*⁸⁰. If Shihadeh, as it seems to me, is right in linking such ‘detached’ ways of referring to the *falāsifa* in the third person to the programmatically uncommitted account envisaged by al-Ġazālī in the *Prologue* and the *Epilogue*, all this material is in itself further evidence for the belonging of introduction and conclusion to the original drafting of the text of the *MF*, and thus also for dating the composition of the work in a period of time posterior to that of the *TF*. The references to the latter work contained in the *Prologue* and the *Epilogue*, therefore, would be prospective only in the sense of an envisaged (or even merely advisable) order of reading, and not of a proper order of composition of the two works.

All the above, however, is not either tantamount to assume that the *MF* and the *TF* were written in explicit and indissoluble connection to one another, and that the *MF* is thus an actual premise, or logical preamble – albeit written later – to the refutation contained in the *TF*, as envisaged by the supporters of traditional option (b). This, indeed, would entail the presupposition of too stark a correlation between the two works, which, despite their similarities, are also admittedly different in many crucial aspects, and would arguably have been written by their author in a different way, had they really been conceived *ab ovo* as correlated parts of one and the same book project. More simply, the *MF* could well represent another aspect of al-Ġazālī’s complex interplay with Avicennan *falsafa*, different from the *TF* as for scope and rhetorical presentation of the arguments, but nonetheless belonging to a contiguous, and certainly mature, phase of the theologian’s outstanding intellectual career. The specifics of this chronological collocation could then arguably vary, even on a

⁸⁰ Cf. *infra* the section of this Introduction devoted to the explicit (nominal and indefinite) quotations occurring in the *MF*, under the heading §1.6.2. *Indefinite Descriptions*. In particular, the texts from the end of *Logic* and the beginning of *Metaphysics* discussed by SHIHADÉH 2011 are reported in Table 11 in that section under numbers [15] and [16]. Occurrences of *qālū* with the philosophers as implicit subject are for instance to be found at numbers [52], [57], [59], [67] and [68], to which one could add the further occurrences referring to «dialecticians» and other logicians (not necessarily Peripatetic) at [6], [8], and [9]. As for *qawm*, it appears as an indefinite description of the *falāsifa* at numbers [31], [38], [40], [45], [55], [56], [65], and [72]. Among these differentiated occurrences, numbers [38] and [45] appear particularly noteworthy, since they contain the expression *fi iṣṭilāḥi l-qawmī*, i.e. «in the technical usage of the group [of the philosophers]», with the same trilateral root of the verb *iṣṭalahū* mentioned *supra* (and reported at occurrence number [17] in Table 11), which, as I have argued, implies a stronger, semi-critical detachment with respect to the philosophers than their mere mention in the third person. The recurrence of the VIII stem of the root *ṣ-l-ḥ* in the lexicon of the *MF* is in itself a very interesting feature of al-Ġazālī’s vocabulary in this work, and as such it is studied in detail in section §1.7.1. *What’s in a Name? Technical Usage and Lexical Convention* below. In occurrence number [40], moreover, *qawm* appears in the context of a very interesting statement concerning the different language (*luġa* or *lisān*) employed respectively by philosophy (here precisely represented by the word *qawm*) and revelation [*ṣarʿ*] as far as the separate substances which move the heavens (intellects for the one, angels for the other tradition) are concerned. I discuss this important issue in §1.7.2. *Angels and Intellects* below, where this crucial passage is reported as number [12] in Table 13, and again as Text 26. The usage of *al-qawm* in the sense of *al-falāsifa* is also registered by Maurice Bouyges, in his Index A to the Arabic edition of Averroes’ *Tahāfut al-Tahāfut* (BOUYGES 1930^b: 605^a and fn. * *ad l.* 124), as the most frequent in Averroes’ work, with only a few exceptions to this generalized *usus*. Since Bouyges did not consider the *lemmata* of al-Ġazālī in his compilation of the indices (see BOUYGES 1927: 599), the indication is to be taken as valid for Averroes’ own formulations, which might then have inherited here a usage already typical of his adversary.

relatively long span of time. Notably, on the one hand, the *MF* could have been drafted immediately after the *TF*, or even roughly at the same time as the refutation, but with the important *caveat* that al-Ġazālī conceived it, early on in its composition, as substantially independent from the refutation (in the sense of not being directly preparatory to it). This crucially distinguishes hypothesis (c) from the traditional alternative (b), even under the extreme assumption of a contiguous drafting of the two works.

At the opposite point of the chronological span in principle covered by (c), the *MF* could also pertain to a phase close to that envisioned by Griffel in his hypothesis (d) (around 1107, as the *Munqid*), but with the equally important *caveat* that, if the reason for holding this is only the *verbatim* similarity of the *Prologue* with the autobiography, this similarity – although undeniable – is in itself not enough to assume a very late dating of the *MF*. First of all, as a matter of fact, it could be the *Munqid* to depend on the *Prologue* of the *MF*, and not vice versa, and this would leave it undetermined how long before the autobiography the latter was drafted. Moreover, even if it is the *Prologue* to depend on the *Munqid*, then this circumstance would in principle only date the *Prologue* (and arguably the *Epilogue*), but not the entire work. By contrast, the arguments for the middle-late dating here suggested – despite being corroborated by the pertinence of the introduction and the conclusion to the original drafting of the *MF* – are in principle independent from it. A further reason to avoid taking the similarities between *MF* and *Munqid* as compelling chronological proofs is suggested by the fact that in the *TF* itself – for which we have an absolute dating twelve years earlier than the *Munqid* – important analogies with the autobiography are to be found. A glaring example of these resemblances is the reasoning in the Fourth introduction of the *TF* that concerns the philosophers' surreptitious linking of their obscure metaphysics with the certainty achieved in mathematics and logic⁸¹. This connection, in reality unwarranted, is a smart strategic move on the part of the *falāsifa*, since it gives to the inexperienced student the false impression of an equally apodictic character of metaphysical and mathematical arguments, thus enticing him or her to an uncritical adherence to *falsafa*. Analogously, al-Ġazālī complains in the *Munqid* about the risks of mathematics, which do not lie in the teaching of errors – virtually absent from its demonstrations – but rather precisely in the danger of luring unskilled beginners into the lair of philosophical metaphysics⁸².

A last hypothesis must be taken into account here, *i.e.* the possibility that the core text itself of the *MF*, and not only the introductory and conclusive statements, might have been subject to a stratified redaction process. Specifically, a version of this hypothesis was maintained by Gabriel Reynolds in an important paper for the contemporary study of the *MF*⁸³. In his 2002 contribution, Reynolds argued that the Fifth treatise of the *Physics* of the *MF* is a later addition to the project of al-Ġazālī's *summa*. Given that one of my main arguments for dissolving Janssens' thesis of the terminological gap between the *MF* and the *TF* pointed precisely at an identical usage of the term *ḥāfiẓa* in *TF*, Discussion 18, and *MF*, *Physics* V⁸⁴, the assumption of a later drafting of just this Fifth treatise of the *Physics* would possibly be disruptive for that part of my reasoning. Hence, it is important to discuss, and hopefully to

⁸¹ Cf. *TF*, [Fourth] introduction, ed. MARMURA 2000: 8-9; cf. also a further parallel passage to the same effect in *TF*, [First] introduction, MARMURA 2000: 4.

⁸² Cf. *Munqid*, ed. BİĠŪ 1992: 46.4-48.2, English translation in WATT 1964: 33-35.

⁸³ REYNOLDS 2002: 36-37.

⁸⁴ See *supra* in this section.

discard, this possibility here⁸⁵.

Reynolds' argument is chiefly based on two very different considerations: (i) the material fact that in al-Ġazālī's Preface to the *Physics* only the topics of treatises I-IV are listed⁸⁶, while the subject-matter of the Fifth treatise is missing, and (ii) the distinctive maturity of thought he himself detects in that treatise of the *MF*⁸⁷. Reynolds draws from this circumstance the conclusion that «[i]ndeed, the fifth article seems to better reflect Ghazzālī's fully developed thought. It seems quite possible that he later returned and added this article to the *Physics*, without editing the list of contents in the beginning of the *Physics*»⁸⁸. In my opinion, such an inference is however untenable, since the Fifth treatise of the *Physics* of the *MF* almost perfectly corresponds to the final sections of Avicenna's *DN*, as can be seen by the Table of comparison between the *MF* and the *DN* given in *Appendix 1* below⁸⁹. While Reynolds does not ignore this circumstance⁹⁰, he is not convinced that it bears any real importance for the sake of his argument.

As opposed to Reynolds' assessment, however, I do think that the overall unity of the *MF* as a systematic *summa* of philosophy is substantially highlighted, and corroborated, by the fundamental unity of its main source: why indeed should al-Ġazālī have reproduced the end of the *Physics* of the *DN*, almost *verbatim*, only at a second stage, and not in the first stage of the composition of his text, which substantially depends on Avicenna's Persian *summa* throughout⁹¹? I am therefore persuaded that this circumstance has a stronger demonstrative value than the absence of an explicit reference to the Fifth treatise in al-Ġazālī's introduction to the *Physics* of the *MF*, which can be easily explained as a material *lacuna*, by the way not onerous to assume, given the brevity of the topic descriptions in that preface⁹². Such a minimal material absence certainly does not legitimate, in itself, the

⁸⁵ I have already critically discussed Reynolds' argument, although briefly, in a previous contribution, some of whose reasonings are repeated and expanded here: cf. SIGNORI 2020^a: 82-83.

⁸⁶ That is, «(1) bodies, form, matter, motion and place; (2) the simple body; (3) compounded and mixed bodies; and (4) the soul (*nafs*) of plants, animals and humans» in the summary given by REYNOLDS 2002: 36. Cf. DUNYĀ 1961: 303,15-21, corresponding to §315 in my Translation (and see also the Commentary *ad locum*, of which I reproduce a section in the following fn. 86).

⁸⁷ This absence is also mirrored in the Latin translation, but with some important precisions to make. The Latin tradition is also a witness, indeed, of a form of the text which does mention five treatises, sometimes also introducing a short description, missing in Arabic, for the fifth treatise. This happens in particular in the Renaissance edition printed in Venice in 1506 by Petrus Liechtenstein, which Muckle consulted in copy Paris, BNF Reserve 809 (see MUCKLE 1933: IX and 130) and which reads «in quinque tractatibus» (anastatic reprint by LOHR 1969: 89^b2; page not numbered in the edition) and later, after the indication of the topic of the fourth treatise, «Quintus est de eo quod fluit in anima ab intelligentia agente» (LOHR 1969: 89^b9-10). The same situation is represented by ms. Paris, BNF lat. 16605, which analogously reads *in quinque tractatibus* (fol. 52^v) and also adds in a marginal note the indication of the topic of the fifth treatise (*quintus de eo quod fluit in animam ab intelligentia agente*). This latter formulation, with the accusative *animam* rather than the ablative *anima*, is identical to the title given for the Fifth treatise in ms. Prague, Bibliotheca Capituli Metropolitani, O.1 (1585) (fol. 1^r: *Tractatus quintus de eo quod fluit in animam ab intelligentia agente*). Moreover, ms. Paris, BNF lat. 16096, which is the sole known witness of the general Prologue of the *MF* in Latin translation (cf. *supra*, §1), omits the summary of the contents of the various treatises, but correctly reads, at the beginning of the passage, *in V tractatibus* (fol. 108^{ra}).

⁸⁸ REYNOLDS 2002:

⁸⁹ See also *infra*, §1.4.2, for further discussion.

⁹⁰ See REYNOLDS 2002: 37 fn. 6.

⁹¹ The role of the *DN* as the main source for the *MF* is discussed in its own right in the following section of this Introduction: §1.3. *A Translation from Persian*.

⁹² Cf. *infra*, Translation, *Physics*, Preface, §315 (and see the Commentary *ad locum*).

drawing of as burdensome conclusions for the overall composition of the *MF* as those sustained by Reynolds. Thus, it neither allows one to assume, for the time being, a stratified redaction of the core text of the *MF*, and it conclusively seems to have no serious consequences on the dating arguments expounded in this section.

While further, hard external evidence – for instance and hopefully, the discovery of dated manuscripts of the *MF* – could certainly alter substantially the aforementioned hypotheses in the future, the preceding arguments based on internal evidence and on textual comparison look for now the most solid at our disposal. As shown above, they lead altogether to conceive for the *MF* a dating subsequent to the publication of *TF* in 1095, but not necessarily as late as the autobiography of 1107. This late-middle period appears thus for the time being as the most likely chronological collocation for al-Ġazālī's encyclopaedia of Avicennan philosophy, which shows many signs of the maturity of thought of its author, of his already sure command of the philosophical subject-matter, and of his subtly critical and reflective attitude towards at least some tenets of the *falāsifa*. I find it important to stress in conclusion that the ability required for such a nuanced interplay, as well as for such an effective presentation of the doctrines of philosophy, can hardly be attributed to an early, scholastic phase of al-Ġazālī's production, while it fits much better in a mature stage of his intellectual development.

1.3.

A Translation from Persian

The best way to approach the systematic study of the *MF* is probably to consider at first its main known source, Avicenna's Persian encyclopaedia *Book of Science for 'Alā' ad-Dawlā*⁹³ [*Dānešnāme-ye 'Alā'ī*] (henceforth *DN*)⁹⁴. The *DN* is likely the least studied of Avicenna's *summae*, despite its great historical and doctrinal interest. As a matter of fact, it constitutes one of the very first, and certainly the foremost, example of philosophical production in Persian *darī*, and it bears as such a peculiar historical importance. It was written by Avicenna around 1027⁹⁵ at the request of 'Alā' ad-Dawlā (d. 1041), the Kākūyid ruler of Iṣfahān, in the service of whom the philosopher had found since 1023 a relatively stable position, which has been described in scholarship as «a sort of tenured appointment»⁹⁶.

⁹³ GUTAS 2014: 118 translates the title – perhaps given to the work by Avicenna's secretary al-Ġūzġānī rather than by the master himself – as *Philosophy for 'Alā' ad-Dawlā*, basing himself on the equivalence between Persian *dāneš* and Arabic *'ilm*, but in the sense of *ḥikma* = philosophy. Gutas quotes to this effect the Arabic rendition of the Persian title as *al-Ḥikma al-'Alā'īyya* in Bahmanyār's *Kitāb al-Taḥṣīl*, for which cf. *infra*, Text 4. A further parallel is given by the title of Avicenna's earliest *summa* of philosophy, *al-Ḥikma al-'Arūḍīyya*, which is construed in the exact same way as Bahmanyār's rendition of *Dānešnāme-ye 'Alā'ī*, and which Gutas also translates with the term 'philosophy' [*Philosophy for 'Arūḍī* (i.e. the 'Prosodist')].

⁹⁴ See the Persian editions of the *Manṭiq* (*Logic*) by MEŠKĀT [1952]; of the *Ṭabī'īyyāt* (*Physics*) by MEŠKĀT [1952]; of the *Ilāhīyyāt* (*Metaphysics*) by MO'IN [1952]. The *Logic* and the *Metaphysics* are also edited together in ḤURASĀNĪ 1981. An excellent complete translation of the *DN* is available in French in ACHENA-MASSÉ (I) 1955, (II) 1958. The *Logic* and the *Metaphysics* of the *DN* can also be read in an English translation: see respectively ZABEEH 1971 and MOREWEDGE 1973. The *Physics* was partially translated into English in an unpublished PhD dissertation by JAUHARI 1987. The Persian edition of the *Mathematics* is quoted by GUTAS 2014: 574 (Bibliography, first entry in the page) as follows: «*Rīyāḍīyyāt. Dānešnāme-ye 'Alā'ī*, ed. by M. MĪNOVĪ, Anjoman-e Āṭār-e Mellī, Tehran, 131Š/[1952]». However, the edition is neither quoted by DABASHI 1993, nor by OMIDSALAR 2015. GRIFFEL 2006: 11 fn. 35 moreover writes: «Only the three parts on logics [*sic*], metaphysics, and natural sciences were authored by Ibn Sīnā and are edited». Furthermore, and more importantly, it is not employed by Achena and Massé, either, even though their French translation – appeared between 1955 and 1958, *after* Mīnovī's edition – is the only version which takes into account the complete *DN*, including the *Mathematics*. The two translators, on the contrary, declare in the *Préface* to the second volume of their work: «...le texte persan de la quatrième et dernière partie [i.e. the *Mathematics*] reste inédit. Nous l'avons traduit en utilisant d'abord la copie d'un manuscrit qui ne contient ni l'arithmétique ni les figures de géométrie et d'astronomie. M. Khorāsānī, professeur à la Faculté des Lettres de Méched, mit généreusement à notre disposition cette copie qu'il avait faite en collationnant d'autres manuscrits. Deux manuscrits du British Museum et un manuscrit de la Bibliothèque du Madjlis (Téhéran) fournirent le texte de l'arithmétique, mais non les figures dont l'absence gênait fort l'intelligence et la traduction de la géométrie et de l'astronomie» (see ACHENA-MASSÉ (II) 1958, *Préface*: 5).

⁹⁵ The tentative dating is in GUTAS 2014: 118, following a preliminary assessment by MAHDAVĪ 1954: 101.

⁹⁶ Cf. REISMAN 2003: 96. *Ivi*: 93, Reisman also speaks of «respectable employment» to describe Avicenna's service at 'Alā' ad-Dawlā's court. The reasons for these cautious expressions are those expressed by BURNEY 1956: 41 and repeated by REISMAN 2003: 93 fn. 7, namely that there is no specific historical evidence to describe Avicenna's appointment with the Kākūyid governor as a vizierate. As recalled by both GUTAS 1987: 326 and fn. 9 and REISMAN 2003: *ibidem*, the French Arabist Claude Cahen also cast some doubts on Avicenna's alleged (by al-Ġūzġānī) previous appointment as the vizier to the Būyid Šams ad-Dawlā, on the grounds i) that vizierate was usually reserved to those who had served in the administrative ranks (and not to generic *savants*, as great as they might have been), and that ii) no other chronicle (apart from al-Ġūzġānī's testimony) attests for Avicenna such a role: cf. CAHEN 1952: 81. The interesting historical circumstance that Cahen's article was published in an explicitly

Despite belonging to a certainly minor dynasty⁹⁷, the Šī‘ī ‘Alā’ ad-Dawlā was not himself a secondary figure in the chaotic situation, heavily subject to political turmoil, of the Islamic East in the years of Avicenna. Rather, he performed an important function of cultural patronage, as well as playing a more partial and discontinuous, though still relevant, role as a military bulwark to the expansion of the Sunnī Ġaznavids in the Western regions of the Islamic domain⁹⁸. The alternate fortunes of the Kākūyid rule of Iṣfahān and the related territories, in the form of a vicissitude of battles won and lost, brought a certain insecurity to Avicenna’s long stay – up to his death in 1037 – at the court of ‘Alā’ ad-Dawlā, which is expressed in partly reliable and partly anecdotal fashion in the historical sources concerning Avicenna’s life, and the fate of his books⁹⁹.

The fact that the *DN* was written in Persian, and in a courtly environment, is by no means ancillary for the understanding of the peculiar status of the *MF*. First of all, the courtly destinatory of Avicenna’s book can be seen as a reason for the Persian encyclopaedia’s relatively slender size, with respect to extremely more ponderous *summae* by Avicenna, such as, most notably, the all-encompassing *Kitāb al-Šifā’* [*Book of the Cure/Healing*]¹⁰⁰. This manageable size could have been appealing to a theologian interested in philosophy such as al-Ġazālī, although it cannot have been the sole reason for choosing the *DN* as a model over texts of comparable size and scope such as, for instance, the *Kitāb al-Nağāt* [*Book of Salvation*]¹⁰¹. More generally, there were many *summae* of Avicenna entirely composed in Arabic, which was undoubtedly the main language of culture in all Islamicate lands. Precisely those texts, then, could have been used by al-Ġazālī as the most natural sources for his own project of an Arabic work on philosophy. In contrast with these *prima facie* more immediately accessible sources, the common Persian ancestry of both al-Ġazālī and Avicenna, and the consequent perfect Arabic-Persian bilingualism that in all likelihood characterized both thinkers, was potentially an important factor that prompted (or favoured) al-Ġazālī’s selection of the *DN* as the main source for his *MF*¹⁰².

Marxist journal in the France of the Fifties would deserve a supplement of historiographical reflection, also in connection with the appearance, in that same year 1952, of the famous *Avicenna und die aristotelische Linke* by the Marxist philosopher Ernst Bloch (see *infra* in this paragraph for his cursory, but interesting, citation of the *DN*).

⁹⁷ For the history of the Kākūyid dynasty in its broader context cf. the accurate studies by BOSWORTH 1970 and BOSWORTH 1996: esp. 160 ff, also quoted in REISMAN 2003: 93-94 and fn. 8.

⁹⁸ For this acknowledgment cf. REISMAN 2003: 94-95; for a broader aperçu on ‘Alā’ ad-Dawlā’s historical figure cf. also BOSWORTH 1984, together with the more encompassing studies by the same author quoted *supra* in fn. 97.

⁹⁹ The by now several times quoted article by REISMAN 2003 deals in particular with two accounts of loss of Avicennan books during this period: the first in the form of a rifling of Avicenna’s saddlebags in 1030, during the master’s flight from Iṣfahān, with consequent loss of four books of his; the second in the form of a plunder of Avicenna’s library in Iṣfahān in 1034. While the first story is deemed by Reisman to be credible, the second anecdote is in all likelihood historically unreliable.

¹⁰⁰ While the Cairo edition of Avicenna’s *Šifā’* comprises more than 5000 printed pages, the *DN* – even with the addition of the four mathematical sections by al-Ġūzġānī – ‘only’ reaches the 464 (vol. I: 225, vol. II: 239) printed pages in the complete French translation of the work. In the Persian original, the three sections which I could directly consult amount in total to 476 pages (165 *Mantiq*, 165 *Ilāhiyyāt*, 146 *Ṭabī‘iyyāt*), although the different editions differ in the mise en page, making it more difficult to gauge at a glance the relative size of the various sections.

¹⁰¹ GUTAS 2014: 118 aptly insists on the structural similarity between the *DN* and the *Salvation*, which are also associated in that the mathematical section of both was added by al-Ġūzġānī.

¹⁰² It is worth mentioning here – just to reject it immediately – the hypothesis that has been advanced by AL-

In this regard, an interesting, though merely formal, aspect of the relationship between the Persian *DN* and the Arabic *MF* is that Persian loanwords seem indeed to be present in the text of the latter work¹⁰³. While these could in principle be due precisely to the interference of Persian – as al-Ġazālī’s mother tongue – with Classical Arabic, even without the necessity of recurring to the *DN* for explanation, the perceivable textual dependence of the *MF* on such a Persian source (which can be assessed, as we will see, on independent grounds) can also be of use for explaining the linguistic asset of the treatise. Most notably, in at least one case a sentence is directly reported in Persian within the Arabic prose of the *MF*.

TEXT 3. al-Ġazālī, *MF*, *Logic* III, §27

Likewise, sometimes one errs in the categorical [*scil.* proposition] and believes that your saying, in Persian, «Zayd is not seeing» [D58] is a negative [proposition], [when] it [actually] is affirmative, since its concept is that he is blind. In Arabic, one may say: «Zayd is non-seeing», [this being an] affirmative [proposition]. [...] This is more apparent in the language of the Persians.

وكذلك قد يغلط في الحملية ويظن أن قولك: «زيد نا بينا است» بالعجمية [D58] سالبة، وهي موجبة؛ إذ معناه أنه أعمى، وربما يقال بالعربية: زيد غير بصير، وهي موجبة. [...] وهو في لغة العجم أظهر.

The example of the Persian clause *Zayd nā bīnā ast*, as opposed to the Arabic equivalent *Zayd ġayr^u baṣū^m*, is functional to the recalling of the different Persian expression *Zayd nīst bīnā*¹⁰⁴, which affixes the particle of negation to the verb [Persian *nīst*, lit. ‘is not’] rather than to the adjective [Persian *nā bīnā*, or, in univerbed form, *na-bīnā*]. According to al-Ġazālī’s exposition, this peculiarity of Persian language allows one to grasp in a better way the logical distinction between an affirmative proposition (in which the predicate expressed by the verb is applied to the subject) and a negative one (in which the predicate is denied of the subject), thus avoiding the confusion that can arise when a morphologically

AKITI 2009: 53 fn. 6 to the effect that the work attributed to al-Ġazālī and discovered by Frank Griffel in MS London, British Library, Or. 3126 (GRIFFEL 2006) should be considered as a version of the *MF* based however largely on the *Kitāb al-Šifā’*, rather than on the *DN*. This assessment seems however at odds with both the structure and size of the work studied by Griffel, which deals only with metaphysics, is nonetheless longer than the *MF* taken altogether, and displays moreover a subdivision in seven treatises not easily comparable with the internal divisions of the *MF*: cf. GRIFFEL 2006: 11 and see also *ivi*: 34-37, *Appendix I*, for a table of contents of the work. On the *divisio textus* of the *MF* cf. *infra*, §1.4.1.

¹⁰³ At *Physics* II.3, §345 of my Translation, al-Ġazālī uses the expression *min razūnat^m*, which I translated as «from the window». The word *razūna* is not attested in WEHR’s dictionary, although it is registered in BEHNSTEDT-WOJDICH 2012: 77 (number 201, s.v. *Fenster*), as Egyptian form with the meaning of ‘smoke outlet’ («Rauchabzug»), from Persian *rūzan* (or *rawzan*; cf. STEINGASS 594, s.v. روزن: «*rozān, rauzan*, A window; an aperture in the middle of the house for allowing the smoke to escape, a louvre-window; (in fortification) a loophole, an embrasure»). LANE 1079^b attests for Arabic the forms *rawzan* or *rawzana*, with the meaning of ‘hole’, ‘perforation’, ‘aperture’ or ‘window’, and classifies them together as an «arabicized word» coming from Persian. The *razūna* of the *MF* could thus be also seen as a misreading for *rawzana* (with a well-possible inversion of ز and و). Further in the text, Dūnyā prints the masculine form *razūn*, which once again could be emended in *rawzan* following Lane’s indication (less likely, but not to be excluded *a priori*, is the hypothesis that it might instead be a plural form, ‘windows’). The forms *rawzan/rūzan/razūn* and *rawzana/rūzana/razūna* could thus probably be seen as Persian loanwords in the text of the *MF*, offering a further confirmation of its origin in the Persian *DN*.

¹⁰⁴ Actually appearing in Avicenna, *DN*, ed. MO’IN-MEŠKĀT 1952: 38.2.

negative predicate (such as «non-seeing») is applied affirmatively to a certain subject. In Arabic, the absence of the copula in sentences like these adds difficulties to the difficulty, because the negation *jayr* is attached directly to the adjective (in this case, *baṣīr*), without possibility to distinguish, in principle, between the affirmative form «A is non-x [e.g. 'non-seeing'] (which is tantamount to «A is y» [e.g. 'blind']»), and the negative form «A is not x», by contrast not reducible to an affirmation.

Given the perfectly parallel passage in Avicenna's *DN*, this text of the *MF* is particularly instructive as a further confirmation of the genesis of the Arabic *MF* from the Persian *summa* in itself, against the recent interpretations that would rather see it as deriving instead from an Arabic *Ur-DN*, or in any case from another intermediate text written in Arabic by Avicenna (or else by an early Avicennist close to the teachings of the master)¹⁰⁵. While it is clear that a comparison with Persian morphosyntax in order to explain a philosophical notion could also appear in an originally Arabic text written by Avicenna himself, for the aforementioned very good reason that the Ṣayḥ al-ra'īs did master both Arabic and Persian, it must not be overlooked that the same certainly applies to al-Ġazālī, as well¹⁰⁶. The interpreter, then, should not undermine *a priori* the possible autonomy of analysis of al-Ġazālī with respect to Avicenna, also on issues of linguistic pertinence – and we will indeed see in a subsequent section how important lexicon is for the global understanding of the theoretical stance of the *MF*¹⁰⁷. On the other hand, and perhaps more importantly, the reader facing an explicitly Persian inclusion in al-Ġazālī's Arabic text – a phenomenon of alloglossy certainly not very frequent in philosophical texts as such – is naturally led to trace back that inclusion to the main source of the text itself – as known for other reasons of textual correspondence –, which is demonstrably the Persian *DN*¹⁰⁸.

As a matter of fact, the dependence of the *MF* on the *DN* in terms of an actual translation, though interpretative it may be, was first pointed out, to the best of my knowledge, by Seyyed Hossein Nasr back in 1964, although in a very cursory manner¹⁰⁹. In 1986, Jules Janssens has convincingly demonstrated the claim in a capital article for the study of the

¹⁰⁵ Cf. *infra*, fn. 107, for bibliography on this issue. As for the different hypothesis that the *DN* itself derives from the collection and translation into Persian of previous Arabic materials written by Avicenna, and also gathered in the *Ta'liqāt*, cf. JANSSENS 1986: 164-165; JANSSENS 1997^b: 110 fn. 6; JANSSENS 2012^b: 202 and fn. 4; GUTAS 2014: 119.

¹⁰⁶ Al-Ġazālī himself also wrote works in Persian, such as the ethical treatise *The Alchemy of Happiness* [*Kīmīyā-ye sa'āda*] (ed. KHADIVJAM 2003), the Persian letters [*Mukātabāt*] he addressed to various governors and other prominent political figures (German translation in KRAWULSKY 1971), and the political *speculum principis* titled *Naṣīḥa al-mulūk* (also transmitted in Arabic version and translated in English in BAGLEY 1964). NASR 1975: 70 also mentions a Persian treatise on eschatology [*Zād-i āḥirat*] penned by al-Ġazālī, as well as a Persian original – the *Farzand-nāme* – of the Arabic ethical *Letter to a disciple* [*Ayyuhā l-walad*].

¹⁰⁷ See *infra*, §1.7, *Lexicon*.

¹⁰⁸ Together with the original studies quoted in what follows, see the more recent assessments by AL-ĀKHTI 2004: 197 fn. 23; JANSSENS 1993: 31 fn. 3; GUTAS 2014: 119 and fn. 4. *Contra*, and for the rather surprising statement that «[a]l-Ghazālī source, or sources, for his *Maqāṣid al-falāsifa* are not known» (!), cf. MADELUNG 2007: 334. Madelung goes on to say: «It has been suggested that he used and adapted Ibn Sīnā's Persian *Dānīsh-nama-yi 'Alā'ī*. While there is certainly substantial agreement between the contents of the *Dānīsh-nāma* and al-Ghazālī's exposition, it is, however, not close enough to identify it as al-Ghazālī's main source or even an immediate source». While Madelung is right in underlining the partial autonomy of the *MF* with respect to the *DN*, denying that Avicenna's work can even be considered an important source for the *MF* strikes me as a curiously hyperbolic statement, which is in all likelihood simply false.

¹⁰⁹ Cf. NASR 1964: 148 fn. 5

*MF*¹¹⁰, which discusses in some detail the correspondences between single sections of al-Ġazālī's and Avicenna's texts, with useful tables of comparison between the Arabic writing and its Persian source. Both Nasr's and Janssens' assessments, however, follow some fundamental preliminary indications by Manuel Alonso Alonso, who presented the first systematic comparison between the *DN* and the *MF* in the introduction to his groundbreaking Spanish translation of al-Ġazālī's text, showing persuasively the capital importance of the former text as a source for the latter¹¹¹. Before Janssens' article, in 1972, the relationship of the *MF* and the *DN* had been further studied by Ghanem-Georges Hana¹¹².

The faithfulness of al-Ġazālī's work to Avicenna's Persian *summa* can indeed be measured both at a macroscopic and a microscopic level, since al-Ġazālī thoroughly follows the peculiar general ordering of the *DN* – with a first section on logic, then one on metaphysics, and finally one on physics¹¹³ –, while also remaining tight to his model in many matters of detail. It is therefore possible to make a very close comparison between the two works, showing the broad correspondences between large sections of the text, all the way down to the borrowing of single arguments in very specific portions of the treatise. This network of correspondences is presented in a detailed and systematic fashion in the Table given in *Appendix 1*, while section §1.5 below offers a complementary discussion of the doctrinal contents of the *MF*, in many cases coincident with those of the *DN*¹¹⁴. To the astounding textual similarity already indicated by preceding scholarship, one might now add the structural homology given by the presence of a very similar set of illustrations in the Persian and the Arabic work. While some differences are also perceivable at this figurative level – some figures are omitted in the *MF*, while some others are not to be found in the Persian tradition, at least as it appears in modern editions¹¹⁵ –, the substantial overlap of the two sets of illustrations calls once more for a very close understanding of the two texts, against the various assessments which tend to posit – rather apodictically – the necessity of a textual intermediary between the *MF* and the *DN*¹¹⁶. While the existence of such an intermediary could not of course be ruled out with absolute certainty, the convergence of textual and contextual hints seems to make it rather unlikely, at least at the present level of knowledge on both Avicenna's and al-Ġazālī's works.

It is important to point out since the beginning of the analysis, however, that there are some small, yet extremely significant variations that separate the *MF* from its Avicennan source, despite and within the general framework of close textual dependence that unites

¹¹⁰ JANSSENS 1986: 164: «Celle-ci [la traduction] ne s'avère pas littérale, mais elle respecte néanmoins l'essentiel du contenu – ainsi la meilleure qualification nous paraît être celle de 'traduction interprétative'».

¹¹¹ The connection between the *MF* and *DN* was very well highlighted in ALONSO 1963: xlv-li, even though Alonso had not employed explicitly the label of 'translation' to describe the relation of dependence of the *MF* on the *DN*.

¹¹² HANA 1972.

¹¹³ On the blatantly anti-traditional character of this order, its importance in Avicenna, its parallels in other works, and the philosophical and epistemological reasons that might have led to adopt it cf. *infra*, §1.4.2, *The Order of the Sciences*.

¹¹⁴ See *infra*, §1.5, *Contents*.

¹¹⁵ Cf. *infra*, *Appendix 2*, in which all the figures present in the *MF* are listed and briefly described.

¹¹⁶ Cf. *infra*, §2.1.3, *Ibn al-Malāḥimī*, for an argument against Wilferd Madelung's stance on this point; and cf. also for instance MANEKIN 2000: 292 fn. 44, who writes against JANSSENS 1986 by stating that «[j]udging from the section on logic, it seems more likely that there was at least one other text involved; in any event, there is no convincing evidence that one is a direct translation of the other, although many formulations are identical».

the two works. Such subtle variations do not compromise the relationship of dependence of the *MF* on the *DN* to such a degree as to make the label of ‘translation’ less viable for the former with respect to the latter, but they certainly call for a finer analysis than hitherto performed by scholarship. As a matter of fact, they are even more interesting because they are surreptitiously interspersed throughout the text, and they seem to show the full personality of al-Ġazālī as a theologian already active – and well-defined – in what has often been considered as a purely philosophical, scholastic work of his¹¹⁷. The systematic study of these changes performed upon Avicenna’s model will be carried on in Sections §1.7 and §1.8 of this *Introduction*, dealing respectively with the vocabulary of the *MF* (§1.7. *Lexicon*), and with the peculiar strategies of exemplification employed by al-Ġazālī in the work (§1.8. *Examples*)¹¹⁸.

Leaving for the moment these fascinating divergences aside, the Table of correspondences with the *DN* presented in *Appendix 1* deserves some further words of contextualization and justification. In this dissertation, and in particular for the sake of the doctrinal Commentary that follows the integral Translation of the *MF*, the Table of correspondences is aimed to replace the piecemeal treatment of every single textual parallel between Avicenna’s and al-Ġazālī’s writings, allowing on the contrary to devote a specific discussion only to the divergent, and thus doctrinally more challenging, occurrences (and/or to peculiar cases of convergence, in themselves interesting for various textual and contextual reasons). Thus, while the choice of a unified Table of comparison between the *DN* and the *MF* has first of all the goal of lightening the cumbersome task of the Commentary, removing from it the burden of systematically indicating all the implicit cross-references between two works such closely interrelated, a further reason for it is the desire to provide to the reader, through the systematic analysis of the *MF*, a possible gateway to the study of the *DN* in itself.

If Ernst Bloch, in his historically infamous (though theoretically challenging) *Avicenna und die aristotelische Linke*, was indeed almost certainly wrong in speaking of an ‘unorthodoxy’ of the *DN* due to linguistic reasons that made it accessible only to a restrained number of readers¹¹⁹, it is nonetheless true that the historical and doctrinal knowledge of Avicenna’s Persian *summa* has progressed slowly in comparison to other works of his, most notably the *K. al-Šifā’*. Despite the existence of an excellent integral French translation of the entire encyclopaedia produced by Mohammad Achena and Henri Massé in the Fifties¹²⁰, the status of the English translations of the *DN* is for instance still wanting, under many respects¹²¹.

¹¹⁷ Cf. in particular JANSSENS 2001 and JANSSENS 2003^b; see *supra*, §1.2. *Chronological and Doctrinal Collocation*, for a finer discussion of these points, and for the suggestion of the opposite idea that the *MF* is, on the contrary, a mature work of al-Ġazālī’s.

¹¹⁸ See in particular §1.8.2, *Anti-Eternalist Examples: Changing Avicenna from Within*.

¹¹⁹ Cf. BLOCH 1952: II: «Ebenso unorthodox (weil aus Sprachgründen nur einem kleinen Leserkreis zugänglich) ist die in einem frühen Tadschikisch verfaßte zweibändige Enzyklopädie „Danish-Nameh“ (Buch des Wissens), die 1937/38 in Teheran herausgegeben wurde [...]».

¹²⁰ ACHENA-MASSÉ 1955 (I) (*Logic and Metaphysics*), 1958 (II) (*Physics and Mathematics*); cf. *supra*, fn. 25, for this and further references to the editions and the translations of the *DN*.

¹²¹ Both the English translations of the *Metaphysics* of the *DN* (by MOREWEDGE 1973) and of its *Logic* (by ZABEEH 1971) are vitiated by various problems of inaccuracy. Morewedge’s translation is moreover heavily misleading from a theoretical point of view, because – together with the Introduction to it penned by Morewedge himself – it tends to interpret the *DN* in a mystic way, downplaying its unmistakable rational (and Aristotelian) aspects. Finally, the English translation of the *Physics* by JAUHARI 1987 appears in an unpublished PhD dissertation, and it is moreover incomplete, as it only covers the sections corresponding to *MF, Physics I-III* (up to meteorology

Moreover, very few studies focus monographically on the Persian *summa* in its own right, and some of those that do are unmistakably ideological in their historical and doctrinal assumptions¹²². Thus, the integral English translation of the *MF* and the analytical commentary to all its parts provided in this dissertation, in connection with the systematic possibility of comparing al-Ġazālī's text to that of the *DN* offered by the comparative Table, could also serve as an introduction, and a partial *vademecum*, to one of the most interesting, and yet least studied, philosophical *summae* by Avicenna. For the sake of this goal, I also refer the reader to the following sections on *Structure* (§1.4) and *Contents* (§1.5), which primarily constitute a detailed analysis of these aspects as far as the *MF* is concerned, but which could also be used – in combination with the Table offered in *Appendix 1* – as a primer to a more precise study of form and doctrines of the *DN* in itself.

As mentioned, the *DN* is very relevant in its own right from a historical and doctrinal point of view, inasmuch as it is the first *summa* of philosophy ever written in Persian. Avicenna can thus rightly be claimed to be the initiator of the genre of the philosophical encyclopaedia in both the languages he spoke and wrote¹²³, as well as the forerunner of the several subsequent developments of the genre in Arabic, Latin and Hebrew¹²⁴. The linguistic importance of Avicenna's philosophical *darī* – heavily indebted with technical Arabic, but also capable of autonomous *tourneures* and felicitous literary solutions – has aptly been recognized by scholarship¹²⁵. It should be stressed that the literary genre itself of the philosophical encyclopaedia, or *summa*, was introduced by Avicenna in the Islamic *milieu*, in apparent connection with the late antique organization of the Aristotelian corpus, even though important steps in that direction had already been taken by al-Fārābī. Avicenna, however, provided several examples of such-conceived works, giving rise to a long-lasting tradition in both Arabic and Persian. As the progenitor of the Persian branch of this tradition, the *DN*

and mineralogy), excluding psychology (*MF, Physics IV*) and the conclusive section on eschatology, oneirology and prophetology (*MF, Physics V*). Jauhari calls this section in her title the «physics proper» of the *DN*, although in rigorous Aristotelian sense this definition is imprecise and would not cover the intended part of the work (physics proper, in the sense of the Aristotelian *Physical Hearing*, would rather correspond to the sole first treatise of the *Physics* in the *MF*; cf. also *infra*, Introduction, §1.5. *Contents*). A preliminary evaluation of the available translations of the *DN*, limited to Achena and Massé's French one and to Morewedge's English version of the *Metaphysics*, was already provided by JANSSENS 1986: 175-177, who criticized in some points the accuracy of the French rendition, as well, despite judging it overall «assez fiable» (*ivi*: 175).

¹²² This is conspicuously the case for BOGUTDINOV 1950.

¹²³ For Avicenna as inventor of the genre of the encyclopaedia of philosophy cf. GUTAS 2014: 86, concerning the *al-Ḥikma al-'Arūdiyya* as the very first *summa* of the history of *falsafa*; for provisos on the notion of encyclopaedia as applied to compact works such as Avicenna's philosophical *summae* cf. also GUTAS 2014: 105-106 and fn. 2, as well as VAN ESS 2006 (in ENDRESS-FILALI-ANSARY 2006 quoted *infra* in fn. 123).

¹²⁴ For overviews of the encyclopaedic genre in Arabic and beyond cf. HEIN 1985 and the series of relevant essays gathered in ENDRESS-FILALI-ANSARY 2006 (in which see in particular GUTAS 2006^c, also for the recognition of Persian sources of Arabic encyclopedism, alongside the Greek ones); some important considerations on the genre and its challenges also in BAKAR 1998 and EICHNER 2009.

¹²⁵ For the literary importance of the *DN* cf. AHMAD 1981; for its language and its style see also LAZARD 1967: esp. 62-66. For a noteworthy, more general appraisal of Persian writings in the tradition of *falsafa*, against the tendency to focus solely on Arabic texts, cf. NASR 1975, with quotation of many relevant titles and a special attention devoted precisely to Avicenna and al-Ġazālī (see esp. *ivi*: 68-70).

deserves serious attention in itself, while its Arabic aftermath – represented most notably, but not exclusively, by the *MF* – can be seen as an especially interesting case of ‘repatriation’ of *falsafī* doctrines from *darī* into the main stream of philosophical Arabic.

As a systematic model for the presentation of knowledge, the *DN* is moreover peculiar, because of the already mentioned alteration in the order of the philosophical sciences it displays, with the anticipation of metaphysics and the postposition of natural philosophy with respect to more traditional accounts. Such a model, which constitutes an alternative with respect to the standard arrangement of the sciences in Peripatetic *falsafa*, will later be adopted by Avicenna also in a further encyclopaedia of his, the *Easterners* [*al-Mašriqiyyūna*]¹²⁶. The same arrangement is also embraced in further texts of post-Avicennan philosophy, apart from the *MF*. This is most notably the case with the philosophical *summa* of Avicenna’s direct disciple Bahmanyār ibn Marzubān (d. 1066), a treatise known with the title of *Kitāb al-Taḥṣīl* [*Book of Validation*]¹²⁷. A well-known passage from Bahmanyār’s preface to the work emphasizes the adoption of the novel ordering employed by Avicenna in the *DN*, and also instantiated by al-Ġazālī’s *MF*.

TEXT 4. Bahmanyār, *Kitāb al-Taḥṣīl*, Prologue¹²⁸

Bahmanyār al-Marzubān said: I have then collected [*muḥaṣṣil*]¹²⁹ in this treatise [*risāla*] [...] the gist [*lubāb*]¹³⁰ of the wisdom [*ḥikma*] which the Ṣayḥ al-raʿīs Abū ‘Alī al-Ḥusayn ibn ‘Abd Allāh ibn Sīnā – may God have mercy upon him – has rectified [*ḥaddaba-hā*]¹³¹, by following the model of [*muqtadiy*]¹³² the *Wisdom for ‘Alā’ ad-Dawlā* [*bi-l-Ḥikma al-‘Alā’iyya*] in the order [*fi l-tartīb*], and, in the full comprehension of the concepts [*fi istī‘āb al-ma‘ānī*], [the model] of the generality of his compositions [*bi-‘amma taṣnīfāt-hi*] and of the interaction in dialogue [*bi-māġara... muḥāwara*]¹³³ between me and him. And I have attached [*muḍīf*]¹³⁴ to [this] what I have acquired in

¹²⁶ Cf. GUTAS 2014: 118 and 137. The *Metaphysics* of the *Easterners* is also programmatically divided in a) universal science and b) theology, a subdivision which is not to be found explicitly in the *DN*. However, the inclusion of the doctrinal material of the *Categories* in the *Metaphysics* of the *DN* (and the *MF*; cf. *infra*, §1.5, *Contents*) appears to respond to a similar strategy of exposition, with a functional contiguity of logical and ‘universal metaphysical’ topics, followed by a more explicit treatment of divine matters (philosophical theology, corresponding chiefly in the *MF* to the Second and Third treatises of the *Metaphysics*).

¹²⁷ GUTAS 2014: 98 translates the title as *Validated Knowledge*, but also proposes – in fn. 12 – the alternative interpretation of *The Digest*.

¹²⁸ Arabic text in MUṬAHHARĪ 1996: 1; cf. the English translation given by JANSSENS 2003^a: 178. Janssens’ version needs correction in keeping with the emendations proposed by GUTAS 2014: 115 fn. 19.

¹²⁹ Or perhaps ‘validated’, in keeping with what seems to be the sense of the II stem of the root *ḥ-ṣ-l* in the title of the book. Cf. *supra*, fn. 126, for the translation of the latter.

¹³⁰ Following GUTAS 2014: 115 fn. 19 against the reading *kitāb* ‘book’ of MUṬAHHARĪ 1996, followed by Janssens: if the *K. al-Taḥṣīl* was defined *risāla* ‘treatise’ immediately *supra*, what Bahmanyār collects in it cannot be in turn a ‘book’.

¹³¹ Janssens’ rendition ‘has taught’, although possible in principle for the II-stem verb of the root *ḥ-d-b* (cf. WEHR 1201^a for the meaning of ‘instruct’), seems here rather weak, since the root in that stem also entails the meaning of ‘cleansing’, ‘purifying’, and thus ‘setting right’, more precise in the context.

¹³² The verb is construed with the *bi-* of the object taken as model, and the *fi* of the complement of argument or limitation. I thus take Bahmanyār’s sentence, against Janssens’ translation, as distinguishing between a model in structural order (the *DN*) and a model for the conceptual aspects (all of Avicenna’s writings). Compare by contrast JANSSENS 2003^a: 178: «and by taking intentions [*al-ma‘ānī*] from the totality of his writings».

my speculation [*fī naẓar-ī*]¹³³ of the [derivative] branches [*min al-furū*], which are analogous to the principles [*al-uṣūl*]. Your [own] speculation [*naẓar^u-ka*] will show you the way to [*yadullu-ka* ‘alā] these branches within his books [*fī kutub^h-hi*]¹³⁴.

Bahmanyār’s prefatory statement is interesting under many respects, not least the final observation concerning the *furū* (‘derivations’, ‘derivative branches’) of Avicenna’s philosophy, which are said to be the object of an autonomous speculation. Not only Bahmanyār claims to have acquired them in this way (and to have accordingly added them to his own work), but every reader of Avicenna – the generic ‘you’ implied by the suffix pronoun *-ka* in *naẓar^u-ka* and *yadullu-ka* – could and should do the same, using his or her own *naẓar* as a sign pointing to the recognition of these corollary matters within Avicenna’s extant writings. The branches [*furū*] are however also said to be analogous to the principles [*uṣūl*], perhaps in the sense that the study of derivative disciplines requires an analogous method as the one employed by Avicenna in determining the theoretical asset of the principal ones¹³⁵.

While this epistemological and didactic aspect is in itself quite intriguing, and would probably deserve a supplement of reflection, the main aspect for which the passage is of interest to our present purposes is that it entails an important distinction, in a given encyclopaedia of philosophy, between the formal or structural aspect of the «order» [*tartīb*], and the material or content-like aspect of the «concepts» [*ma‘ānī*]. While for the latter Avicenna’s disciple claims to have used the generality of Avicenna’s writings, for the former aspect he declares to have availed himself of a specific work, the *DN*. The usage of the *DN* also for matter of content, however, is not excluded by its specific function as the structural model of the *Kitāb al-Taḥṣīl*, so that Avicenna’s Persian *summa* – the only encyclopaedia of the master explicitly singled out in Bahmanyār’s preface – may well have been an important source of the *Taḥṣīl* also for the definition of the contents it teaches.

In his well-known article on Bahmanyār, Janssens entertains this possibility, although he concludes with certainty for a genuine parallelism only in the case of two chapters of the *Physics* of the *DN*, whose contents are faithfully reproduced in the *Kitāb al-Taḥṣīl*¹³⁶. Janssens’ contribution, however, does not explore at all the possible connections that might link Bahmanyār’s work not only to Avicenna’s writing as a structural ancestor, but also to the *MF* as a possible sister *summa*, another heir of the same, mature phase of the master’s thought¹³⁷. If also conducted in the light of the *MF* as an important alternative witness of Avicenna’s early legacy, further and more detailed inquiries into the contents of Bahmanyār’s encyclopaedia, its way of presenting arguments, and the finer aspects of its doctrinal structure might well unearth further similarities between Bahmanyār’s and al-

¹³³ JANSSENS 2003^a: 178 translates as ‘understanding’, and gives *naẓarī* the wrong syntactical function of subject of the sentence.

¹³⁴ JANSSENS 2003^a: 178: «Your looking into his books will furnish you the proof of these derivations».

¹³⁵ For Avicenna’s distinction between *furū* and *uṣūl* cf. also *infra*, §1.4.2. *The Order of the Sciences*.

¹³⁶ See JANSSENS 2003^a: esp. 194-195. In that contribution, and despite the clear general similarity between the structure of the *DN* and that of the *Kitāb al-Taḥṣīl*, Janssens prefers to look at the *K. al-Šifā* to detect Avicennan parallels for Bahmanyār’s formulations, and he even underlines in various occasions the differences, rather than the affinities, with the *DN*: see e.g. JANSSENS 2003^a: 181, 185. For a better acknowledgment of the parallelisms between *DN*, *MF*, and *Taḥṣīl*, see EICHNER 2009: 3-18.

¹³⁷ Some similarities of approach between the *MF* and the *Kitāb al-Taḥṣīl* are acknowledged and discussed in EICHNER 2009: 11-18, esp. 12 and 16-17.

Ġazālī's work. For the time being, it is important to assess that the two writings already appear to share a most fundamental aspect, *i.e.* their recourse to the *DN* as a structural, as well as doctrinal, model. The pivotal issue of the structure of the *MF*, in its inescapable relation with the *DN*, will be treated in full in the next section.

1.4. Structure

By the term architectonic I mean the art of constructing a system. Without systematic unity, our knowledge cannot become science; it will be an aggregate, and not a system. Thus architectonic is the doctrine of the scientific in cognition, and therefore necessarily forms part of our methodology.

Immanuel KANT, *Critique of Pure Reason* II 3

The two related problems of the classification and the structural organization of the sciences are among the most fascinating in the history of ancient and medieval philosophy. They question, as a matter of fact, the status of knowledge itself, both from an epistemological and from a methodological point of view – this latter being probably the most influential *côté* of the issue even in modern times, as Kant's excerpt quoted as an epigraph to this chapter might well indicate¹³⁸. It can be further argued, however, that in late antique and medieval times the cognitive, or subjective, side of the question is also strongly and characteristically linked to an ontological, or objective, side, since the *leges mentis* are very often (though somewhat implicitly) thought to be faithful descriptions of the *leges entis*, and the *ordo sciendi* is likewise considered as a faithful mirror of a most fundamental *ordo essendi*¹³⁹.

In the light of this fascinating epistemological and ontological framework, I will devote this chapter to the analysis of the structural issues posed by the *MF*, starting from the basic level of a presentation of the internal subdivisions of the text (§1.4.1, *Divisio textus*). This *divisio textus* has important consequences for the analysis, as it will help the reading of the

¹³⁸ Kant's conception of the systematic unit of the sciences is clearly far beyond the scope of this introductory remarks. The issue, however, is becoming increasingly central in Kantian scholarship as well: see, for instance, the recent monograph by FERRARIN 2015, which devotes much attention to the theoretical implications of the Architectonic of Pure Reason.

¹³⁹ This crucial aspect has been duly emphasized by Dimitri Gutas as far as Avicenna is concerned: «since this Knowledge, when acquired by *hads*, means that “the form of all things contained in the active intellect are imprinted” on man's intellect *in habitu* [...], which is then called “acquired intellect” and is “like a polished mirror upon which are reflected the forms of things as they are in themselves without any distortion”..., and since “the forms of all things as they are in themselves”, or the intelligibles, contained in the intellects of the celestial spheres (including of course the active intellect, the last in the emanative series) represent ontological truth, the way things are [...], there is necessarily a one-to-one correspondence between this Knowledge and ontological truth; i.e., the object of this Knowledge is ontological reality as it is in itself, and ontological reality is included, completely and exhaustively, in this Knowledge» (GUTAS 1988: 174 = GUTAS 2014: 198; but see in general Chapter 3.2, which deals with the pivotal notion of *hads* as the theoretical trait d'union between epistemology and ontology in Avicenna's conception of *'ilm* and in his thought as a whole). About al-Ġazālī and al-Rāzī, cf. now also GRIFFEL 2021: 427: «Like al-Rāzī later, al-Ghazālī created an order of knowledge that is independent from the established distinctions in Aristotle's œuvre. Also like al-Rāzī, he claims that this order mirrors the order of the outside world. It is, hence, an ontological division. [...] The presentation of knowledge in these philosophical books mirrors the divine causal order of the world».

text as offered in the Translation, as well as constitute a companion to the detailed table of contents provided in the following chapter (§1.5, *Contents*). After this, I will discuss the crucial issue represented by the peculiar ordering of the philosophical sciences displayed by the *MF*, in its relation with the model of the *DN* (§1.4.2, *The Order of the Sciences*). Within this section, I will devote some attention to the question why al-Ġazālī did not treat philosophical mathematics in his *summa*, while otherwise following rather closely the format of Avicenna's *DN*, in which a conspicuous section is indeed devoted to mathematical topics (§1.4.2.1, *Why Didn't al-Ġazālī Do His Math?*). Finally, I will present a conspectus of the various internal cross-references that link together the different sections of the *MF*, also comparing this network of annotations to the homologous structure of its source text. This will hopefully contribute to sketch in a meaningful manner the system of Peripatetic knowledge expanded in the *MF*, highlighting the importance of its formal configuration.

1.4.1. Divisio textus

To address the issue of the structure of the *MF*, I will first of all present a systematic *divisio textus* of the work. Such an exercise is never idle when it comes to highly complex and analytical pieces of writing like the texts of the Peripatetic tradition (in Greek as well as in Arabic, Latin or Hebrew), but it is particularly useful in the case of the *MF*. First of all, this is because the internal structure of the text is in itself one of the subtle, but meaningful alterations provided by al-Ġazālī with respect to the *DN*, and as such it has already been partially analysed in scholarship¹⁴⁰. Even more to the point, however, al-Ġazālī as an author is known for his smart, stratified, and complex ways of organizing knowledge, a feature of his literary style which also already attracted the attention of scholars¹⁴¹. In particular, Frank Griffel recently devoted some consideration to the issue of the structure of the *MF*, in comparison with both the *DN* and other Ġazālīan writings. Griffel effectively underlines how al-Ġazālī's engaging and complex way of presenting ideas – in both philosophy and theology – formed a great part of his success as a writer and an intellectual authority in his age, and far beyond it. This applies with particular evidence to the cases in which al-Ġazālī reworked writings by other scholars in his own production, since those Ġazālīan reworkings arguably had a wider impact, and a greater success, than their sources, also and precisely because of their highly sophisticated structure¹⁴².

¹⁴⁰ JANSSENS 1986: *passim*, but see also EICHNER 2009: 11-22.

¹⁴¹ Muḥammad Afifi al-Akīti presented a comprehensive index to the internal divisions of many of al-Ġazālī's main works in AL-AKITI 2012. Cf. also GRIFFEL 2021: 425-428 for a series of interesting remarks – part of which are summarised in what follows – on al-Ġazālī's structuring of knowledge, in direct connection with the problems here at stake.

¹⁴² For instance, GRIFFEL 2021: 426 and 518 fn. 36 quotes ROSENTHAL 2007: 182 to the effect that al-Ġazālī's reworking of Abū Ṭālib al-Makkī's *Qūt al-qulūb* in his *Revival of the Religious Sciences [Iḥyā' 'ulūm al-dīn]* achieved a much greater success than its source text, due to its «much clearer and more interesting presentation». Likewise, Griffel (*ibi* and 518 fn. 37) also recalls the remarks by COOK 2000: 428 and 447 on the nineteenth book of the *Iḥyā'*, which is «highly organized [...] in a manner that in some ways departs radically from earlier treatments», and shows, among other pieces of evidence, the overall «impressive architecture» of al-Ġazālī's literary output.

The *MF* is certainly a case in point of this distinct feature of al-Ġazālī's production. As a matter of fact, its alteration of the *DN* in terms of internal formatting is particularly well-perceivable, given the very simple structure of the latter¹⁴³, as opposed to the highly ramified organization of al-Ġazālī's version¹⁴⁴. Moreover, as will emerge from the second part of this Introduction, the *MF* did have a much greater fortune than its Avicennan source, being copied, read, used, and translated in several different cultures, and through several centuries of continuous reception history¹⁴⁵. This outstanding *Wirkungsgeschichte* is clearly not due solely to the difference in structure and organization of the *MF* with respect to the *DN*, but this feature was by no means secondary in ensuring to the work a wide readership throughout the Middle Ages (and up to the Renaissance). As for the Islamic milieu in the crucial phase of the 12th century, Griffel himself noticed how the internal subdivisions of the *MF* «foreshadow the complexities al-Rāzī employs in his two philosophical compendia»¹⁴⁶, thus effectively linking al-Ġazālī's style to a specific, and highly influential, development of later Islamic philosophy¹⁴⁷.

As shown by both al-Akiti and Griffel¹⁴⁸, the *divisio textus* of al-Ġazālī's works is not only complex, but also highly flexible, in the sense that the subdivisions are not defined *a priori* and then rigidly applied to all the different sections of the work, but rather follow the internal anatomy, as it were, of the subject-matter, adapting to it with remarkable pliability. As a consequence, also in the case of the *MF* many different labels – not always perfectly coherent among themselves – are used to define the various subdivisions that occur in different parts of the work. Moreover, the organization of each section of the *MF* reaches different levels of complexity, from the minimum represented by the Fifth treatise of *Metaphysics*, which has no discernible internal subdivisions, to the maximum of the immediately preceding Fourth treatise, whose inner articulation involves a Premise and three Pillars, each of which further divided in allegations (which might be again subdivided in lesser units of meaning).

¹⁴³ The *DN* has four main sections, respectively on *Logic*, *Metaphysics*, *Physics*, and *Mathematics* (the latter added by al-Ġūzġānī). Within these main parts, only a basic subdivision in unnumbered chapters is performed, in contrast with the highly complex structure of the *MF*, for which cf. *infra* in the present section.

¹⁴⁴ JANSSENS 1986 advanced the hypothesis that the organization of the *MF*, which he himself recognizes as an improvement with respect to the *DN*, might actually derive from an authentically Avicennan source, slightly different in arrangement than the *summa* we read today (for instance, Janssens envisages an Arabic *DN*, maybe in part transmitted in the *Ta'liqāt*: see JANSSENS 1986: 165; or else a different Persian version of it). Such hypotheses, although strictly speaking not dismissable, have however been countered as unlikely by GRIFFEL 2021: 426. Against the suggestion of an Arabic *DN*, or of other stages between the *DN* as we know it and the *MF*, cf. also *supra*, §1.3. *A Translation from Persian*, and *infra*, §2.1.3. *Ibn al-Malāḥimī*. Moreover, Janssens' repeated claims to the effect that «il est assez inconcevable qu'un esprit aussi brillant et systématique que celui d'Ibn Sīnā ait rédigé un texte si maladroitement structuré» (at JANSSENS 1986: 168), and above all that the *MF* «est du point de vue logique tellement mieux structuré, qu'on est naturellement incliné à croire que cet ordre se trouvait déjà chez Ibn Sīnā» must be rejected on the grounds of the recognition of al-Ġazālī's fine ability to structure a text, now firmly established in scholarship.

¹⁴⁵ Cf. *infra*, §2. *Brief History of a Multi-Lingual, Multi-Faceted Reception*.

¹⁴⁶ GRIFFEL 2021: 427.

¹⁴⁷ For further reflections on the connection between al-Ġazālī's *MF* and the developing genre of philosophy known as *ḥikma* up to al-Rāzī cf. *infra*, §1.10. *The First Text of ḥikma*.

¹⁴⁸ This feature emerges implicitly from al-Akiti's collection of material concerning the subdivisions of various Ġazālīan texts in the aforementioned AL-AKITI 2012; Griffel remarks explicitly on it in GRIFFEL 2021: 426.

It can be inferred from the *Prologue* of the *MF*¹⁴⁹ that each of the three main parts on *Logic*, *Metaphysics*, and *Physics* is meant to be called *qism* ('part' or 'division'; plural *aqsām*). This term is Avicennan, as it appears in the title of Avicenna's famous *Risāla fī aqsām al-ʿulūm al-ʿaqliyya* [*Epistle on the Divisions of the Intellectual Sciences*]¹⁵⁰. The *Logic* is introduced by a «premise» [*muqaddima*], the *Metaphysics* by two of such premises (further preceded by a not named introduction), while the preface to the *Physics* is not explicitly called *muqaddima*, though serving a comparable role. Interestingly enough, each of the three main *aqsām* is regularly subdivided in five units – albeit of very different length¹⁵¹ –, which brings to fifteen the total number of sections in the whole work. While each of the five subsections of both *Metaphysics* and *Physics* is called «treatise» [*maqāla*], those of *Logic* are called chapters [sg. *fann*]. Below this rather unitary level, a diversified terminology appears: many subsections are simply called «division» [*qisma*]¹⁵², others «subdivision» [*taqsīm*], others «section» [*faṣl*]¹⁵³, and yet others «speech» [*qawl*]. The term «allegation», or 'claim'¹⁵⁴ [*daʿwā*] appears especially, but prominently, in treatises III and IV of the *Metaphysics*¹⁵⁵, while also being present in the Second treatise of the *Physics*. The Fourth chapter of *Logic*, which expounds Aristotelian syllogistics, and the Third treatise of *Metaphysics*, which deals with divine attributes, are both concluded by an «epilogue» [*ḥātima*], which appears thus in both cases *in medias res* within the respective macro-sections [*aqsām*] of the work. Specific consideration deserves the word *rukn* 'pillar', or perhaps 'cornerstone', used to designate the two main subdivisions, respectively on the form and on the matter of the syllogism, of *Logic* IV, as well as the three main subsections of *Metaphysics* IV¹⁵⁶. The term seems indeed to be a typical trademark of al-Ġazālī's textual divisions, in particular of his theological output, as it appears most prominently in the *Revival of the Religious Sciences* [*Ihyā' ʿulūm al-dīn*]¹⁵⁷ as well as in other religious works of his such as the *Book of the Forty* [*Kitāb al-Arbaʿīna*] and the *Infamies of the Bāṭiniyya* [*Faḍāʾih al-bāṭiniyya*]¹⁵⁸. A main subdivision in four *arkān* is also featured in al-Ġazālī's Persian ethical treatise *The Alchemy of Happiness* [*Kīmīyā-ye saʿāda*]¹⁵⁹.

In the following Table 3, I will provide a *divisio textus* of the *MF* which shows its internal

¹⁴⁹ See *infra*, *Translation*, §1.

¹⁵⁰ For further reflection on this capital Avicennan text cf. also *infra*, §1.4.2, *The Order of the Sciences*.

¹⁵¹ The shortest treatise of the *MF*, the First chapter of *Logic*, is only composed of 5 pages in Dunyā's edition, while the longest one, the Fourth of *Metaphysics*, spans for as many as 34 printed pages.

¹⁵² Especially in the first three treatises, or «chapters», of *Logic*, but also in the First treatise of *Metaphysics*, composed of eight of such divisions, and in the First and Second one of *Physics*, in which they appear as subdivisions of inferior rank (of 'speech' and of 'allegation' respectively).

¹⁵³ In the Fifth chapter of *Logic*.

¹⁵⁴ Or even 'invocation': cf. GRIFFEL 2006: 6.

¹⁵⁵ In which eleven and thirteen of such allegations respectively appear.

¹⁵⁶ But with some likely textual mishaps: cf. *infra* in the notes to the table for more information on the issue.

¹⁵⁷ In particular, Book XIX of the *Ihyā'* has four 'pillars' [*arkān*], Book XXVIII three, Book XXXI four, and Book XXXII again three (although embedded at a lower level of the *divisio textus*). Likewise, and conspicuously, Book II.3 of the *Ihyā'*, also known separately as *al-Risāla al-Qudsiyya* (often translated as *The Jerusalem Epistle*), is subdivided into four *arkān*, each further divided into ten 'principles' or 'foundations' [*uṣūl*].

¹⁵⁸ Complete titles *Kitāb al-Arbaʿīna fī uṣūl al-dīn* [*Book of the Forty on the Principles of Religion*], ed. KURDĪ 1910, and *Faḍāʾih al-bāṭiniyya wa-faḍāʾih al-mustazhiriyya* [*The Infamies of the Bāṭiniyya and the Virtues of the Mustazhiriyya*], also known simply as *al-Mustazhiri*, ed. BADAWĪ 1964.

¹⁵⁹ Edited in KHADIVJAM 2003. For all the references to the occurrences of *rukn* in the textual divisions of the cited works cf. the detailed indexes gathered by AL-AKITI 2012.

articulations up to five levels of subdivisions. Further analysis could have been provided, but with the unwanted effect of considering as formal subdivisions of the text some merely internal articulations of its subject-matter, which bear an importance only from the point of view of content, rather than from the perspective of structure absolutely taken. The footnotes to the Table account for all the variations this arrangement produces with respect to Afifi al-Akiti's previous analytical index of the *MF*. In particular, I have added letters in small caps ([A], [B]) in Treatises III and IV of *Metaphysics*, in order to account for the fact that in his preliminary tables of contents al-Ġazālī declared, in those cases, a main subdivision of the subject-matter in a premise [A], and in further allegations (*Metaphysics* III) or else pillars (*Metaphysics* IV) [B], which are logically on the same level. Thus, for instance, the fifth allegation of *Metaphysics* III will be henceforth referred to as *Metaphysics* III.b.5, while the second allegation of the second pillar of *Metaphysics* IV will be referenced as *Metaphysics* IV.b.2.2. I will not indicate any further level of analysis than this in my cross-references throughout the present dissertation.

TABLE 3. Divisio textus of the MF

LEVELS OF THE <i>DIVISIO TEXTUS</i>					PAGES / §§
[i]	[ii]	[iii]	[iv]	[v]	
Prologue					31 §1
Logic					
	Premise				33 §§2-4
	Chapter I				
		Division 1			39 §5
		Division 2			40.1 §6
		Division 3			40.18 §7
		Division 4			41.7 §8
		Division 5			42.7 §9
	Chapter II				
		[Division 1]			44 §§10-13
		Division [2]			47.6 §§14-15
		Division [3]			48.9 §§16-17
		Division [4]			51 §§18-21
	Chapter III				
		[intro]			53 §22
		Division 1			54.10 §§23-25
		Division [2]			57 §§26-27
		Division [3]			58.19 §§28-29
		Division 4			60.19 §30
		Division 5			62 §§31-32
		Division 6			64.4 §33
	Chapter IV				
		[intro]			66 §34

LEVELS OF THE <i>DIVISIO TEXTUS</i>					PAGES / §§	
[i]	[ii]	[iii]	[iv]	[v]		
		Pillar 1				
			[Speech 1]			
				[intro]	66.8	§§34-37
				1	70	§§38-42
				2	76.22	§§43-44
				3 ¹⁶⁰	80.11	§45
			Speech [2]			
				[1]	84	§46
				2 ¹⁶¹	86.9	§47
			[Speech 3]			
				[1]	88	§48
				[2]	89	§49
				[3]	90.5	§§50-54
				[4]	96	§§55-57
		Pillar 2				
			[Speech 1]		100	§§58-68
			Speech [2]		110	§§69-73
		Epilogue ¹⁶²			113	§§74-76
	Chapter V					
		Section 1			118	§77
		Section 2			120	§§78-79
		Section 3			122	
			1		122.6	§80
			2		122.20	§81
			3		123.10	§§82-83
			4		125.10	§84
		Section 4			126	§§85-90
	Metaphysics					
				[intro]	133	§91
				Premise 1	134	§§92-96
				Premise 2	138	§§97-100
	Treatise I					
				[intro]	140.18	§101
			Division 1			

¹⁶⁰ It does not seem sensible to identify these internal subdivisions of the first pillar of the fourth chapter of the *Logic* of the *MF* with the term *šakl*, as AL-AKITI 2012: 163 does, because the word does not designate by any means a *formal* partition of the text (such as *fann*, *qisma*, etc.), but rather indicates each of the three figures of the syllogism. As such, it conveys an indication of content, and not of form.

¹⁶¹ The same considerations advanced in the preceding footnote about *šakl* also apply, although somewhat less strongly, to the word *naw'* ('species'), used by AL-AKITI 2012: 163 as a label for this level of the subdivision of the text. The mentioned *anwā'* are indeed the species of the repetitive syllogisms: thus, while *naw'* as such is not an indication of content, certainly it is not a formal label for a further level of the *divisio textus*, either.

¹⁶² Against the choice of AL-AKITI 2012: 163-164, I feel there is no need to list separately each of the ten *maṭārāt* ('occasions for error') of which the epilogue of the fourth chapter of *Logic* consists. These are just like the thirteen kinds of different propositions enumerated in [Speech 1] within the second pillar, which al-Akiti himself, correctly, does not mention in his *divisio textus*. Indeed, there is no need to consider them as proper subdivisions of the text, but rather as mere articulations of the subject-matter treated in that section.

LEVELS OF THE <i>DIVISIO TEXTUS</i>					PAGES / §§	
[i]	[ii]	[iii]	[iv]	[v]		
			[intro]		140.21	§§101-105
			Speech [1]		144	§§106-109
			Speech [2]			
				[intro]	147	§110
				[a] ¹⁶³	147.13	§§111-116
				[b]	154.16	§§117-118
				[c]	156.2	§§119-120
			Speech [3]		158	§§121-126
			Speech [4]		163	§§127-128
			Speech [5]		166	§§129-138
		Division 2				
			[intro]		174.5	§139
			1		174.11	§§139-140
			2		178	§§141-142
			3		180	§143
			4		181	§§144-147
		Division 3			183.9	§§148-153
		Division 4 ¹⁶⁴			187.13	§§154-155
		Division 5			189.3	§§156-161
		Division 6			193	§§162-165
		Division 7				
			[intro]		200.4	§166
			1		201.8	§167
			2		202.18	§168
		Division 8			203.17	§§169-175
<hr/>						
	Treatise II					
		[intro]			210	§176
		'Thing' 1			210.9	§176
		2 ¹⁶⁵			210.13	§177
		3			211.7	§178
		4			211.13	§179
		5			212.9	§180
		6			212.20	§181
		7			213.8	§182
		8			214.9	§§183-185
		9			215.18	§186
		10			216	§187
		11			216.23	§§188-189
		12			219.14	§§190-195

¹⁶³ Further subdivided in six proofs advanced against the atoms.

¹⁶⁴ The topic of the fourth division of the first treatise of *Metaphysics* is anterior and posterior. Anteriority is said to be divided into five kinds, which AL-AKITI 2012: 164-165 lists separately as further subdivisions of the text.

¹⁶⁵ Subdivided into two aspects [sg. *waǧh*]. The fact that AL-AKITI 2012: 165 even distinguishes, in this case, a question posited within the text (noted with «q. 1») is somewhat idiosyncratic, since the system of questions (posited by fictional objectors) and answers appears more as a strategy of presentation of the subject-matter embedded within the text, than as a proper subdivision of it. Being moreover such a widespread technique in the *MF*, its systematical registration in the table would make the presentation of the *divisio textus* excessively long, without adding much to the comprehension of the actual structure of the text.

LEVELS OF THE <i>DIVISIO TEXTUS</i>					PAGES / §§	
[i]	[ii]	[iii]	[iv]	[v]		
Treatise III						
		[intro]			223	§196
		Premise [A]			223.3	§§196-198
		Allegations [B]				
			Allegation 1		224.23	§§199-200
			Allegation 2		226.2	§§201-202
			Allegation 3		227.24	§203
			Allegation 4 ¹⁶⁶		228.13	§§204-209
			Allegation 5		232.2	§§210-211
			Allegation 6		233.9	§§212-213
			Allegation 7		235	§§214-221
			Allegation 8		239.15	§§222-223
			Allegation 9		240.23	§§224-225
			Allegation 10		241.22	§226
			Allegation 11		242.12	§§227-238
		Epilogue			250	§§239-244
Treatise IV						
		[intro]			253.1	§245
		Premise [A]			253.15	§§246-248
		Pillars [B]				
			Pillar 1		255.24	§249
				Allegation 1	256.13	§§250-251
				Allegation 2	258.22	§§252-255
				Allegation 3	261.11	§§256-259
				Allegation 4	263.18	§§260-263
				Allegation 5	266.11	§264
				Allegation 6	267.3	§§265-268
		Speech [?] ¹⁶⁸	[Pillar 2]			

¹⁶⁶ I do not list the three 'conditions' [sg. *hāla*] mentioned within the text in this subdivision, not least because they are not exhaustive subsections of the fourth allegation; *contra* see AL-AKITI 2012: 165.

¹⁶⁷ Contrary to AL-AKITI 2012: 167, I do not indicate as further subdivisions the three signs [sg. *dalīl*] internal to the first allegation of the first pillar of the fourth treatise.

¹⁶⁸ Instead of the indication of the beginning of the second pillar, as one would have expected judging from the programmatic declaration or table of contents presented at the beginning of the treatise, one finds here simply the heading *Speech on the celestial bodies*. As already noticed by AL-AKITI 2012: 167 fn. 22: «the original heading in the text, designated simply as *qawl*, is meant to represent the start of *rukn* 2». Indeed, the third *rukn* deals with the celestial *intellects*, which could hardly be meant to be subsumed under the label of «celestial bodies». However, the fact that the numbering of the allegations [sg. *daʿwā*] continues without interruption between the (hypothetical) second and third pillars seems to imply that in the tradition of the text the heading *Speech on the celestial bodies* might have been taken as a general title for both remaining *arkān* (and the allegations therein contained progressively numbered accordingly). While this conflation of the two programmatic pillars is probably not authorial, such a scenario cannot be excluded *a priori*, since al-Ġazālī shows at times a somewhat loose attitude about his own subdivisions of the text. Hence, al-Akiti's indication (in AL-AKITI 2012: 167 fn. 23) that «the number sequence for the following sub-sections (*daʿwās* 4, 5, 6, and 7) needs to be reset accordingly» (*i.e.* changed to 1, 2, 3, and 4, respectively) seems perhaps too confident, and should be accepted only in part. In keeping with these reasons of caution, I have maintained in the subdivisions of my translation the running numbering of the allegations from 1 to 7 as they appear in the extant Arabic text (and thus as if they all belonged to such *Speech on the celestial bodies*), but I have also indicated, in parallel, the reordered numbering which

LEVELS OF THE <i>DIVISIO TEXTUS</i>					PAGES / §§	
[i]	[ii]	[iii]	[iv]	[v]		
				[intro] ¹⁶⁹	271.1	§269
				Allegation 1	271.12	§§270-271
				Allegation 2	272.21	§§272-274
			Pillar 3	Allegation 3	274.15	§§275-281
				Allegation 4	279.9	§§282-288
				= [1]		
				Allegation 5	283.18	§289
				= [2]		
				Allegation 6	284.15	§§290-292
				= [3]		
				Allegation 7	286.11	§293
				= [4]		
				Treatise V	288.1	§§294-314
				Physics		
				[intro]	303.1	§315
				Treatise I		
				[intro]	304.1	§316
				Speech [1]	304.6	§316
			Division 1		305.13	§§317-320
			Division 2		309.1	§§321-322
			Division 3		311.1	§323
				Speech [2]	312.1	§§324-332
				Treatise II		
				[intro]	318.1	§§333-334
				Allegation 1	319.20	§§335-337
				Allegation 2	321.23	§338
				Allegation 3	322.22	§§339-340
			Division 1		323.22	§§341-342
			Division 2		325.2	§343
			Division 3		325.6	§§344-346
				Allegation 4 ¹⁷⁰	327.1	§§347-348
				Allegation 5	328.6	§§349-350
				Allegation 6	329.24	§§351-353
				Allegation 7	332.8	§§354-356
				Treatise III		
				[intro]	335.1	§357
				Speculation 1	335.4	§§357-359

would derive from the separate consideration of the aforementioned third pillar. Thus, allegation 1 within the *Speech on the celestial bodies* is also indicated in the text of the Translation as B.2.1, being the first of the (programmatic) second pillar, while allegation 4 is also indicated as B.3.1, being the first of the third pillar. For this arrangement cf. also the *Commentary* to the relevant paragraphs of the translation.

¹⁶⁹ Common to the second and the third pillar.

¹⁷⁰ I do not list the three 'conditions' [sg. *hāla*] mentioned within the text as further elements of this *divisio textus*, not least because they are not exhaustive subsections of the fourth allegation; *contra* see AL-AKITI 2012: 167.

LEVELS OF THE <i>DIVISIO TEXTUS</i>					PAGES / §§
[i]	[ii]	[iii]	[iv]	[v]	
		Speculation 2			336.20 §§360-363
		Speculation 3			339.1 §§364-369
		Speculation 4			342.14 §§370-372
		Speculation 5			344.8 §§373-375
<hr/>					
	Treatise IV				
		Speech [1]			346.1 §§376-378
		Speech [2]			347.8 §§379-382
			Speech [2.1]		350.1 §§383-393
			Speech [2.2] ¹⁷¹		356.1 §§394-401
		Speech [3]			359.1 §§402-411
			Signs 1-11 ¹⁷²		362.23 ^b §§412-424
<hr/>					
	Treatise V				
		[intro]			371.1 §425
		1			371.20 §426
		2			372.16 §427
		3			373.8 §§428-429
		4			374.19 §§430-432
		5			376.1 §§433-436
		6			377.25 §437
		7			378.20 §§438-440
		8			379.19 §§441-442
		9			380.18 §443
			9.1		380.20 §§443-446
			9.2		382.7 §§447-449
			9.3		383.15 §§450-451
		10			384.7 §§452-453
<hr/>					
	Epilogue				385.1 §§454-455

¹⁷¹ AL-AKITI 2012: 169 lists these respectively as *qawl* 3 and *qawl* 4. However, being devoted respectively to the external and the internal senses (*i.e.* the perceptive faculties of the animal soul), these sections are to be considered as logical subdivisions of the *Speech on the animal soul* listed here as «Speech [2]», rather than as autonomous subsections at the same level of the three main speeches on the vegetative, animal, and rational souls.

¹⁷² But nn. [8] to [10] are explicitly said to be «demonstrations» [sg. *burhān*], and thus to have a stronger apodictic value than the mere *dalīl*. Number [11] is problematic, because it was not announced in the programmatic declaration concerning the signs of the immateriality of the intellectual soul: cf. *infra, Commentary*, §420.

1.4.2. The Order of the Sciences

Pour peu qu'on ait réfléchi sur la liaison que les découvertes ont entr'elles, il est facile de s'appercevoir que les Sciences & les Arts se prêtent mutuellement des secours, & qu'il y a par conséquent une chaîne qui les unit. Mais s'il est souvent difficile de réduire à un petit nombre de regles ou de notions générales, chaque Science ou chaque Art en particulier, il ne l'est pas moins de renfermer en un système qui soit un, les branches infiniment variées de la science humaine.

Jean D'ALEMBERT, *Discours préliminaire des éditeurs de l'Encyclopédie* (1751)

While Arabic classifications of the sciences have long been studied¹⁷³, the format of the philosophical *summae* – as regards their internal layout, and the ordering of the sciences within them – has received comparatively little scholarly attention. A conspicuous exception to this regrettable lacuna is Heidrun Eichner's remarkable dissertation on *The Post-Avicennian Philosophical Tradition and Islamic Orthodoxy: Philosophical and Theological Summae in Context*¹⁷⁴, which effectively compares a great deal of important texts in order to show how Avicenna's epistemological legacy develops and changes in both the philosophical and the theological reflection subsequent to the master's death.

Given such an interesting, and in itself challenging, epistemological framework revolving around the organization of knowledge in Arabic philosophical encyclopaedias, the case of the structure of the *MF*, in its relation to the *DN*, appears particularly relevant from both a historical and a theoretical point of view. As already mentioned¹⁷⁵, indeed, the *MF* reproduces the same format of Avicenna's Persian *summa*, with the result that both writings follow the atypical ordering *Logic – Metaphysics – Physics – (Mathematics)*, with a blatantly anti-traditional inversion of the natural and the divine sciences with respect to what had become the standard *iter studiorum* in Late Antique and Arabic reworkings of Aristotelian

¹⁷³ The most important and well-known works on the classification of the sciences in Islamic context are al-Fārābī's *Iḥṣā' al-'ulūm* [*Catalogue of the Sciences*] (Arabic edition by BŪ MALḤAM 1996, French translation in MANSOUR 1991), whose medieval Latin translation by Gerard of Cremona has also received much scholarly attention (see SCHUPP 2005 and BOTTIN-POZZOBON 2013) and Avicenna's *Risāla fī aqṣām al-'ulūm al-'aqliyya* [*Epistle on the Divisions of the Intellectual Sciences*] (on which see the Arabic edition in 'AṢĪ 1986', 1989²: 104-118, and various translations in modern western languages: French ones by ANAWATI 1977, MICHOT 1980 and MIMOUNE 1984; English one in MAHDI 1967. For a global overview on the issue, see the entry by JOLIVET 1996. General monographs on the topic are HEIN 1985 and BAKAR 1998. A selection of English translations of key-texts (from al-Ḥwārizmī's *Maḥāṭib al-'ulūm*, al-Fārābī's *Iḥṣā' al-'ulūm*, the Brethren of Purity's [*Iḥwān al-ṣafā'*] encyclopaedia, Ibn Ḥazm's *Marātib al-'ulūm*, and Avicenna's *Kitāb al-Nağāt*) is available in ROSENTHAL 2003³: esp. 52-62. Many specific contributions have also been devoted to specific authors and their classifications: see for instance, on al-Fārābī, Miskawayh and their common source, the groundbreaking article by GUTAS 1983; on al-Fārābī himself, ZONTA 2001; on Avicenna, MARMURA 1980, MARÓTH 1980, GUTAS 1988: 79-159 = GUTAS 2014: 77-179, and EICHNER 2010; on al-Ġazālī, the well-researched survey by TREIGER 2011. For a broad aperçu on Latin classifications of the sciences, two contributions by the leading scholar of Albert the Great James Weisheipl are still very valuable: cf. WEISHEIPL 1965 and WEISHEIPL 1977.

¹⁷⁴ EICHNER 2009.

¹⁷⁵ Cf. *supra*, §1.3, *A Translation from Persian*.

philosophy¹⁷⁶. In the impossibility to retrace all the lines of that important history, I will limit myself to present here the two most conspicuous examples of classification of the sciences in Arabic language – Abū Nasr al-Fārābī's *Iḥṣā' al-'ulūm*, and the *Risāla fī aqsām al-'ulūm al-'aqliyya* penned by Avicenna himself –, in order to emphasize the differences that separate both of these works from the *DN* and the *MF*.

In the *Catalogue of the Sciences* [*Iḥṣā' al-'ulūm*], al-Fārābī expounds a system in which the Islamic traditional sciences are craftily blended with the philosophical sciences of the Aristotelian tradition¹⁷⁷. Thus, he presents at first a logical-linguistic pole – in which the Arabic «science of language» [*'ilm al-lisān*]¹⁷⁸ comes right before the Peripatetic «science of logic» [*'ilm al-manṭiq*]¹⁷⁹ –, he later moves on to mathematics¹⁸⁰ (called *'ilm al-ta'ālīm*, or *scientia doctrinarum*, as the Latin translation by Gerard of Cremona puts it¹⁸¹), he discusses in a single chapter physics (lit. «the natural science» [*al-'ilm al-ṭabī'ī*])¹⁸² at length, and then more briefly metaphysics (lit. «the divine science» [*al-'ilm al-ilāhī*])¹⁸³, and he finally completes the treatise with a section dealing with socio-political and then theological subjects, or, as he characteristically writes, with *al-'ilm al-madīnī* («political science»), *'ilm al-fiqh* (jurisprudence or «science of the law») and *'ilm al-kalām* (Islamic theology)¹⁸⁴.

This kind of classification finds a sharp systematization in Avicenna's *Epistle on the Divisions of the Intellectual Sciences* [*Risāla fī aqsām al-'ulūm al-'aqliyya*]. Avicenna's text, much shorter than al-Fārābī's treatise, coherently employs a classificatory device based on the distinction between *aṣl* (pl. *uṣūl*, 'roots', 'principles') and *far'* (pl. *furū'*, 'branches', 'ramifications'), and he therefore distinguishes, in each macroarea of philosophy (here always rendered as *ḥikma*, wisdom), the 'principal' subdivisions [*al-aqsām al-aṣliyya*] from the 'derivative' ones [*al-far'īyya*]¹⁸⁵. Avicenna's epistle presents at first a chapter on the quiddity of wisdom/philosophy¹⁸⁶, and then proceeds to assess the fundamental division between theoretical [sg. m. *nazarī*] and practical [sg. m. *amālī*] philosophy¹⁸⁷. After this primary

¹⁷⁶ The history of this 'traditional' classification is long and complex, as it involves a stratified tradition of thinking, which goes from the late antique experience of the Alexandrian commentators on Aristotle to the Arabic reception, and Islamic remodulation, of that same tradition. For a survey of the classifications of philosophy in the Greek commentaries, see the fundamental study on *prolegomena* conducted by HADOT 1992. For a thorough reconstruction of some important steps of the reception of this prolegomenic material in Arabic milieu cf. GUTAS 1983: 288 ff. The order of studies established in late antiquity was the one followed by Avicenna himself in his learning, as described in Avicenna's *Autobiography*; cf. Gutas 2014: 178: «Avicenna thus reports in the Autobiography that he studied the philosophical sciences following the order of the classification in the late antique Alexandrian / Islamic Aristotelian tradition, and that he studied these sciences in three successive stages at increasingly advanced levels».

¹⁷⁷ See MARTINI BONADEO 2005 for a quick but accurate presentation of this blended Greek-Islamic system.

¹⁷⁸ Cf. AL-FĀRĀBĪ, *Iḥṣā' al-'ulūm*, ch. 1, ed. BŪ MALḤAM 1996: 17-25.

¹⁷⁹ *Ivī*, ch. 2, ed. BŪ MALḤAM 1996: 27-48.

¹⁸⁰ *Ivī*, ch. 3, ed. BŪ MALḤAM 1996: 49-65.

¹⁸¹ Cf. AL-FĀRĀBĪ, *De scientiis*, ed. SCHUPP 2005: 64: «Capitulum tertium. De scientia doctrinarum».

¹⁸² Cf. AL-FĀRĀBĪ, *Iḥṣā' al-'ulūm*, ch. 4.1, ed. BŪ MALḤAM 1996: 67-74.

¹⁸³ *Ivī*, ch. 4.2, ed. BŪ MALḤAM 1996: 75-77.

¹⁸⁴ *Ivī*, ch. 5, ed. BŪ MALḤAM 1996: 79-92.

¹⁸⁵ See in particular the case of the natural science, in 'Aṣī 1989²: 108.11 and 110.7 (and compare MICHOT 1980: 64 for the philological addition of *al-aṣliyya*, on the basis of three further manuscripts. The correction, however, is not implemented in 'Aṣī's edition, though it is posterior to Michot's fundamental revision of the tradition of Avicenna's epistle).

¹⁸⁶ 'Aṣī 1989²: 104.12-105.3: «Faṣl fī māhiyya al-ḥikma».

¹⁸⁷ *Ivī*: 105.4-13: «Faṣl fī uwal aqsām al-ḥikma».

subdivision, Avicenna has a chapter on the subdivisions of theoretical philosophy¹⁸⁸, and then one on the subdivisions of the practical one¹⁸⁹. Further analysing the theoretical sciences, he then treats physics¹⁹⁰, mathematics¹⁹¹ and metaphysics¹⁹², each time distinguishing the *uṣūl* of the science from its *furūʿ*. Finally, he presents a relevant chapter on logic¹⁹³. Since logic is traditionally the absolute beginning of the *iter studiorum*, its conclusive collocation is particularly meaningful. By placing it at the end of his classification of the sciences, Avicenna emphasizes its instrumental role, since logic must be employed throughout the course of learning, and therefore needs not be located at a particular stage of the learning process. Clearly, it is didactically useful to study it at first, but in the context of his general presentation of the sciences – which has not an immediate didactic purpose as far as the sciences themselves are concerned – Avicenna can allow himself to discuss logic at the opposite end point of the *cursus studiorum*. It seems indeed that what is important to him is the isolation of *manṭiq* from the remaining philosophical sciences, with the effect of underlining its special function for the acquisition of a sound scientific knowledge.

From this cursory analysis of the two most important classificatory texts of the classical age of *falsafa* we can extract at least three considerations. (1) Firstly, as already mentioned, the position of logic makes a case for itself, and is somehow not relevant on its own, since *manṭiq* might be located either at the beginning or at the end of the course of learning, without serious implications for the definition of the *iter studiorum* itself¹⁹⁴. (2) Secondly, mathematics is a quite mobile science, since it can be placed either before (as in al-Fārābī) or after (as in Avicenna) the natural science; however, it is never located at the very end of the course of studies, as is the case with the accomplished *DN* as we read it today¹⁹⁵, but always somewhere in the middle of it. (3) Thirdly, and most notably, metaphysics always comes after physics, although mathematics may sometimes interject between the two of them.

As for the first aspect that emerged from the preceding discussion (1), neither the *DN* nor the *MF* are particularly problematic, since they both regard *Logic* as the first science to be treated. As for (2), mathematics was added to the *DN*, and more precisely at the end of it (thus in a slightly ‘irregular’ position), by Avicenna’s disciple Abū ‘Ubayd ‘Abd al-Wāḥid ibn Muḥammad al-Ġūzġānī (d. 1070), while it is omitted from the *MF*. I will devote some attention to the reasons of this omission in the following §1.4.2.1. (3) Finally, and most importantly, the postposition of natural science with respect to metaphysics is instead at odds with all traditional classifications of the philosophical sciences. As such, it must have been a conscious choice on Avicenna’s part, as some programmatic statements of his contribute to clarify.

¹⁸⁸ *Ivī*: 105.14-107.3: «Faṣl fi aqsām al-ḥikma al-naẓariyya».

¹⁸⁹ *Ivī*: 107.4-108.10: «Faṣl fi aqsām al-ḥikma al-ʿamaliyya».

¹⁹⁰ *Ivī*: 108.11-110.6: «Faṣl fi aqsām al-ḥikma al-ṭabīʿiyya [al-aṣliyya]» and *ivī*: 110.7-111.7: «aqsām al-ḥikma al-farʿiyya al-ṭabīʿiyya».

¹⁹¹ *Ivī*: 111.8-112.4: «al-aqsām al-aṣliyya li-l-ḥikma al-riyāḍiyya», and *ivī*: 112.5-11: «al-aqsām al-farʿiyya li-l-ʿulūm al-riyāḍiyya».

¹⁹² *Ivī*: 112.12-114.8: «al-aqsām al-aṣliyya li-l-ʿilm al-ilāhī», and *ivī*: 114.9-116.9: «furūʿ al-ʿilm al-ilāhī».

¹⁹³ *Ivī*: 116.10-118: «fi aqsām al-ḥikma allatī hiya al-manṭiq aqsāmu-hā al-tisʿa».

¹⁹⁴ Factually, however, logic is virtually always presented at the very beginning of Arabic *summae* of philosophy, in conformity with the initial position of the *Organon* in the received *corpus aristotelicum*.

¹⁹⁵ More on this *infra*, §1.4.2.1, *Why Didn't al-Ġazālī Do His Math?*

TEXT 5. Avicenna, *DN*, Prologue¹⁹⁶

[(a)] His [*i.e.* of ‘Alā’-ad-Dawlā] order is that I write a book in Persian for the servants of his great court, and that I concentrate [in it], in a very abridged form, the principles and the details of five sciences that are part of wisdom: [(i)] logic, which is like a balance for the other sciences; [(ii)] natural science, [which is] the knowledge of the things that fall under the senses and that move and change; [(iii)] astronomy, [which is] the knowledge of the system of the universe, of the movement of heavens and stars, [and the science in which] it will be demonstrated how one must know the true nature of this movement; [(iv)] music, which shows the cause of the harmony and dissonance of the sounds and expounds the composition of melodies; and [(v)] the science which is beyond nature [*i.e.* metaphysics].

[(b)] Preference was given to the fact that, once completed logic, we would start with the superior science, and then move on gradually to the inferior sciences, in contrast with what is usual and customary.

[(c)] Therefore, if somewhere [within metaphysics] we cannot do without referring to one of the inferior sciences, we will do so.

In this pivotal text, taken from Avicenna’s Prologue to the entire *DN*, the Šayḥ al-ra’īs makes the contents of ‘Alā’-ad-Dawlā’s commission explicit, and he describes the plan of the future work. In section (a) of the text, he states that his *summa* will be a synthesis – covering however both the ‘principles’ and the ‘details’ of them – of five philosophical sciences, namely (i) logic, (ii) physics, (iii) astronomy, (iv) music, and (v) metaphysics. Logic (i) is qualified as a balance [*mīzān*] for the other sciences, with a metaphor that on the one hand guarantees for its typical instrumental role, and on the other hand will later become traditional, thanks to al-Ġazālī’s own elaboration in the *MF*¹⁹⁷. As for the other sciences, their ordering is quite traditional, and it mirrors in particular Avicenna’s format, as presented in his *Risāla fī aqsām al-‘ulūm al-‘aqliyya*¹⁹⁸, since here mathematics (iii)-(iv) comes after physics (ii) and before metaphysics (v).

¹⁹⁶ The Persian text of the prologue can be read in IBN SĪNĀ, *Manṭiq. Dānešnāme-ye ‘Alā’ī*, ed. MEŠKĀT 1952: 1-4. I have also kept in mind the French translation contained in *DN*, ACHENA-MASSÉ I: 21-22, of which I reproduced, where necessary, some of the happiest translative solutions. Another English translation of the prologue is to be found in ZABEEH 1971: 12-13, of which I transcribe here the relevant excerpt for the reader’s convenience (highlighting the same subdivision in paragraphs I have provided above, and underlining the main difference in rendering from my – and Achena-Massé’s – translation): «[...] [(a)] to compose for him and his courtiers a very concise book in Persian (Duri) on five traditional and philosophical sciences, namely: First on the science of Logic [(i)] which is the science of scales (or canon). Second on Natural Philosophy [(ii)] which is the science of sensible objects – moving and growing. Third, the science of Astronomy – Cosmology – [(iii)] the essence and form and movement of skies and stars, as it is reported and examination of these reports. Fourth, the science of Music [(iv)] and discussion of modes, melodies, harmonies of songs. And the Fifth, Metaphysics, [(v)] discussion of those things which are outside of Nature. [(b)] Our plan started with the subject of Logic which is a pure (higher) and formal science and gradually led to less pure and formal sciences (lower), (unlike the prevailing custom). [(c)] It was possible to start with less formal and lower sciences».

¹⁹⁷ For the relevant passage of the *MF* cf. *infra* the Translation of *Logic*, Preface, §3: logic «is like the balance [*mīzān*] and the standard [*mīyār*] for the sciences, and in everything that is not weighed by the balance one cannot distinguish what is excessive from what is defective, nor the gain from the loss». Cf. also the Commentary to §3 for further information on the metaphor of scales for logic and the quotation of various parallel texts.

¹⁹⁸ See *supra* in this paragraph.

Section (b) of Text 5 is extremely significant, inasmuch as it provides a description of the actual ordering of the sciences dealt with in the *DN*. The text also aims here to qualify the shift that occurs in the following exposition, by contrasting it with the programmatic statements of (a). According to (b), then, the «preference» or choice [*iḥtiyār*] – *prima facie* of the patron, ‘Alā’-ad-Dawlā, but more likely of Avicenna himself – was to make use of an anti-traditional format, with the «superior science» [*‘elm-e barīn*]¹⁹⁹, *i.e.* metaphysics, placed immediately after logic, and the «inferior sciences» [*‘elmhā-ye zīrīn*]²⁰⁰ following in turn, in a gradual way [*bi-l-tadrīġ*]²⁰¹.

The anti-traditional precedence of metaphysics with respect to physics can be explained on the basis of further texts of the *DN*, which show an interesting epistemological oscillation between the consideration of the sciences and their objects in themselves (*per se*), and their opposite consideration in terms of our (human) understanding of them (*quoad nos*)²⁰². In the opening chapter of the *Ilāhiyyāt* of the *DN* («On the number of the philosophical sciences»), for instance, Avicenna – and al-Ġazālī following him – presents a subdivision of the sciences based on their objects²⁰³. The first subdivision is between objects that depend from us – like our actions – and objects that do not depend from us at all – like the earth, the sky, the animals, and the plants. From this fundamental, objective difference there stems the traditional distinction between practical and theoretical sciences. Avicenna deals at first with the practical branch of philosophy, subdividing it into three sciences ordered from the macroscopic to the microscopic level: first politics, coping with the government of the city, then œconomics, treating the ruling and running of the household, and finally ethics, which has to do with the government of oneself. Having sketched this traditional scheme, Avicenna moves on to dealing with the theoretical sciences, in the following Text 6.

¹⁹⁹ For the opposition between *barīn* and *zīrīn* cf. also *infra*, Text 6.

²⁰⁰ The expression «inferior sciences», in itself, could either mean that all sciences but metaphysics are considered on a same level, namely as cumulatively inferior to the supreme science, or else that the inferiority of these other sciences comes by degrees, and that there actually are some philosophical disciplines farther removed from metaphysics than others. This second alternative appears to me as the only one compatible with the following adverbial expression *bi-l-tadrīġ*, which should precisely qualify the ordering of the inferior sciences. As a matter of fact, should they all be considered as a single layer in the epistemological hierarchy, this graduality of presentation would appear to be completely unjustified.

²⁰¹ This latter expression may give rise to at least two distinct interpretations. It may mean indeed that the inferior sciences come after the superior one either in a descending order (A), from the highest and noblest (of the inferior disciplines) to the lowest and humblest; or, on the contrary, in an ascending order (B), from the lowest to the loftiest in the set of the inferior sciences. The existence of this alternative is in itself one of the major issues that the interpreter has to face in addressing the problem of the structure and format of the *DN*, since understanding precisely what the *Ur-DN* envisaged by Avicenna might have looked like is crucial to single out the differences (if any) that separate it from the actual *DN*, as completed by al-Ġūzġānī.

²⁰² For this distinction as crucial to explain the difference in ordering between the *K. al-Šifā’* and the *DN* cf. BERTOLACCI 2017: 146-147.

²⁰³ This first classification is almost *verbatim* translated by al-Ġazālī at the beginning of the *Metaphysics* of the *MF*: see *infra*, *Metaphysics*, First Premise, §§92-96.

TEXT 6. Avicenna, *DN, Ilāhiyyāt*, §1²⁰⁴

As for the theoretical science, it is also subdivided in three orders: [(1)] the science that is called superior [*‘elm-e barīn*], science of the primordial [*‘elm-e pīšīn*], of everything which is beyond nature; [(2)] the intermediate science [*‘elm-e miyāngīn*], which is called science of syntax and mathematics, and an instructive science; [(3)] and the other [one], which is called natural science and inferior science [*‘elm-e zīrīn*].

In this passage, the intermediate nature of the science of mathematics is made completely clear, as opposed to both the superior science (metaphysics) and the inferior one (physics), whose respective hierarchical position at the apex and at the bottom of the series of the sciences depends precisely on the relative excellence of their subject-matters. This ‘objective’, *per se* classification is also reaffirmed by Avicenna, with even greater clarity, at the end of this same introductory paragraph²⁰⁵.

By contrast, in a passage like the one reported in the following Text 7, the didactic, ‘subjective’ order [*quoad nos*] is contrasted with the previously advanced ‘objective’ order [*per se*], in which metaphysics was clearly meant to come before physics. This learning order, according to which natural science must come before the divine science because it is propaedeutic to it, is reflected in the traditional arrangement of Aristotelian philosophy, in which metaphysics comes only at the very end of the course of study. The relevant text by Avicenna is taken from the beginning of the second chapter of the *Metaphysics* of the *DN*, devoted to «Finding the subject-matter of the theoretical sciences so that the subject-matter of first philosophy can be discovered»²⁰⁶.

TEXT 7. Avicenna, *Dānešnāme, Ilāhiyyāt*, §2²⁰⁷

Among these three sciences [*scil.* the three theoretical sciences] the most accessible to man and his understanding is the natural science [(3)], but the confusion in it is greater. The subject-matter of this science is the sensible body, inasmuch as it is de-

²⁰⁴ See IBN SĪNĀ, *Ilāhiyyāt. Dānešnāme-ye ‘Alā’ī*, ed. MO‘ĪN 1952: 3.5-9, and the modern translations in *DN*, ACHENA-MASSÉ (1) 1955: 90.17-25, and MOREWEDGE 1973: 12.4-10. The corresponding passage in the *MF* is *Metaphysics*, First Premise, ed. DUNYĀ: 136.4-9 (cf. *infra*, §95 in the Translation).

²⁰⁵ Persian text in IBN SĪNĀ, *Ilāhiyyāt. Dānešnāme-ye ‘Alā’ī*, ed. MO‘ĪN 1952: 5.1-12; French translation in *DN*, ACHENA-MASSÉ I: 91.20-92.5; English translation in MOREWEDGE 1973: 12.36-13.14: «There is, then, a science that investigates the nature of entities which are not in a constant state of dependency (*niyāzmand*) on matter and movement. Thus, it is possible that there is (*buwad*) among the subjects one kind that is never united (*paiwand*) with matter, such as intelligence and truth (*‘aql wa haqq*), as shall be known. There are entities which may be mixed (*āmizīsh*) with matter and movement, but their nature is not necessarily related to matter and to movement. An example of these subjects is causality (*‘illatī*) which can either be in a body or be a property of an intelligence. That science having such a subject-matter is first philosophy (*‘ilm-i barīn*). And that science is called the science of mathematics (*‘ilm-i riyyāḍī*) which knows the nature of those subjects which in their state of being (*hastī*) have no choice but to be united with matter, although no particular matter is specified for them, such as figure (*shakl*) and numerosity (*shumār*), which are conditions known by the science of axiomatics (*angārīsh*). And the third is natural science (*‘ilm-i ṭabī‘ī*). In this book our discourse (*sukhūn*) and our observations (*nigarīsh*) are directed towards these three kinds of speculative sciences».

²⁰⁶ See IBN SĪNĀ, *DN, Ilāhiyyāt*, ed. MO‘ĪN 1952: 15.13-14.

²⁰⁷ See IBN SĪNĀ, *DN, Ilāhiyyāt*, ed. MO‘ĪN 1952: 15.15-16.14, and the modern translations in *DN*, ACHENA-MASSÉ (1) 1955: 92.10-28, and MOREWEDGE 1973: 13.18-37. The passage is paralleled by AL-ĠAZĀLĪ, *MF, Metaphysics*, Second Premise, ed. DUNYĀ: 138-139.17; cf. also *infra*, §97 in the Translation.

livered to movement and change, and inasmuch as it entails parts and limits.

The other is the mathematical science [(2)], in which there are very few elements of confusion and disagreement, since it is apart from movement and change. Its object is quantity, if you consider it in its totality, [while] it is measure and number, if you consider it in its details. The science of geometry, the science of arithmetics, the science of astronomy, the science of music, the science of optics, the science of the weights [*scil.* mechanics], the science of the moving spheres, the science of the instruments of observation and the other sciences analogous to these are part of it.

As for the superior science [(1)], its object is not a particular thing, but absolute being *qua* absolute [*hastī-i muṭlaq*], and thus first philosophy is absolute.

The passage effectively expounds a classification of the three theoretical sciences based on their objects – here indicated with the *terminus technicus* ‘subject-matter’ [*mawḍūʿ*, pl. *mawḍūʿāt*]²⁰⁸ – and on the distinction between this *per se*-ordering and a *quoad nos*-way of classification. According to its object, natural science is the lowest of the three, since sensible matter, subject to motion and change, is an ontologically lower object than mathematical quantity, that is in turn inferior to being *qua* being, which constitutes the subject-matter of metaphysics as ontology. If we consider these same sciences, and these same objects, from the point of view of learning, however, natural science becomes the first discipline to be taught, since the ontologically lowest object is also the one which enjoys the most direct access to human understanding. Conversely, absolute being, which is in itself the simplest object, comes for us only at the end of the *iter studiorum*, while mathematics and the object of mathematical knowledge maintain their intermediate position between physics and metaphysics regardless of the chosen ordering.

It is clear, in sum, that the anteposition of the section on *Metaphysics* to the one on *Physics* in both the *DN* and the *MF* chiefly depends on the atypical adoption of an objective (*per se*) arrangement of the sciences, in which the objectively more excellent science is made precede the less excellent one. This is at odds with the commonly used, and in itself functional, didactic (*quoad nos*) order, which would rather require that physics, *i.e.* the science whose object is inferior (and thus closer to human imperfection), be studied before the higher – and harder to grasp – ‘divine science’ of metaphysics. Such a bold choice, which disregards – at least in principle – any subjective consideration of purely didactic utility, is especially baffling in the case of the *DN* and the *MF*: the first explicitly written for a patron, in a courtly environment of non-specialists in philosophy; the second penned by a theologian, with the alleged aim of merely reporting the opinions of the philosophers²⁰⁹. In both cases, the disruption with tradition highlights the maturity of thought of their authors – original and entirely autonomous in the case of Avicenna; certainly derivative, but not less perceivable, in the case of al-Gazālī.

²⁰⁸ The term is key in Avicenna’s theory of the science, as it emerges in particular from the *Kitāb al-Burhān* [*Book of Demonstration*] (the Avicennan elaboration on Aristotle’s *Posterior Analytics*) in his *K. al-Šifāʾ*, and it is crucial in particular for the understanding of the architectonic role of metaphysics in Avicenna’s system of the sciences. For a general overview on this aspect see BERTOLACCI 2015, and, for a deeper analysis of the problem of the subject-matter of metaphysics in Avicenna, BERTOLACCI 2007^b. EICHNER 2010 is also rich of important information and useful analyses on the topic. For the crucial doctrine of the scientific subject-matter in the *MF* cf. in particular *Logic* V.3, §80, and then again *Metaphysics*, First Premise, §92.

²⁰⁹ Cf. the statements contained in the Prologue, *infra*, Translation §1.

Apart from the almost *verbatim* reproduction of Avicenna's text quoted above in Texts 2-3²¹⁰, al-Ġazālī has in the *MF* a further passage, with no proper correspondence in the *DN*, which shows his vivid awareness of the atypical ordering of the sciences he is employing. The passage is located at the very beginning of the *Metaphysics* of the *MF*²¹¹.

TEXT 8. al-Ġazālī, *MF*, *Metaphysics*, Preface, §91

Know that it was their [*scil.* of the philosophers] habit to make the natural [science] precede, but we preferred to make this [science, *scil.* metaphysics] precede, since it is more important [*ahamm*] and the variety within it is greater, as it is the extremity of the sciences and their objective [*maqṣid*]. It is [usually] postponed only because of its obscurity [*ġumūd*], which makes it difficult to inquire into it before having inquired into the natural [science]. We, however, shall account in our speech for those parts of the natural science from which depends the comprehension of our intent [*maqṣūd*].

Text 8 is important because it shows the faint traces of a reworking of Avicenna's general Prologue to the *DN* – otherwise not reported by al-Ġazālī, and rather substituted by his own Prologue – in the *MF*. Though occurring in a different position than Avicenna's programmatic statement, this text has indeed a similarly emphatic introductory role, as it is used to preface the materially and thematically central section on *Metaphysics*. In both texts, moreover, a specific care for the didactic, subjective ordering of the sciences appears, in contrast with the ontological, objective approach adopted in the actual organization of the respective *summa*. In particular, the attention devoted by al-Ġazālī to the problem of the teaching order of the sciences seems to reprise and amplify the brief declaration made by Avicenna in section (c) of Text 5 quoted above. In both cases, as a matter of fact, the anticipated treatment of *Metaphysics* with respect to *Physics* is acknowledged as the possible source of didactic complications, because some topics normally treated in the natural science are preconditions to the full understanding of metaphysical problems.

The solution propounded to this problem of philosophical instruction is simple, and common to both the *MF* and the *DN*: physical notions indispensable for the comprehension of metaphysical themes will be sometimes anticipated within the treatment of the divine science itself, in order to make the exposition as clear and complete as possible, in spite of the difficulties raised by the atypical ordering of the sciences. Such a solution, thus, clearly implies the assignment of a special importance to the network of cross-references that conjoin the various parts of each *summa*, and particularly to the prospective references to natural philosophy that are to be found in *Metaphysics*. While a full analysis of this issue is complicated by the ambiguity of some cross-references, and by the necessity of cross-checking each reference occurring in the *MF* with the antigraph in the *DN*, I will lay the basis for such a discussion in section §1.4.3 *infra*, which is precisely devoted to listing the internal cross-references occurring in the *MF*. This will hopefully serve as a basis for a better assessment of the important structural issue of Avicenna's late change in the order of the sciences, which has been recognized in scholarship as an important point of the master's late

²¹⁰ Text 1 as such has no counterpart in the *MF*.

²¹¹ As a matter of fact, the Latin translation of its beginning («*Usus fuit apud philosophos...*») became the *incipit* of the unitarian text formed by the *Metaphysics* and the *Physics* of the work, often transmitted without the *Logic* in medieval Latin manuscripts: on this cf. *infra* in the *Introduction*, §2.2, *Latin*.

production²¹². Before moving to that, I wish however to complete the discussion of the format of the *MF* by addressing another most notable feature of al-Ġazālī's *summa* that rather differentiates it from the *DN*, *i.e.* the absence from it of any treatment of mathematics.

1.4.2.1. Why Didn't al-Ġazālī Do His Math?

As mentioned above²¹³, the *DN* was left unfinished by Avicenna, and it was later completed by the master's faithful disciple and secretary, Abū 'Ubayd al-Ġūzġānī²¹⁴, who added the whole mathematical section – composed of an *Arithmetics*, a *Geometry*, an *Astronomy*, and a *Music* – to the work²¹⁵. As he tells us in a first-person introduction to the added section, al-Ġūzġānī did so by gathering the necessary materials from various Arabic works of Avicenna's which were at his disposal, and by translating them into *darī* in order to fit into the master's project of a Persian encyclopaedia²¹⁶. This historical circumstance clearly posits a further challenge to the interpreter, who has to consider the possibility that the *DN* as it presents itself to the modern reader might not entirely correspond to the original work as it was initially envisaged by its author²¹⁷.

²¹² GUTAS 2014: 118: «[Avicenna] changed the order of presentation of the rest into Logic, Metaphysics, and Physics. This change of order foreshadows the new arrangement Avicenna was later to follow in *The Easterners*».

²¹³ Cf. *supra*, §1.3.

²¹⁴ On al-Ġūzġānī's life and works see the biographical entry prepared by DHANANI 2007 and the seminal article on Avicenna's closest disciples by AL-RAHIM 2009, now complemented by the wider exposition of AL-RAHIM 2018. Al-Ġūzġānī worked as Avicenna's secretary throughout the crucial phase of the latter's career, and he kept trace of the teaching and writing activity of his master, producing at the same time a significant number of autonomous works, especially, as it seems, in the fields of astronomy, zoology and medicine: see the list of works provided in AL-RAHIM 2009: 8. According to this list, al-Ġūzġānī authored a commentary on the difficulties of the *Qānūn*, a *Kitāb al-Ḥayawān* (in Persian) and at least two astronomical works (a commentary and an independent treatise), both extant. For a more specific overview on the latter work – known with the title *Ḥilāṣ kayfiyya tarkīb al-aflāk* –, see RAGEP 2009.

²¹⁵ Cf. ACHENA-MASSÉ (II) 1958, *Mathématiques*.

²¹⁶ Cf. al-Ġūzġānī, Prologue to the *Riyāḍiyyāt*, *DN*, ACHENA-MASSÉ II: 91.7-92.11. As also reported by al-Bayhaqī in the *Continuation of the Cabinet of Wisdom [Tatimma Ṣiḡwān al-Ḥikma]* (ed. ŠAFĪ' 1935: 94.1-2), al-Ġūzġānī also added the mathematical section to Avicenna's Arabic encyclopaedia *Book of Salvation [Kitāb al-Naġāt]*: «[...] and he [*scil.* al-Ġūzġānī] added [*alḥaqa*] at the end of the *Naġāt* and of the *Risāla 'alā'yya [= DN]* a part of the mathematical sciences [*ṭaraḡ^m min al-'ulūmⁱ al-riyāḍiyyatⁱ*]». Cf. also al-Ġūzġānī's own prologue to the mathematics of the *Naġāt* (much similar to the Persian one of the *DN*, though written in Arabic), as edited in MAHDAVĪ 1954: 234-235. The text of this latter introduction can also be read in IBN SĪNĀ, *Kitāb al-Naġāt*, ed DĀNĪŠPAŽŪH 1985: 399 (facsimile of a MS of the University of Tehrān, «slightly better» than Mahdavi's text according to GUTAS 1988 = GUTAS 2014^a: 421, 463 and related footnotes). An English translation made on the basis of Mahdavi's text and of MS Damascus, Zāhiriyya 9152, 1^a-2^b is also available in RAGEP-RAGEP 2004.

²¹⁷ I cannot delve into this complicated question here, although I plan to do so in a future contribution. Suffice it to say, for now, that from the considerations advanced in the previous section §1.4.2, and based on the Prologue of the *DN* by Avicenna, one could distinguish the following four possible arrangements of the philosophical sciences treated in the *DN*. Options (A) and (B) under the column «Programmatic' *DN*» refer to the two possible interpretations of the expression *bi-l-tadriġ* ('gradually') advanced in fn. 200 *supra*. In the same column, 'Mathematics' appears marked by a star (*) because Avicenna, in the prologue, only mentioned the applied mathematical sciences of astronomy and music, ignoring their theoretical counterparts (geometry and arithmetics, respectively). Hence, the programmatic mathematics of the *DN* is strictly speaking different from the actual mathematics introduced in the work by al-Ġūzġānī, which rather comprises all four mathematical

Given this relevant background and complicated textual tradition, the macroscopic omission in al-Ġazālī's *MF* of the entire section of the *DN* dealing with mathematics opens a whole bunch of new questions to the interpreter: has it to do only with al-Ġazālī's lack of interest for the mathematical aspects of the philosophical science? Or else, may this exclusion be ascribable to other, more extrinsic reasons as well? For instance, might it derive from al-Ġazālī's unwillingness to occupy himself with texts authored not directly by Avicenna, but by his secretary? Or might it rather be connected with the material absence of the mathematical section added by al-Ġūzġānī in the copy of the *DN* employed by al-Ġazālī during the translation and the elaboration of Avicenna's material?

A first answer to these questions can be found in al-Ġazālī's own prologue to the *MF*, the relevant excerpt of which can be read in the following Text 9.

TEXT 9. al-Ġazālī, *MF, Prologue* (= Translation, §1)

I will first of all apprise you of the fact that their sciences have four subdivisions [*aqsām*]: [(1)] the mathematical [sciences] [*riyādīyyāt*], [(2)] the logical [sciences] [*mantīqīyyāt*], [(3)] the natural [sciences] [*tabī'īyyāt*] and [(4)] the divine [sciences] [*ilāhīyyāt*].

[(1)] As for the mathematical [sciences], they [consist in] a speculation about [(1.1)] arithmetics [*ḥisāb*] and [(1.2)] geometry [*ḥandasa*]; but in the things required [D32] by geometry and arithmetics there is nothing contrary to the intellect, nor is it possible that they encounter disavowal or rejection. Since that is the case, there is no point for us in occupying [ourselves] with their allegation.

[(4)] As for the divine [sciences], many doctrines concerning them are against the truth [*alā ḥilāf al-ḥaqq*], and what is sound in them is the exception.

[(2)] As for the logical [sciences], the majority of them [proceeds] according to the method of correctness, and the error in them is an exception. The Aš'arites [*ahl al-ḥaqq*]²¹⁸, are at variance with them only by virtue of the technical terms and the alle-

sciences. By the same token, option (III.B) is thus in principle different from the structure of the 'accomplished' *DN* described in (II).

	I. 'Traditional' ordering	II. 'Accomplished' <i>DN</i>	III. 'Programmatic' <i>DN</i>	
			(A)	(B)
1	Logic [i]	Logic [i]	Logic [i]	Logic [i]
2	Physics [ii]	Metaphysics [iv]	Metaphysics [iv]	Metaphysics [iv]
3	Mathematics [iii]	Physics [ii]	Mathematics* [iii]	Physics [ii]
4	Metaphysics [iv]	Mathematics [iii]	Physics [ii]	Mathematics* [iii]

²¹⁸ The expression *ahl al-ḥaqq* is used to indicate the Aš'arites and the Aš'arite school in many texts by authors akin to al-Ġazālī as for times and doctrines. A first occurrence of this circumlocution is to be found in al-Aš'arī himself, who contrasts the expression *ahl al-ḥaqq wa-l-sunna* with the expression *ahl al-zayġ wa-al-bid'a*,

gations [of proofs], and not [by virtue of] the concepts and the intentions [*maqāṣid*], since their goal is the refinement of the methods of the argumentations [*tahdīb ṭuruq al-istidlālāt*], and that is the thing to the sake of which all the speculators [*nuzzār*] collaborate.

[(3)] As for the natural [sciences], what is true in them is mixed with what is false, and what is sound in them is similar to the error, so that in them it is not possible to judge whether the one or the other does prevail.

Here, al-Ġazālī presents a certainly ‘philosophical’, but also clearly personal view on the structure of knowledge and learning, which is not completely equivalent to the one expounded in the *DN*. Firstly, albeit using Avicenna’s own terminology – in particular the word ‘(sub)divisions’ or ‘parts’, the Arabic *aqsām* (sg. *qism*)²¹⁹ –, he considers just four fundamental philosophical sciences, apparently merging the derivative mathematical sciences into mathematics as a whole²²⁰. The ordering of this first presentation of the sciences is also quite peculiar, since mathematics comes as the first science, followed by logic, physics and metaphysics, this time in the traditional ordering. The displacement of mathematics at the beginning, so to speak, of the *cursus studiorum* is however precisely explained by al-Ġazālī’s need to get rid of it as soon as possible, since the *MF* will not discuss, programmatically, any topic dealing with the mathematical sciences.

This is made clear in the next, fundamental section of the Prologue, where the philosophical disciplines are rearranged and ordered on the basis of an entirely new criterion, namely their degree of truthfulness and objective validity, as evaluated by al-Ġazālī himself. This further section of the prologue may therefore be considered as an explanation of the hierarchical ordering employed in the first presentation of the philosophical sciences, which might have been arranged by al-Ġazālī in a descending order of truthfulness, from the truest of the sciences to the most involved with falsity among them. As a general *caveat*, however, it should be said that these very judgments call into question the status itself of the neutral «account» that al-Ġazālī claims to be providing²²¹. Far from being evenhanded – at least in principle – with respect to the degree of trustworthiness assigned to the single philosophical sciences, al-Ġazālī seems in fact willing to apply here, in the same prologue where he had defended his unbiased approach, a criterion of classification based precisely on the truth and falsity of the doctrines of the philosophers. The degree of truthfulness of

employed to designate altogether the Mu’tazilites, the Qadarites, the Muṣṭafīites and the Šī’a, as opposed to al-Aš’arī’s own doctrines, which are considered by him to be faithful to tradition (and of course to be true as well). Cf. for instance his *Kitāb al-Ibāna ‘an uṣūl al-diyāna*, ed. MAḤMŪD 1977, Chapters 1 (*al-bāb al-awwal fi ibāna qawl ahl al-zayj wa-al-bid’a*) and 2 (*al-bāb al-tānī fi ibāna qawl ahl al-ḥaqq wa-l-sunna*). Other occurrences can be found in later theological texts: see for instance AL-ŠAHRASṬĀNĪ, *Kitāb Nihāya al-aqdām fi ‘ilm al-kalām*, ed. GUILLAUME 1934, Chapter 16 (pp. 356-369) and Chapter 17 (pp. 370-396). In the first chapter al-Šahrastānī chooses the expression *al-aš’ariyya* to designate the Aš’arites, while in the second he employs *ahl al-ḥaqq* to the same purpose. I wish to thank very much Francesco Omar Zamboni for having brought these useful parallel texts to my attention.

²¹⁹ Cf. *supra*, §1.4.1, *Divisio textus*.

²²⁰ This is at odds with both Avicenna’s prologue to the entire *DN*, in which Avicenna does not mention mathematics as such as a main subdivision of knowledge, but rather distinguishes between astronomy and music, raising them, as it were, to the level of the first subdivisions of wisdom such as logic, metaphysics, and physics: cf. *supra*, Text 5.

²²¹ This also has bearings on the thorny issue of the dating of the work, for which cf. *supra*, §1.2. *Chronological and Doctrinal Collocation*.

the singles sciences seems therefore to be considered by al-Ġazālī – at least to some extent – as an aprioristic piece of knowledge, which is clearly quite problematic, both from a generally theoretical and from a practical point of view. The interpreter’s approach, I believe, must be rather pragmatic in this case, and try to keep separate al-Ġazālī’s historically interesting claims for neutrality, and his just as challenging occasional neglect of this programmatically uncommitted stance²²².

In the truth-based classification of the philosophical disciplines provided by al-Ġazālī in the *Prologue*, (1) mathematics is indeed the first science to be dealt with, since it is completely true, and cannot be subject to any form of cultural, or ideological rejection. This makes the mathematics completely useless to al-Ġazālī’s alleged purpose²²³, namely that of accounting for the doctrines of the philosophers as a premise for the following refutation, and it may thus help to explain the absence of the mathematics from the *MF*, despite the encyclopaedic format of the latter. Significantly, al-Ġazālī makes sure to specify that the mathematical sciences to which he is ascribing the highest level of trustworthiness are arithmetics [*ḥisāb*] and geometry [*handasa*] – i.e. the propaedeutical mathematics, and not their applied counterparts²²⁴. His failure to mention also astronomy and music in this context makes it clear that those two sciences will hardly be exempt from any kind of error, as it happens on the contrary for their theoretical, elementary counterparts. In particular,

²²² This is, I believe, an important methodological principle to deal with the *MF* in general, and not only with the *vexata quaestio* of its difficult prologue. The work is indeed constructed as a faithful presentation of the doctrines of the philosophers, which is however very often interspersed with al-Ġazālī’s own points of view, regardless of the claims contained in the prologue. For a systematic analysis of this distinctly Ġazālīan attitude, taken under different angles such as lexicon, exemplification, the usage of revealed authorities, and more, see *infra* in this Introduction, §§1.6-1.10.

²²³ As a matter of fact, this same dismissive attitude towards mathematics is to be found also at the beginning of al-Ġazālī’s *Tahāfut al-falāsifa*. See al-Ġazālī, *TF*, [Fourth] introduction, transl. MARMURA 2000: 8: «We say: “As regards [the branch of] mathematics which consists of the examination of discrete quantity – namely, arithmetic – metaphysics has no relation to it. The statement that the understanding of metaphysics is in need of it is nonsense.” It is as if one were to say that medicine, grammar, and philology require it, or that arithmetic is in need of medicine. As regards the geometrical sciences that consist in the investigation of continuous quantity, [the investigation] in sum amounts to showing that the [highest] heavens and what is below them to the center are spherical in shape, to showing the number of their layers, to showing the number of the spheres that move in the heavens, and to showing the quantity of their [various] motions. Let us concede all this to them, either dialectically or out of conviction. They do not need to set up demonstrations for it. This has no bearing whatever on metaphysical investigation». The relevance of this passage was already highlighted by JANSSENS 2001: esp. 6-7. There, Janssens posits as well the problem of the absence of the mathematics from the *DN*, wondering whether Avicenna «omitted the latter because he simply did not want to repeat what he had said elsewhere in an (in his eyes) indisputable way, or because he no longer agreed with the (Platonic-)Aristotelian curriculum».

²²⁴ This can be hinted at also by Ġazālī’s terminological choice, who consistently employs the more specific root *rwḍ* (also connected with the idea of ‘practice’ and ‘exercise’) instead of the broader, and widely used, expression *‘ilm al-ta’ālīm* (on which see also *supra*, §1.4.2). This choice, however, might be prompted only by Avicenna’s own consistent use of *riyāḍiyyāt* throughout the *DN*, matched as well by al-Ġūzġānī’s *usus*. It may be worth noticing here that the Latin translation is somehow less consistent than al-Ġazālī’s Arabic original in rendering the various occurrences of the root *rwḍ*. In particular, the common translation «mathematicae» is substituted with a perhaps more literal «disciplinales» at the beginning of the *Physics*. Cf. *MF*, *Ṭabī‘yyāt*, Preface, ed. DUNYĀ 1961: 303.10: *wa-anna l-taqṣīm^a yanzila min-hu ilā l-kammiyyat^t, allatī hiya mawḍū^a l-riyāḍiyyat^t* («and that the subdivision goes down from it [*scil.* from the knowledge concerning substance and accident in general] to quantity, which is the subject-matter of mathematics», §315 of my Translation), and the Latin version: «Dividendo autem descenditur ad quantitatem, que est subiectum disciplinalium» (cfr. *Physica*, Tractatus primus, Capitulum loquendi de naturalibus, ed. MUCKLE 1933: 130.9-131.1).

astronomy – which, with its cosmological side²²⁵, represents a crossing point for physical, mathematical, and metaphysical considerations at once – appears to be a particularly controversial domain²²⁶, certainly not as suitable as arithmetics and geometry for al-Ġazālī's appraisal of unquestioned truth.

Immediately after mathematics, in a characteristically chiasmic scheme of exposition, al-Ġazālī deals with the 'most false' of the philosophical sciences, *i.e.* (4) metaphysics, in which what is sound is the exception [*nādir*, lit. 'uncommon', 'rare']. (2) Logic, for its part, is the perfect counterpart of the divine science, since what is false is the exception in it, while most of the doctrines belonging to it are sound and correct. Finally, al-Ġazālī mentions the intermediate status of the last science, (3) physics, whose doctrines are almost equally divided between true and false ones. Given the successive omission of a section devoted to mathematics, this curious classification appears all the more interesting, since it evokes a tripartite, and not anymore a quadripartite, scheme of the philosophical sciences. Mathematics, deemed as completely true, is promptly set aside, while the three remaining sciences are rearranged in a more regular structure, with two extreme poles – logic and metaphysics, the first all but true, the second all but false – bracketing an intermediate, nuanced set of doctrines – *i.e.* those of natural science, which are true and false at the same time. It is also rather interesting, and thus worth mentioning at least *en passant*, that none of the philosophical sciences is deemed here to be entirely false: even the theologian often portrayed as the harshest critic of the philosophers, therefore, is not completely willing to express too categorical a condemnation of his alleged enemies²²⁷.

Al-Ġazālī's classification is summarized in the following Diagram 1. Arabic numbers in the left column indicate the ordering of presentation of the sciences in the prologue of the *MF* (Text 5 *supra*), while the Roman numbers in brackets indicate the ordering with which the sciences are dealt with in the actual exposition of the work.

²²⁵ On the link between astronomical doctrines and philosophical cosmology see SALIBA 2004.

²²⁶ For an accurate analysis of cosmology as a point of encounter, conflict, and merging between Avicenna's and al-Ġazālī's doctrines see the still fundamental study by FRANK 1992; on the mediating role of astronomical (and broadly cosmological) matters in the thought of Avicenna see also JANOS 2011. The case of astronomy as a particularly significant instance of the relationship between a philosophical and a theological discourse is also briefly addressed by EICHNER 2009: xiv-xv, though she makes it clear that «[a] prominence of astronomical discussions in *kalām*-texts [...] can not be detected before the Ilkhanid period, *i.e.* the period where the influence of the Marāgha-observatory milieu creates a very specific type of theological discourse which relies heavily on contemporary approaches to Avicennian philosophy». Mathematical astronomy, however, is far less involved with general metaphysical and cosmological discussions, and could in principle be considered as possessing the same degree of truthfulness of the other mathematical sciences.

²²⁷ This aspect has been emphasized as well by JANSSENS 2001: 7 with regard to the *TF*, in which «philosophy is not rejected in its totality». The attitude towards philosophy shown in the *TF* is therefore completely consistent with the attitude displayed in the prologue to the *MF*. However, Janssens also proposed elsewhere (JANSSENS 2003^b: 43) to read the *MF* as a purely philosophical, and precisely for this reason scholastic and juvenile, work of al-Ġazālī. I think however it is safe to reject now such a simplistic interpretation: cf. *supra*, §1.2. *Chronological and Doctrinal Collocation*, and §1.3. *A Translation from Persian*.

DIAGRAM 1. *Classification of the sciences according to their degree of truthfulness in the MF*

	Entirely true	Almost entirely true	True and false	Almost entirely false	Entirely false
1	(Mathematics)				---
2		Logic (i)			---
3			Physics (iii)		---
4				Metaphysics (ii)	---

In the *Epilogue* of the *MF*, in the occasion of a brief, final recapitulation of his work, al-Ġazālī does not mention the mathematical sciences anymore, but rather limits himself to citing the three sciences that he has properly discussed in the previous three main sections of the text.

TEXT 10. al-Ġazālī, *MF*, *Epilogue*, §455²²⁸

This, then, is what we wanted to relate [*an nahkiya-hu*] about their sciences – logic, metaphysics and physics – without occupying [ourselves] with the distinction of the scanty from the abundant and of the true from the false. Let us begin after this one with the book *The Incoherence of the Philosophers*, so that the falsity of what is false among these opinions be made clear.

It can be said with a fair amount of safeness, therefore, that the general project of the *MF* did not involve at any rate the dealing of mathematics, despite the earlier mention of the fourth science in the *Prologue*²²⁹. As we have seen, the main reason why al-Ġazālī chose this course of action can be probably explained with his theoretical indifference towards mathematics: being a true science, whose principles and conclusions cannot be challenged by the human intellect – even by a human intellect illuminated by divine revelation, one would say – mathematics is intrinsically sheltered from the elaborate operation of presentation and criticism undertaken by al-Ġazālī, and thus it does not even need the preliminary step of the uncommitted account, unlike the other sciences.

Although this is certainly the main, and perhaps also the only, reason for al-Ġazālī's omission, it is worth noticing that a material factor may have had some influence on al-Ġazālī's reception of the *DN*, as well. As a matter of fact, the extant manuscript tradition of Avicenna's work is for the major part devoid of the conclusive section on mathematics, thus corresponding more, so to speak, to al-Ġazālī's model than to al-Ġūzġānī's one. In the following Table 4, I have collected from previous scholarship all the information I could find about the Persian manuscript tradition of the *DN*. Only five manuscripts out of the 21 known extant *codices* preserve the entire work, comprised the mathematics; two manuscripts preserve limited portions of the work (only al-Ġūzġānī's *Geometry* in the case of MS Calcutta, Bengal II 565; only the *Physics* in MS Tehrān, Malik 2009₂), while as many as fourteen

²²⁸ See *MF, Epilogue*, ed. DUNYĀ 1961: 385.1-4; see *infra*, Translation, §454.

²²⁹ Al-Ġazālī does mention the mathematical section at least two more times in the *MF*: on such peculiar 'external' cross-references, cf. the following section §1.4.3, esp. Table 6.

manuscripts present the format *Logic – Metaphysics – Physics*, later precisely reproduced in al-Ġazālī’s *MF*. While it is clearly not necessary that al-Ġazālī should have read a *DN* manuscript of this kind in order for him to plan the *MF* in the very characteristic format we now face, this structural coincidence may be not without significance. Concluding the entire encyclopaedia with the subject-matter of the last chapters of *Physics*, in fact, is far from being preposterous, and may be on the contrary a fairly reasonable – and a philosophically fascinating – choice to make, for al-Ġazālī and for any other qualified reader as well²³⁰.

TABLE 4. «Ġazālīan» and «Ġūzġānīan» models in the manuscript tradition of the *DN*²³¹

		PERSIAN MANUSCRIPT	CONTENT	NOTES
1	Berlin	P 55	M • I • T	Ġ
2	Calcutta	Bengal I 1357	M • I • T	Ġ
3		Bengal II 565	R (H)	
4		Būhār 215	M • I • T	Ġ
5	Hyderabad	I 334	M • I • T	Ġ
6	Istanbul	Fatih 3312	M • I • T	Ġ
7		Nuruosmaniye 2682	M • I • T	Ġ
8	London	British Library, Add. 16659 ₃ [foll. 255 ^b -348 ^b]	M • I • T • R	★ • AM
9		British Library, Add. 16830	M • I • T • R	★ • AM
10		British Library, Or. 2361 ₃	M • I • T	Ġ
11		British Library, India Off. 2218	M • I • T	Ġ
12	Mašhad	Rižavi I 1/98	M • I • T	Ġ
13		Rižavi IV 1/557	M • I • T	Ġ
14	Tehrān	Maġlis 123	M • I • T • R	★ • AM

²³⁰ This could very well have been the case also for Bahmanyār’s *Kitāb al-taḥṣīl*, which also follows the ordering Logic-Metaphysics-Physics, while completely omitting the Mathematics, as well. This issue has already been briefly addressed by JANSSENS 2003: esp. 179, who argues that Bahmanyār «seems to valorize it [*scil.* the ordering of the sciences adopted in the *DN*] as a major contribution of Ibn Sinā’s (mature) thought». *Pace* other stances taken by Janssens himself (*e.g.* in JANSSENS 2003^b: 43), the same can perhaps be applied as a fitting characterization of al-Ġazālī’s philosophical project, as well. On the overall structure of the *Kitāb al-taḥṣīl* see also EICHNER 2009: esp. 9-11, and cf. also *supra*, §1.3, *A Translation from Persian*, for the quotation of a relevant excerpt of its introduction.

²³¹ I have gathered the information summarized in this diagram from GUTAS 2014: 424-425, and from the *Préface* by ACHENA-MASSÉ (1) 1955: 5 («Deux manuscrits du British Museum et un manuscrit de la Bibliothèque du Mađlis (Téhéran) fournirent le texte de l’arithmétique»). I have inferred which manuscripts the translators did actually use on the basis of the information gathered by Gutas. As a matter of fact, the only two complete manuscripts preserved in London are, to the best of my knowledge, MSS. British Library, Add. 16659₃, and British Library, Add. 16830, while MS Tehrān, Maġlis 123 is the sole Iranian manuscript corresponding to the brief description provided in the French preface.

	PERSIAN MANUSCRIPT	CONTENT	NOTES
15	Malik 1025	M · I · T · R	★
16	Malik 1026	M · I · T	Ġ
17	Malik 2009 ₂	T	
18	Malik 4648 ₃	M · I · T	Ġ
19	Milli, Pers. 43	M · I · T · R	★
20	Ṭabāṭabā'ī 1322	M · I · T	Ġ
21	Tangābunī 74	M · I · T	Ġ

M = *mantiq* · I = *ilāhiyyāt* · T = *tabī'yyāt* · R = *riyādīyyāt* (H = *handasa*)

AM = MSS. used by Achena-Massé for their translation of the *Arithmetics*

Ġ = 'incomplete' *DN*, according to the «Gazālīan» model · ★ = 'complete' *DN*, according to the «Ġūzġānīan» model

The wide attestation, at least in the material tradition, of the «Gazālīan» format of the *DN* – *i.e.* devoid of the section on Mathematics – requires thus a closer inspection of the end of the *Physics*, in order to ascertain the philosophical validity of this alternative model, as opposed to the «Ġūzġānīan» *DN* enriched of the mathematical section.

The last chapters of the natural science of the *DN*²³² are not devoted to properly physical matters, but they deal on the contrary with eschatology and prophetology, within the framework of a distinctly Avicennan doctrine of the rational soul. The psychological framework tightly links this conclusion with the parallel cosmological ending of the *Metaphysics*, where Avicenna had dealt with the heavenly souls and intellects, explaining at length the hierarchy of reality from the perspective of the First Principle. In the conclusive sections of the *Physics*, the point of view is the mirror, and the opposite, of the metaphysical one – that is to say, the emanative system is described from the perspective of the human soul, which receives the intellectual forms from the Agent Intellect, and thus actualizes her intrinsic knowing potentiality²³³. The treatment of prophecy is precisely the climax of this kind of discussion, since the prophet's soul is the 'holy soul' [*naḥs qudsī*] whose intellectual powers transcend those of the rest of humanity and make the prophet close to God. The significance of this kind of religious, ethico-theological conclusion is particularly striking if we compare it with the two analogous cases of al-Fārābī's *Iḥṣā' al-'ulūm*, on the one hand, and of Avicenna's *Kitāb al-Šifā'*, on the other hand. In al-Fārābī's treatise, as we have seen above²³⁴, the concluding chapter is devoted precisely to a kind of juridico-political crowning of the philosophical sciences, with a well perceivable insistence on the religious and theological peak represented by the prophet, leading figure in both the civil and the religious domain. This same emphasis on the amphibious character of the prophet/caliph is one of the most important features of al-Fārābī's metaphysical and political *summa Principles of*

²³² See *DN*, ed. MEŠKĀT 1952: 139.5-141.9 [§49]; 141.10-145.3 [§50]; 145.4-146 [§51]; and the French translation in *DN*, ACHENA-MASSÉ (II) 1958: 86.15-87.27 [§49]; 87.28-89.18 [§50]; 89.19-90 [§51]. The paragraphs are not numbered in the Persian and the French editions.

²³³ Cf. on this SIGNORI 2020^a: esp. 82-83, 86 and 98.

²³⁴ See *supra*, §1.4.2. *The Order of the Sciences*.

the *Opinions of the Inhabitants of the Virtuous City* [*Mabādi' āra' ahl al-madīna al-fāḍila*]²³⁵, but, what is more, it is also the theme which concludes the *Ilāhiyyāt* of Avicenna's *Kitāb al-Šifā'*, and thus the entire project of the *Book of the Healing/Cure*²³⁶.

Notably, this prophetological conclusion comes in the *Šifā'* at the end of *Metaphysics*, which is also the end of the entire work, while in the *DN* the very same topics constitute the end of the natural science²³⁷. This collocation would be conclusive if the *DN* ended with physics, but it becomes an intermediate position after al-Ġūzġānī's addition of the mathematics. This is of course no sufficient reason for considering the mathematics as a spurious appendix, given the programmatic statements by Avicenna himself about the necessity of their addition²³⁸. This notwithstanding, it is a striking coincidence that the *DN* without the mathematics does nonetheless preserve a perfectly sensible structure, similar to the Fārābīan scheme on the one hand – with a logical beginning and a theological endpoint, and the other sciences inbetween – and to Avicenna's own way of concluding the *Šifā'* on the other hand.

In the *MF*, whose structure reflects the alternative reading of the *DN* in which the mathematics play no role at all, the plausibility of this format is highlighted by the chaptering with which al-Ġazālī rearranges Avicenna's writing²³⁹. As a matter of fact, the conclusive part of the natural science – subdivided by Avicenna in various paragraphs of his *DN* – is gathered by al-Ġazālī in the Fifth and final treatise of his *Physics*, which, in turn, bears the signs of a tight link with the corresponding Fifth treatise of the *Metaphysics*²⁴⁰. By highlighting this doctrinal correspondence between the natural and the divine sciences, al-Ġazālī manages to convey to the reader the existence of an amphibious science – psychology –, whose doctrines touch on physics, but on metaphysics (and on divine revelation) as well. The double-edged nature of the soul – which has a natural agency, but also a supernatural induction – is the ontological fact that implies, on an epistemological level, the existence

²³⁵ See in particular Sections V.15.10-11 in WALZER 1985: 244-247, where the figures of the true philosopher, of the prophet, and of the perfect ruler are conflated and ultimately shown to be coincident.

²³⁶ See *Šifā' Ilāhiyyāt* X.5, ed. QANAWATĪ-ZĀYID 1960: 455, English translation in MARMURA 2005: 378.26-30: «[But] whoever combines theoretical wisdom with justice is indeed the happy man. And whoever, in addition to this, wins the prophetic qualities becomes almost a human god. Worship of him, after the worship of God, exalted be He, becomes almost allowed. He is indeed the world's earthly king and God's deputy in it».

²³⁷ This material coincides in part with the part of Avicennan philosophy dubbed by Dimitri Gutas «Metaphysics of the Rational Soul». The perfect convergence on prophetological and other supernatural themes between the ending of the *MF*'s *Physics* and the corresponding conclusion of Avicenna's *Metaphysics* was already noted with the customary acumen by Albert the Great in his *De somno et vigilia* 3.1.6, ed. BORNET: 185^b: «Ista autem est sententia Algazelis in fine philosophiae suae, et Avicennae in prima philosophia sua: in quibus locis isti duo de prophetis et prophetiis loquuntur». I have already touched upon this interesting feature of the reception of the *MF* in SIGNORI 2020^a: 87 fn. 24. For al-Ġazālī's Latin reception cf. also *infra* in this Introduction, §2.2. *Latin*.

²³⁸ For which cf. *supra*, §1.4.2, esp. Text 5.

²³⁹ EICHNER 2009: 12 noticed as well that the differences between the text of the *MF* and the *DN* are «[f]requently...related to the fact that al-Ghazālī imposes on the text of the *Maqāṣid al-falāsifa* a far more explicit structure than the text of the *Dānishnāma-yi 'Alā'i* has» (cf. also *supra*, §1.4.1, *Divisio textus*). The case here examined is a further instance of this kind of attitude towards Avicenna's text, which tends to make the connection and the structural links among the various parts of the text far more explicit and clear-cut.

²⁴⁰ This tight link is in itself a further reason against the hypothesis, advanced by Reynolds 2002 and already discussed *supra*, §1.2. *Chronological and Doctrinal Collocation*, of a later drafting of the Fifth treatise of the *Physics* with respect to the core text of the *MF*. Cf. also *infra*, §1.4.3. *Internal Cross-References*.

of an intermediate set of doctrines, which are located at the intersection between physics and metaphysics, and which constitute at the same time the connection of the philosophical disciplines with the domain of religious revelation.

This intermediate set of doctrines is therefore not given, in principle, a precise collocation within the *cursus studiorum*, since it plays the role of a culminating theory, where both metaphysical and physical doctrines find their ultimate realization. In this sense, it is well understandable that this same set of psychological and prophetological doctrines comes sometimes (as in Avicenna's *Šifā'*) after metaphysics – in what might be considered as a more regular position –, and sometimes (as in Avicenna's *DN* devoid of the mathematics) after physics – in what might be considered to be a slightly irregular collocation. The unchanging element in this mobile situation is represented by the *conclusive* position of these same doctrines, which is maintained in both cases, in accordance with the originally Fārābīan scheme of the *Iḥṣā' al-'ulūm*, as well. The addition of the mathematics at the end of the *DN* changes the balance of the entire work, moving a possible – and reasonable – endpoint to the middle of the discussion, without substituting it with a new, substantial conclusion at the new ending of the writing.

Clearly, this implies by no means that the actual ending of the *DN* should be the *Physics* with its religious capping, since the addition of the mathematical sciences was probably Avicenna's own will, at least at some stage of the drawing up of the work. Nevertheless, this structural closure makes it reasonable that a noteworthy instance of the *Wirkungsgeschichte* of the *DN* such as al-Ġazālī's *MF* should employ the abridged version, without mathematics, as opposed to the «Ġūzġānīan», extended model. This is a significant feature of Avicenna's reception in its earliest stage, and it should be taken into serious account for the fuller comprehension of his rich and differentiated legacy.

1.4.3. Internal Cross-References

TEXT 11.a. [= Text 5 (c)]
Avicenna, *DN*, *General Prologue*

Therefore, if somewhere [within metaphysics] we cannot do without referring to one of the inferior sciences, we will do so.

TEXT 11.b. [= Text 8]
al-Ġazālī, *MF*, *Metaphysics*, *Preface*

It is [usually] postponed only because of its obscurity, which makes it difficult to inquire into it before having inquired into the natural [science]. We, however, shall account in our speech for those parts of the natural science from which the comprehension of our intent depends.

To begin with the analysis of the network of internal cross-references of the *MF*, I have reported in Texts 11.a and 11.b the relevant excerpts of two passages, of the *DN* and the *MF* respectively, which we already had the occasion to read in what precedes. In both passages, as a matter of fact, Avicenna and al-Ġazālī insist on the necessity to anticipate within the

treatment of *Metaphysics* some of the topics properly belonging to *Physics*, thus inviting the interpreter to a check of the actual application of this programmatic statement in the development of the *summa*. However, they do so in a quite different way: Avicenna (Text 11.a) envisages possible prospective references not only to natural philosophy, but more generally to «one of the inferior sciences» (comprising in all likelihood also mathematics), while al-Ġazālī, in keeping with his omission of mathematics, speaks only of «natural science», and more particularly of only «those parts» of it which are required to make the «intent» of metaphysics comprehensible. Moreover, al-Ġazālī explicitly states that he will «account» within metaphysics for those propaedeutical physical doctrines, in contrast with Avicenna's mention of mere cross-references.

As mentioned above²⁴¹, both philosophers' wordings betray however the same preoccupation with the didactic ordering of the sciences, which should culminate with metaphysics – as Avicenna himself explains at the beginning of the *Ilāhiyyāt* of his *Kitāb al-Šifā'*²⁴² – precisely because the supreme science makes use of many notions demonstrated in the inferior sciences (in particular in physics). The highest rank of metaphysics is therefore somewhat a function of its position at the top of the system of the sciences, since its final place in the didactic order is a sign of its apical position, and architectonic role, in the system of knowledge as a whole. As a consequence, dealing with metaphysics before the inferior sciences – as the *DN* and the *MF* do – might well imply to be forced to anticipate some of the conclusions of the lower sciences within the metaphysical discourse, in order to make it comprehensible even if it comes before its proper, conclusive place. Avicenna's remark, therefore, clearly indicates that he remains well aware of his previous theorization of the system of the knowledge also in the *DN*, and that the displacement of metaphysics is not without consequences for this same system – on the contrary, given this general displacement, some particular rearrangements do become inevitable.

It is thus particularly interesting to look for the passages in the *Metaphysics* of the two works in which topics traditionally belonging to (Aristotelian) physics are treated. Even more notably, at least one doctrine treated within metaphysics – *i.e.* that of time – is explicitly said by al-Ġazālī to be «more appropriate» [*alyaq*] to the *Physics*, which gives *inter alia* a strong hint of the seriousness of his philosophical training in Peripatetic *falsafa*, even beyond the boundaries of the model provided by the *DN* in itself. More generally, explicit prospective references to *Physics* are also of great importance to this analysis, especially in the light of Avicenna's own statement in Text 11.a, in which the reference to the inferior

²⁴¹ Cf. *supra*, §1.4.2, after Text 8.

²⁴² See AVICENNA, *K. al-Šifā', Ilāhiyyāt* I.3, ed. QANAWATI-ZĀYID 1960: 19; English translation in MARMURA 2005: 14.30-15.6: «Concerning the order [in which] this science [is studied], it should be learned after the natural and mathematical sciences. As regards the natural [sciences], this is because many of the things admitted in this science are among the things made evident in the natural sciences as [for example] generation and corruption, change, place, time, the connection of every moved thing by a mover, the termination of [all] moved things with a first mover, and other than these. As for the mathematical [sciences], this is because the ultimate aim in this [metaphysical] science – namely, knowledge of God's governance, knowledge of the spiritual angels and their ranks, and knowledge of the order of the arrangement of the spheres – can only be arrived at through astronomy; and astronomy is only arrived at through the science of arithmetic and geometry. As for music and the particular divisions of mathematics and the moral and political [sciences], these constitute benefits that are not necessary for this science».

sciences, and not the proper account of specific doctrines (as in Text 11.b), is promised to be undertaken.

To give systematic context to the aforementioned central assets, I will provide in what follows a table of the explicit cross-references to other parts of the *summa* that are to be found in the text of the *MF*, showing time by time if the cross-reference is taken from the *DN* or added by al-Ġazālī (Table 5). A second, much shorter table (Table 6) will offer a list of the ‘external’ cross-references that are to be found in the text of the *MF*, *i.e.* of those cases in which another philosophical science is explicitly quoted that is not present in the actual format of the *MF* as we read it today (*e.g.* rhetoric, mathematics, or optics).

TABLE 5. *Internal cross-references in the MF*

	LOCUS	§	CROSS-REFERENCE		LOCUS CITATUS	§
1	<i>Logic</i> , Premise	2	they will be explained at their own place	→	<i>Logic IV</i>	60-68
2	<i>Logic II</i>	17	as was mentioned before in teaching the accidental	←	<i>Logic II</i>	13-14
3	<i>Logic IV</i>	34	We have already mentioned the fact	←	<i>Logic</i> , Premise	2
4	<i>Logic IV</i>	43	as it has been [explained] before about the first figure	←	<i>Logic IV</i>	38
5	<i>Logic IV</i>	43	as we have mentioned about the first figure	←	<i>Logic IV</i>	40
6	<i>Metaphysics I.1</i>	104	as it was said before	←	<i>Metaphysics I.1</i>	104
7	<i>Metaphysics I.1</i>	105	according to what will be abundantly expounded [later on]	→		
8	<i>Metaphysics I.1</i>	123	of the kind we have mentioned	←	<i>Metaphysics I.1</i>	122
9	<i>Metaphysics I.1</i>	124	as will be explained while mentioning the contrariety	→	<i>Metaphysics I.3</i>	153
10	<i>Metaphysics I.1</i>	126	along the [lines] of the indication that was presented	←		
11	<i>Metaphysics I.1</i>	129	As for «time» [...] it will be explained in the physics (!)	→	<i>Metaphysics IV</i>	256- 259 esp. 258
12	<i>Metaphysics I.1</i>	135	by virtue of what we have previously mentioned concerning the concrete existence	←		

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	LOCUS	§	CROSS-REFERENCE		LOCUS CITATUS	§
13	<i>Metaphysics</i> I.1	137	as will be [explained]	→	<i>Metaphysics</i> II.4; <i>Metaphysics</i> III	179; 203, 240- 243, 295
14	<i>Metaphysics</i> I.2	139	we have already mentioned it in the first [chapter] of the <i>Logic</i>	←	<i>Logic</i> I	7
15	<i>Metaphysics</i> I.2	143	as it was said before	←	<i>Metaphysics</i> I.1	135
16	<i>Metaphysics</i> I.2	146	as it was said before	←	<i>Logic</i> II; <i>Metaphysics</i> I.1; <i>Metaphysics</i> I.2	17; 141; 146
17	<i>Metaphysics</i> I.5	160	an increased explanation will follow	→	<i>Metaphysics</i> III.b.7 (?)	218
18	<i>Metaphysics</i> I.6	162	as it was said before	←	<i>Metaphysics</i> I.4	154-155
19	<i>Metaphysics</i> I.6	163	what was mentioned about their signs will come [later]	→		
20	<i>Metaphysics</i> I.8	175	as it was said before	←		
21	<i>Metaphysics</i> II	176	we have already mentioned	←	<i>Metaphysics</i> I.8	169
22	<i>Metaphysics</i> II.2	177	we have already mentioned	←	<i>Metaphysics</i> I.5	156
23	<i>Metaphysics</i> II.2	177	it has already been established	←	<i>Metaphysics</i> I.1	121-126
24	<i>Metaphysics</i> II.4	179	it has already been said before	←	<i>Metaphysics</i> I.1	135
25	<i>Metaphysics</i> II.4	179	as will be explained	→		
26	<i>Metaphysics</i> II.7	182	as we have mentioned	←	<i>Metaphysics</i> I.2	142
27	<i>Metaphysics</i> II.7	182	it has already been said before [...] its being existent	←	<i>Metaphysics</i> I.2	143
28	<i>Metaphysics</i> II.7	182	it has already been said before [...] other than the existence	←	<i>Metaphysics</i> I.2	143
29	<i>Metaphysics</i> II.8	183	as it was said before	←	<i>Metaphysics</i> I.5; <i>Metaphysics</i> II.1	156; 176
30	<i>Metaphysics</i> II.8	183	we have already clarified	←	<i>Metaphysics</i> II.1	176
31	<i>Metaphysics</i> II.8	184	we will clarify in the <i>Physics</i>	→	<i>Physics</i> I	316- 322
32	<i>Metaphysics</i> II.8	184	We have already clarified	←	<i>Metaphysics</i> II.2; <i>Metaphysics</i> II.3	177; 178

	<i>LOCUS</i>	§	CROSS-REFERENCE		<i>LOCUS CITATUS</i>	§
33	<i>Metaphysics</i> II.9	186	We have already mentioned	←	<i>Metaphysics</i> II.8	184
34	<i>Metaphysics</i> II.12	192	We have already established	←	<i>Metaphysics</i> I.8	169-170
35	<i>Metaphysics</i> II.12	192	we have clarified [...] nor accident	←	<i>Metaphysics</i> II.1; 176; <i>Metaphysics</i> II.2; 177; <i>Metaphysics</i> II.3; 178; <i>Metaphysics</i> II.11 188	
36	<i>Metaphysics</i> II.12	193	We have already mentioned	←	<i>Metaphysics</i> I.8	169-170
37	<i>Metaphysics</i> II.12	194	since it has already been said	←	<i>Metaphysics</i> II.12	190-191
38	<i>Metaphysics</i> II.12	195	We will clarify	→	<i>Metaphysics</i> III.b.7	214-218
39	<i>Metaphysics</i> III.a	196	it has already been said before	←	<i>Metaphysics</i> II.4	179
40	<i>Metaphysics</i> III.a	196	for what has been said before	←	<i>Metaphysics</i> II.11	189
41	<i>Metaphysics</i> III.a	197	as it was said before	←	<i>Metaphysics</i> II.8; 183- <i>Metaphysics</i> II.9 185; 186	
42	<i>Metaphysics</i> III.b.1	199	It will be [explained] in the book on the soul, within the <i>Physics</i>	→	<i>Physics</i> IV	412
43	<i>Metaphysics</i> III.b.1	200	It has already been said before	←	<i>Metaphysics</i> II.2; 177; <i>Metaphysics</i> II.3 178	
44	<i>Metaphysics</i> III.b.2	202	as it was said before	←	<i>Metaphysics</i> III.b.2	201
45	<i>Metaphysics</i> III.b.2	202	Since, then, it has been established	←	<i>Metaphysics</i> III.b.2	201
46	<i>Metaphysics</i> III.b.5	210	we have already mentioned	←	<i>Metaphysics</i> I.8	170
47	<i>Metaphysics</i> III.b.6	212	it has already been said before	←	<i>Metaphysics</i> II.9	186
48	<i>Metaphysics</i> III.b.7	218	we have already clarified	←	<i>Metaphysics</i> I.5	159
49	<i>Metaphysics</i> III.b.7	220	as it was said before	←	<i>Metaphysics</i> III.b.2	201- 202

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	<i>LOCUS</i>	§	CROSS-REFERENCE		<i>LOCUS CITATUS</i>	§
50	<i>Metaphysics</i> III.b.8	222	we have already clarified	←	<i>Metaphysics</i> III.b.7	214
51	<i>Metaphysics</i> III.b.8	222	has already been [established] before	←	<i>Metaphysics</i> III.b.7	214-217
52	<i>Metaphysics</i> III.b.9	224	as it was said before	←	<i>Metaphysics</i> II.12; <i>Metaphysics</i> III.b.7	195; 214, 217
53	<i>Metaphysics</i> III.b.11	227	the demonstration of whose existence will be made subsist [afterwards]	→		
54	<i>Metaphysics</i> III.b.11	232	we will clarify in the book of the soul	→	<i>Physics</i> IV	412- 420
55	<i>Metaphysics</i> III.b.11	232	as it will be explained	→	<i>Physics</i> IV	402
56	<i>Metaphysics</i> III.b.11	236	according to that whose clarification will follow	→		
57	<i>Metaphysics</i> IV	245	we have already apprised	←	<i>Metaphysics</i> III	all
58	<i>Metaphysics</i> IV	245	we will mention in the fifth treatise	→	<i>Metaphysics</i> V	all
59	<i>Metaphysics</i> IV.a.1	246	as it will be explained	→	<i>Metaphysics</i> IV.b.1.6; <i>Meta-</i> <i>physics</i> IV.b.3.1	265; esp. 282
60	<i>Metaphysics</i> IV.a.3	248	It has already emerged	←	<i>Metaphysics</i> IV.a.1	246
61	<i>Metaphysics</i> IV.b.1.1	250	as it will be explained in the <i>Physics</i>	→	<i>Physics</i> II	
62	<i>Metaphysics</i> IV.b.1.1	250	as it will be explained	→	<i>Physics</i> I.2	321-322
63	<i>Metaphysics</i> IV.b.1.1	250	It has already been clarified	←	<i>Metaphysics</i> IV.b.1.1	250
64	<i>Metaphysics</i> IV.b.1.2	251	We have already mentioned	←	<i>Metaphysics</i> I.6	164
65	<i>Metaphysics</i> IV.b.1.2	254	we have already clarified	←	<i>Metaphysics</i> IV.b.1.1	251
66	<i>Metaphysics</i> IV.b.1.2	255	as it was said before	←	<i>Metaphysics</i> IV.b.1.2	252

	LOCUS	§	CROSS-REFERENCE	LOCUS CITATUS	§
67	<i>Metaphysics</i> IV.b.1.4	263	we have already mentioned	← <i>Metaphysics</i> I.1; <i>Metaphysics</i> I.6	119- 120; 164
68	<i>Metaphysics</i> IV.b.1.4	263	as it was said before	← <i>Metaphysics</i> I.1	111-116
69	<i>Metaphysics</i> IV.b.2.1	270	has already been clarified	← <i>Metaphysics</i> IV.b.1.5	264
70	<i>Metaphysics</i> IV.b.2.3	276	It has already been clarified	← <i>Metaphysics</i> IV.b.1.5	264
71	<i>Metaphysics</i> IV.b.2.3	276	it has already been established before	← <i>Metaphysics</i> I.7	167
72	<i>Metaphysics</i> IV.b.2.3	277	as it will be explained	→ <i>Metaphysics</i> IV.b.3.1	287- 288
73	<i>Metaphysics</i> IV.b.2.3	280	we have already mentioned	← <i>Metaphysics</i> IV.b.2.1	271
74	<i>Metaphysics</i> IV.b.3.1	283	as it was said before	← <i>Metaphysics</i> IV.b.2.2	272
75	<i>Metaphysics</i> IV.b.3.2	289	it has already been clarified	← <i>Metaphysics</i> IV.b.2.1	270
76	<i>Metaphysics</i> IV.b.3.4	293	it has been established	← <i>Metaphysics</i> IV.b.3.2	289
77	<i>Metaphysics</i> IV.b.3.4	293	It has already been said	← <i>Logic</i> II; <i>Metaphysics</i> I.2	17; 141
78	<i>Metaphysics</i> V	294	it has already been said	← <i>Metaphysics</i> II.7	182
79	<i>Metaphysics</i> V	295	as it was said before	← <i>Metaphysics</i> I.8 (~)	169-170
80	<i>Metaphysics</i> V	295	it has been clarified	← <i>Metaphysics</i> I.8	169-170
81	<i>Metaphysics</i> V	297	as it was said before	← <i>Metaphysics</i> V	295
82	<i>Metaphysics</i> V	298	as it will be explained in the <i>Physics</i>	→ <i>Physics</i> II	333; 335; 350
83	<i>Metaphysics</i> V	313	as it was said before	← <i>Metaphysics</i> IV.b.2.3	276
84	<i>Metaphysics</i> V	314	have already been elucidated	← <i>Metaphysics</i> V	all; esp. 294

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	<i>LOCUS</i>	§	CROSS-REFERENCE		<i>LOCUS CITATUS</i>	§
85	<i>Physics</i> , Preface	315	We have already mentioned	←	<i>Metaphysics</i> I.1	100-138
86	<i>Physics</i> , Preface	315	[We have already mentioned also]	←	<i>Metaphysics</i> , First Premise; <i>Metaphysics</i> I	91; <i>passim</i>
87	<i>Physics</i> I.1.1	318	as it will be explained	→	<i>Physics</i> I.2	332
88	<i>Physics</i> I.2	328	The sign which invalidated [...] as it was demonstrated before	←	<i>Logic</i> II; <i>Metaphysics</i> I.1; <i>Metaphysics</i> I.2	17; 141; 146
89	<i>Physics</i> I.2	332	the four aforementioned marks	←	<i>Physics</i> I.2	324
90	<i>Physics</i> II.a.1	333	It was already said before [...] in <i>Metaphysics</i>	←	<i>Metaphysics</i> IV.b.1.2; <i>Meta-</i> <i>physics</i> IV.b.2.1; <i>Metaphysics</i> IV.b.2.2; <i>Metaphysics</i> IV.b.2.3; <i>Metaphysics</i> IV.b.3.2	252- 255; 270- 271; 272- 274; 275- 276; 289
91	<i>Physics</i> II.b.1	335	as will be explained	→	<i>Physics</i> III.1	357- 359
92	<i>Physics</i> II.b.3	346	the answer to [this] has already come before from two passages, where we have said that	←	<i>Physics</i> II.b.3	344- 345
93	<i>Physics</i> II.b.4	347	It has already been said before	←	<i>Physics</i> I.1.1; <i>Physics</i> II.2	320; 338
94	<i>Physics</i> II.b.6	351	as it was said before	←	<i>Physics</i> II.a.1	333
95	<i>Physics</i> II.b.7	354	as it was said before concerning their reception of the rectilinear movement	←	<i>Physics</i> I.1.3	323
96	<i>Physics</i> II.b.7	354	We have already clarified [...] from outside	←	<i>Metaphysics</i> IV.b.1.2	254- 255
97	<i>Physics</i> II.b.7	355	to the impossible which we have mentioned	←	<i>Physics</i> II.b.7	354
98	<i>Physics</i> II.b.7	356	It has already been clarified that the void is absurd	←	<i>Physics</i> I.2	329- 331
99	<i>Physics</i> III.1	357	which we have clarified to be accidents for the forms	←	<i>Physics</i> II.2	338
100	<i>Physics</i> III.2	360	about whose attributes and simplicity the speech has come before	←	<i>Physics</i> II	333;

	<i>LOCUS</i>	§	CROSS-REFERENCE		<i>LOCUS CITATUS</i>	§
						335- 338; 356; <i>passim</i>
101	<i>Physics</i> IV.2.1	388	like the exposition on [this] will follow	→	<i>Physics</i> IV.2.2	394
102	<i>Physics</i> IV.2.1	392	as it was said before	←	<i>Physics</i> IV.2.1	389
103	<i>Physics</i> IV.3	406	we have already mentioned	←	<i>Physics</i> IV.2.1	388
104	<i>Physics</i> IV.3	410	as it was said before	←	<i>Physics</i> IV.2.2	401
105	<i>Physics</i> IV.3	419	we have clarified [...] has already appeared manifestly	←	<i>Logic</i> II; <i>Metaphysics</i> I.1; <i>Physics</i> I.2	17; 141; 328
106	<i>Physics</i> IV.3	420	we have already mentioned in what precedes	←	-- ?	
107	<i>Physics</i> IV.3	422	it has already been said before	←	<i>Metaphysics</i> IV.b.3.3	292
108	<i>Physics</i> V	425	its establishment and its description have already been anticipated	←	<i>Metaphysics</i> V (~)	299- 301
109	<i>Physics</i> V.1	426	as it was said before	←	<i>Metaphysics</i> IV.b.3.3	292
110	<i>Physics</i> V.1	426	the intellectual substances, whose establishment has come before in <i>Metaphysics</i>	←	<i>Metaphysics</i> IV.b.3.1	esp. 282
111	<i>Physics</i> V.3	428	for what we have clarified before	←	<i>Metaphysics</i> III.b.11	228
112	<i>Physics</i> V.3	429	It has already appeared manifestly [...] This has already been said in <i>Metaphysics</i>	←	<i>Metaphysics</i> III.b.11	228- 233
113	<i>Physics</i> V.4	430	as we have clarified	←	<i>Physics</i> IV.3	411; 423
114	<i>Physics</i> V.4	430	We have already commented on the causes of that	←	<i>Physics</i> IV.3	414
115	<i>Physics</i> V.7	438	what we have adduced	←	<i>Physics</i> V.5	434- 435
116	<i>Physics</i> V.9.1	443	it has already been established in <i>Metaphysics</i>	←	<i>Metaphysics</i> IV.a.1 (~)	246

	<i>LOCUS</i>	§	CROSS-REFERENCE		<i>LOCUS CITATUS</i>	§
117	<i>Physics</i> V.9.3	450	the soul sometimes [...] as it was said before	←	<i>Physics</i> V.6	437
118	<i>Physics</i> V.9.3	450	she conjoins [...] as it was said before	←	<i>Physics</i> V.7	438-440, esp. 438

As can be seen from Table 5, at least 118 cases of cross-references can be found in the text of the *MF*. This builds an impressive web of references, helping to structure the text in a systematic and tightly bound way. Of this imposing number, only 24 cases are prospective references to a theme that will be treated later on in the *summa*, while the vast majority of the cross-references – the remaining 94 cases – point backwards to a doctrine already expounded in what precedes. The reader is thus most often reminded of teachings already imparted in the preceding exposition, although he or she also receives some glimpses of what will come next, by way of anticipation of a doctrine that will be discussed afterwards, or as a way to lighten the burden of the argumentation that is being developed by referring to a further *locus* in which some point, at present merely corollary, will rather be treated at length.

The section on *Logic* appears quite isolated in the structure of the work, as it only contains five cross-references, all but one ([1]) retrospective, and all pointing to passages internal to the logical treatise (numbers [1]-[5]). Passages of *Logic* are also rarely quoted in the subsequent sections, and very often in connection with other *loci* of different treatises, as is the case for instance with cross-references [16], [77], [88], and [105]. Such a thematic and structural isolation of *Logic* with respect to the other two sections of al-Ġazālī's *summa* can contribute to explain its frequent autonomous circulation in Latin manuscripts of the medieval translation of the work, as opposed to the pairing of *Metaphysics* and *Physics* as a single work²⁴³. A partial exception to this isolation is provided by occurrence number [14], in which the text, while introducing the metaphysical treatment of universal and particular, explicitly refers back to «the first [chapter] of the *Logic*» for the logical treatment of those same notions.

Metaphysics is, by contrast, the section in which the vast majority of the cross-references – 79 cases out of the total 118 – occur. Likewise, the most part of the *loci citati* also pertains to the metaphysical treatise, thus making it the actual core of the *MF*, both as the place of irradiation of references to other doctrines expounded elsewhere, and as the target of cross-references from both *Metaphysics* itself and *Physics*. This situation is partly due precisely to the atypical central collocation of the *Metaphysics*, which can thus behave as the repository of backward references from the *Physics*, being at the same time the right place off of which backward (to *Logic*) and forward (to *Physics*) cross-references can branch. The wealth of references pointing to *Metaphysics* can also be explained by reasons of content,

²⁴³ For an overview of the Latin reception of the *MF* cf. *infra*, §2.2. *Latin*.

since the metaphysical section of the *DN* and the *MF* comprises much material traditionally treated in other parts of the philosophical system²⁴⁴.

A case in point of this displacement of physical material in *Metaphysics* is the treatment of the doctrine of time in *Metaphysics* IV²⁴⁵. While not a proper cross-reference – and as such absent from Table 5 – al-Ġazālī’s statement on the topic still deserves to be discussed here:

TEXT 12. al-Ġazālī, *MF*, *Metaphysics* IV.b.1.3, §257

It is inevitable to point at the verification of the time [*išāra ilā taḥqīq al-zamān*], and although that would be more appropriate [*alyaq*] in the *Physics*, yet we say [...]

In introducing the discussion on time, within the broader treatment of the movement of the celestial spheres in the Fourth long treatise of the *Metaphysics* of the *MF*, al-Ġazālī feels the need to warn his readers about this atypical collocation, thus showing his own theoretical preoccupation for the metaphysical relevance of a traditionally physical topic such as time. The reason of this remark – absent in the *DN* – seems indeed to be traceable to the fact that Aristotle – and with him also Avicenna in his major *summae*²⁴⁶ – famously treated time in the fourth book of his *Physics*²⁴⁷. By contrast, a more metaphysical understanding of time might appear more influenced by a Platonic or Neoplatonic agenda. Thus, while the metaphysical dislocation of the discussion on time in the *DN* and the *MF* can be explained *via* its immediate tangency with the problem of the foundation of movement, of which time constitutes the measure and which reasonably belongs to *Metaphysics* proper, it is very significant to underline al-Ġazālī’s genuinely Aristotelian care about the more standard setting of time within natural science. The idea of the greater appropriateness, expressed by the comparative *alyaq*, shows by the way al-Ġazālī’s awareness that the deferral to *Metaphysics* of the treatment of time performed by Avicenna in the *DN* was not unjustifiable, albeit innovative with respect to the most authentic Peripatetic tradition. With respect to this change of collocation, it might also be significant that al-Ġazālī in Text 12 uses the word *išāra* (‘indication’, ‘pointer’; rendered as a verb in my translation) in order to introduce the «verification» [*taḥqīq*] of time. As a matter of fact, in the *Ilāhiyyāt* of the *K. al-Šifā’* the same term is sometimes used by Avicenna to designate a merely ‘preliminary proof’, not entirely complete and decisive²⁴⁸. This hypothetical openness to a further, proper treatment – despite not being fulfilled in the actual text of the *Physics* of the *MF* – might nonetheless help to make the displacement of time in *Metaphysics* feel less definitive and more nuanced, since it lightens the heavy theoretical burden of providing a proper apodictic proof or demonstration [*burhān*] of time.

A specular case for the passage just discussed is provided by the following Text 13, in which the verb *lāqa* – from the same trilateral root *l-y-q* of the comparative *alyaq* occurring in Text 8 – is used to express the pertinence to *Metaphysics* of the treatment of the agent

²⁴⁴ Cf. *infra*, §1.5, for a detailed presentation of the contents of the *Metaphysics* of the *MF*.

²⁴⁵ Cf. *Metaphysics* IV.b.3.1, §§257-259 in the *Translation*.

²⁴⁶ For time in the *K. al-Šifā’* cf. most recently LAMMER 2018: 429, 524.

²⁴⁷ Cf. ARISTOTLE, *Physics* Δ [IV] 11, 219^b1-2: τοῦτο γὰρ ἐστὶν ὁ χρόνος, ἀριθμὸς κινήσεως κατὰ τὸ πρότερον καὶ τὸ ὕστερον.

²⁴⁸ See Avicenna, *K. al-Šifā’*, *Ilāhiyyāt*, I.3, transl. MARMURA 2005 (and cf. BERTOLACCI 2007^a: 170). See BERTOLACCI 2007^b: esp. 80-82 for a discussion of that important metaphysical occurrence of *išāra*.

intellect, which will then be analysed in *Physics* only from the point of view of the human intellectual soul.

TEXT 13. al-Ġazālī, *MF, Physics* V, §425 [= Table 5, (108)]

There is no doubt that the speculation on the agent intellect is appropriate for metaphysics [*yalīqu bi-l-ilāhīyyāt*], and [indeed] its establishment and its description have already been anticipated.

Also in this case, the doctrinal link was not explicitly drawn by Avicenna, but it was rather al-Ġazālī himself who felt the need to underline the connection between the material treated in the last treatise of his *Physics* and the specular discussion on that same material – there seen rather from the point of view of the celestial intellects – in the Fifth treatise of his *Metaphysics*.

As the important example of Text 13 shows paradigmatically, the *Physics* of the *MF* presents indeed many backward references to *Metaphysics*, due both to the already mentioned hypertrophic character of the metaphysical section, which also includes themes of natural philosophy, and to its atypically anticipated collocation. As can be seen from Table 5, many internal cross-references make however the *Physics* of the *MF* a united system in itself, whose single parts often refer back and forth to one another. In particular, the Fourth and Fifth treatises of the *Physics*, with their psychological and noetical subject-matter, appear to form a strong thematic unit, while the first three treatises are more loosely – but still perceivably – interrelated.

To conclude this section, there remains to mention the set of ‘external’ cross-references that are to be found in the text of the *MF*. In this regard, the cross-references to mathematics are peculiarly amphibious cases, because the mathematical section is indeed present in the *DN* as source-text, but not in the *MF*²⁴⁹: thus, references that were – or would have been – ‘internal’ for Avicenna in the *DN* become in these cases ‘external’ for al-Ġazālī. The same cannot be said to apply to the cases of the explicit, though indefinite, cross-references to dialectics (case [2] in Table 6), rhetoric ([3]), and optics (numbers [7] and [9]) in various *loci* of al-Ġazālī’s *summa*, which are as much ‘external’ for Avicenna’s *DN* as they are for al-Ġazālī’s *MF*, because even the master’s project did not plan to include those sections of knowledge into the book for ‘Alā’ al-Dawlā. All the cases of ‘external’ cross-references, both explicit and ambiguous (or ‘semi-external’), are listed in the following Table 6.

TABLE 6. *External and semi-external cross-references in the MF*

	LOCUS	§	CROSS-REFERENCE	QUOTED BOOKS (E.G.)	DN
1	<i>Logic</i> IV	55	in the didactic (mathematical) books ²⁵⁰	Euclid, <i>Elements</i>	

²⁴⁹ Cf. *supra*, §1.4.2.1, *Why Didn’t al-Ġazālī Do His Math?*.

²⁵⁰ Cf. *infra*, Commentary *ad* §55, for a discussion.

	LOCUS	§	CROSS-REFERENCE	QUOTED BOOKS (E.G.)	DN
2	<i>Logic</i> IV	70	and otherwise there is an autonomous book	Aristotle, <i>Topics</i>	
3	<i>Logic</i> IV	72	About rhetoric there is an autonomous book	Aristotle, <i>Rhetoric</i>	
4	<i>Metaphysics</i> IV.b.3.4	293	it has been clarified in the mathematics	Astronomy	
5	<i>Metaphysics</i> V	304	which are mentioned in the science of the stars	Astrology	
6	<i>Physics</i> II.b.6	351	whose detailed exposition is made known in the particular books ²⁵¹	Astronomy/Astrology [Effects of the moon (and the sun): tidal waves, ripening of fruits]	
7	<i>Physics</i> III.3	368	that is examined in the science of optics	Optics	
8	<i>Physics</i> III.5	375	The discipline of the alchemy and many [other] disciplines apart from it branch out from [this]	Alchemy; maybe sub-sciences such as the art of talismans <i>et simm.</i> (?)	
9	<i>Physics</i> IV.2.1	389	The science of that is inquired in the books whose subject-matter is the science of the optics, among the mathematics, but in this measure it is sufficient for our goal	Optics	

²⁵¹ The reference to the *kutub ġuz'iyya* could lead one to think to the Neoplatonic distinction of «particular» [μερικά] books of Aristotle with respect to the «universal» [καθόλου] and «intermediary» [μεταξύ] ones, as expressed for instance by SIMPLICIUS, *In Cat.*, transl. CHASE 2003: 19.10.14: «Of the Aristotelian writings, some are particular (*merika*), like the Letters written to one individual about some particular reality, while others are general (*katholou*). Still others are intermediary, like the investigations on plants and on animals, which are about things which are not entirely particular, since they are about the species (*eide*) of animals. For the moment, however, let the particular and intermediary works remain undivided». For the Neoplatonic classification(s) of the works of Aristotle, cf. however HADOT 1987, and see esp. *ivi*: 255-257 (and the synoptic table at p. 252) for the identification of the «particular» writings of Aristotle with his *Letters*, whose topic does not seem at all compatible with the subject-matter envisaged by al-Gazālī for the *kutub ġuz'iyya* he mentions.

1.5. Contents

As is by now apparent, the *MF* is a comprehensive survey of Avicennan philosophy, which comprises the three main theoretical sciences of logic, metaphysics, and physics. In the preceding §1.4, focusing on the *Structure* of the *MF*, I have already dealt at large with the peculiar ordering of the work, its Avicennan source, its peculiarities, and its epistemological implications. In the present section, I will rather address, in a necessarily concise but analytical manner, the main teachings of al-Ġazālī's philosophical writing, listing them according to the order in which they appear in the book, and discussing briefly the connections between different parts of the work, and between them and their Avicennan background²⁵². I hope that the resulting table of contents will prove useful to readers looking for a specific doctrine in the *MF*, by providing them with a handy roadmap to the intricacies of the philosophical pathways of the encyclopaedia, as well as to all those interested in an overview, organized by subjects, of this peculiar specimen of Avicennan philosophy. It is important to stress, indeed, that the following synopsis of the teachings of the *MF* can also work as a preliminary vademecum to the *DN*, since the similarities between the two writings far exceed their differences, at least at this somewhat loose level of the analysis²⁵³. In this regard, the present chapter will best be used in connection with the comprehensive Table of correspondences between the text of the *MF* and that of the *DN* provided *infra* in *Appendix 1*.

TABLE 7. *Outline of the contents of the MF against the background of the received corpus aristotelicum*

<i>MF</i>	CORRESPONDENCES IN	
	THE EXTENDED <i>CORPUS ARISTOTELICUM</i>	AVICENNA'S REWORKINGS OF IT
<i>Logic I</i>	Aristotle, <i>De interpretatione</i>	<i>K. al-'Ibāra</i>
<i>Logic II</i>	Porphyry, <i>Isagoge</i>	<i>K. al-Madḥal</i>
<i>Logic III</i>	Aristotle, <i>De interpretatione</i>	<i>K. al-'Ibāra</i>
<i>Logic IV</i>	Aristotle, <i>Prior Analytics</i>	<i>K. al-Qiyās</i>
<i>Logic V</i>	Aristotle, <i>Posterior Analytics</i>	<i>K. al-Burhān</i>
<i>Metaphysics I</i>	Aristotle, <i>Categories</i> + Aristotle, <i>Metaphysics</i>	<i>K. al-Maqūlāt</i> + <i>Ilāhiyyāt</i>

²⁵² For a specific treatment of the internal cross-references cf. *supra* §1.4.3.

²⁵³ On this cf. also *supra*, §1.3, *A Translation From Persian*.

<i>MF</i>	CORRESPONDENCES IN	
	THE EXTENDED <i>CORPUS ARISTOTELICUM</i>	AVICENNA'S REWORKINGS OF IT
<i>Metaphysics</i> II		<i>Ilāhiyyāt</i>
<i>Metaphysics</i> III		<i>Ilāhiyyāt</i>
<i>Metaphysics</i> IV	Aristotle, <i>Metaphysics</i> Λ	<i>Ilāhiyyāt</i>
<i>Metaphysics</i> V		<i>Ilāhiyyāt</i>
<i>Physics</i> I	Aristotle, <i>Physics</i> (movement and place)	<i>al-Samā' al-ṭabī'ī</i>
<i>Physics</i> II	Aristotle, <i>On Generation and Corruption</i> (?) + Aristotle, <i>Meteorology</i> IV	<i>al-Kawn wa-l-Fasād + al-Af'āl wa-l-infi'ālāt</i>
<i>Physics</i> III	Aristotle, <i>Meteorology</i> I-III	<i>Ma'ādin wa-l-Ātār al-'ubwiyya</i>
<i>Physics</i> IV	Aristotle, <i>On the Soul</i>	<i>K. al-Nafs</i>
<i>Physics</i> V	Aristotle, <i>Parva naturalia</i> ²⁵⁴ + Aristotle, <i>Nicomachean Ethics</i> + Plato, <i>Republic</i> , <i>Laws</i>	<i>Ilāhiyyāt</i> X

1.5.1. An Elementary Logic

As implicitly recognized by previous scholarship²⁵⁵, the *Logic* [*Manṭiq*] of the *MF* is a fairly basic outline of Avicennan logic, mainly focused on Aristotelian syllogistics and entirely uninterested in modal logic. In particular, following the *DN*, the *MF* does not take into account at all the controversial field of Aristotelian syllogistic that considers modal premises, and much less the syllogisms with mixed modal premises. The *Manṭiq* section – globally called *qawl*, 'speech' – is opened by a **Premise** [*muqaddima*] which provides a general introduction to logic as a discipline, dealing as well with its utility and its parts. The subsection on the utility of logic (§3), which links its practice to the accretion of knowledge and, through it, to the attainment of intellectual happiness, is the most original element of this

²⁵⁴ With the important insights and provisos on the Arabic version of the *Parva naturalia*, and in particular of the *De divinatione per somnum*, offered by HANSBERGER 2008. The Arabic version is for more than half different than its Greek 'original', and it adds to the text some anti-Aristotelian ideas such as the derivation from God of divinatory dreams, as well as an important description of the mechanisms involved within the rational soul when such dreams – either veridical or mendacious – take place. On the topic, cf. already PINES 1974.

²⁵⁵ The absence of a particular originality in the *Logic* of the *MF* seems to be acknowledged *e silentio*, since the major outlines of the history of Arabic logic omit its treatment: cf. *e.g.* STREET 2004 and STREET 2015.

introduction, and it enjoyed as such a documentable fortune in the Latin Middle Ages²⁵⁶.

The **First Chapter** [*fann*] of *Logic* deals with the way in which expressions [*alfāz*] signify concepts [*ma'ānī*]. **I.1.** The first, short subsection discusses the notions of conformity, inclusion and concomitance in the process of signification (§5); **(I.2)** the second treats the distinction between simple and composed expressions (§6); **(I.3)** the third, the distinction between particular and universal expressions (§7). **I.4.** The fourth subsection is a grammatical detour on the notions of verb, name and particle (§8), while **(I.5)** the fifth and last one analyses the relation between concepts and expressions, thereby classifying the latter in synonymous, homonymous, polyonymous, heteronymous and ambiguous (§9).

The **Second Chapter** has to do with universal concepts, which can either be essential or accidental (§10). Three features of universal essential concepts are enumerated (priority of the essential over the accidental, priority of the universal over the particular, and uncausedness of the essential, §§11-13). The accidental concept is then subdivided into separable and inseparable concomitant (§§14-15), while the essential is qualified in terms of its relative commonality and specificity, and thereby characterised as genus [*ǧīns*] or species [*naw'*], up to the highest genera, and down to the lowest species (§§16-17). Genera and species are answers to the question «what», while the differentia [*faṣl*] is given as an answer to the question «which» (§18). The union of genus and differentia produces the definition [*ḥadd*] (§19), about which the text examines, by way of conclusion, four possible reasons of error, *i.e.* fallacious attempts at defining something (a) in a tautological way, (b) by means of its contrary, (c) *per obscurius*, or finally (d) in a circular way, by means of something of which the *definiendum* itself is the *definiens* (§§20-21).

After the two sections dealing respectively with simple expressions and concepts, the **Third Chapter** starts discussing propositions, which derive from the composition of the former (linguistically, of expressions; conceptually, of notions or concepts) (§22). **III.1.** Propositions can be categorical (assertions) [*ḥamlīyya*], conjunctive hypothetical (conditionals) [*ṣartīyya muttaṣila*], or disjunctive hypothetical (disjunctions) [*ṣartīyya munfaṣila*]. Concrete examples are given for each kind, and the categorical proposition is analysed into its fundamental division in subject [*mawḍū'*] and predicate [*maḥmūl*] (§23). The conjunctive hypothetical, composed of an antecedent [*muqaddim*] and a consequent [*tālī*], is then discussed, with examples (§24). The disjunctive hypothetical is introduced through its differences with respect to the conjunctive hypothetical (§25). **III.2.** From the point of view of its predicate, every proposition can be either affirmative or negative (§26), and possible reasons of error concerning this are explained (§§26-27). **III.3.** From the point of view of its subject, every proposition can be singular, indefinite or definite. Definite propositions can be either universal or particular. An overall diagram of eight possible propositions is derived, and the four definite propositions are singled out as the ones employed in scientific knowledge (§28). A subdivision of conjunctive and disjunctive hypothetical propositions

²⁵⁶ Cf. the favorable reception of this doctrine, with a long *verbatim* quotation, in Albert the Great's *Super Porphyrium de V universalibus*, ed. SANTOS NOYA 2004: 6.16-25: «Est autem non tantum necessaria, sed etiam utilis haec scientia. Si enim bonum et felicitas hominis est secundum optimae partis animae hominis perfectissimum actum, hoc est secundum intellectum contemplativum, nec contemplari poterit intellectus, nisi noverit contemplationis principia et sciat invenire quod quaerit contemplari, et diiudicare id ipsum quod iam contemplatur inventum, patet quod prae omnibus utilis est ad felicitatem haec scientia, sine qua non attingitur felicitatis actus et per quam ipse felix actum non impeditae recipit operationis»; cf. SIGNORI 2019: 481.

into universal and particular is then presented (§29). Interestingly, while examples of the affirmatives are given, examples of the corresponding negatives are left as an exercise to the reader. III.4. From the point of view of the relation between subject and predicate, propositions can be possible [*mumkina*], necessary [*wāğiba*], or impossible [*mumtani'a*] (§30). III.5. The notion of contradiction [*tanāquḍ*] is presented, and seven conditions for it are listed (§§31-32). III.6. The last section of the Third treatise deals with the conversion [*aks*] of propositions.

The **Fourth Chapter** is the longest and most detailed of the section on *Logic*. It discusses Aristotelian syllogistic, with materials ultimately deriving for the major part from the *Prior Analytics*. In a very short general introduction, the syllogism is explicitly said to be the core of logic and its primary goal (§34). The general topic of the treatise is subdivided into two pillars, discussing respectively the form [*šūra*] [A] (§§34-57) and the matter [*mādda*] [B] (§§58-73) of the syllogism, which correspond in turn respectively to the validity of its argumentative structure, and to the truth-value of its premises. IV.A. In introducing the discussion of form, the text gives a definition of syllogism and then distinguishes between connective [*iqtirānī*] and repetitive [*istiṭnāʿī*] syllogisms (§35). A list of the technical terms occurring in basic syllogistic is then provided, with the definition of key-concepts such as those of major, minor and middle terms, major and minor premises, conclusion, and combination of premises (§§36-37). Afterwards, the first figure [*šakl*] of the syllogism is introduced (§38), its four conclusive moods are described (§39), and also the twelve ineffective ones are listed (§40), with the aid of a summarizing table (§41)²⁵⁷. More general rules of inference in the first figure are then extracted from the concrete cases (§42). The second figure and its four valid moods is described next (§43), and two methods for validating its fourth mood – the ekthesis and the *reductio ad absurdum* (*deductio per impossibile*) – are explained (§44). The latter method will be discussed autonomously also in a subsequent paragraph (§48). It is then the turn of the third figure and of its six valid moods (§45). Having thus concluded the treatment of the connective or categorical syllogisms, the text discusses the repetitive ones, which can either be conjunctive (§46) or disjunctive hypothetical (§47). Further methods of reasoning are discussed: the induction [*istiqrāʿ*] (§49) and the exemplification [*tamtūl*] (§50). The analysis of exemplification also entails the discussion of two ways suggested by «the most sensible among the dialecticians» [*aḥass' l-ğadaliyyīna*]²⁵⁸ in order to ensure the validity of their method of argumentation: the evaluation from all sides [*al-ṭard wa-l-aks*] (§51) and the probing and dividing [*al-sabr wa-l-taqṣīm*], which is discussed at great length (§52-54). The ‘pillar’ on the form of the syllogism is concluded by a discussion on the composed syllogisms (polysyllogism), conducted through the example of the geometrical method of demonstration employed by Euclid in the case of his first figure and then ‘translated’ into Aristotelian syllogistic (§§55-57). In this context, §56 contains the first illustration occurring in the *MF*, *i.e.* the reproduction of

²⁵⁷ The arrangement in a table appears to be authorial, since it already occurs at the level of the most ancient known Arabic manuscripts. Much like in nowadays academic production, such a way of arranging materials had probably didactic and/or mnemonic purposes, and appears as a prominent feature, to be seen in connection with the set of illustrations that enrich the text. The inquiry into schemes, diagrams, and tables in the transmission of pre-modern philosophy is still moving its first steps, and will constitute a fascinating topic for further research.

²⁵⁸ Cf. *supra*, §1.6.2. *Indefinite Descriptions*, Table 11, [4].

Euclid's construction of an equilateral triangle²⁵⁹. **IV.B.** As for the matter of the syllogism, it coincides with its premises, whose truth-value conditions the truth-value of the conclusion (§58). Certainty is like gold, and a syllogism is like a golden coin, whose shape and material are equally important in determining its value (§59)²⁶⁰. Thirteen different kinds of premises are listed (§60) and then analytically treated. These are the primary propositions (§61), the sensible, the experimental (§62), the transmitted (§63), the propositions whose syllogisms are by nature with them (§64), the estimative (§65), the famous (§66), the accepted, the conceded, the similar (§67), the seemingly famous, the opinable, and the imaginative ones (§68). Further, the text explores in which kind of syllogism each kind of premise fits better: the first five kinds are suitable for the demonstrative syllogism (§69), while the famous and the conceded propositions are useful for the dialectical one (§70). The estimative and the similar propositions form the basis for the sophistical syllogism (§71), the seemingly famous, the opinable, and the accepted serve for the rhetorical one (§72), and the imaginative propositions, finally, are fitting for the poetic syllogism (§73). The Epilogue of the Fourth treatise discusses ten reasons why error can occur when forming a syllogism, and gives advice in order to avoid it (§§74-76).

The **Fifth** and final **Chapter** of the *Logic* of the *MF* has to do with topics typical of Aristotle's *Posterior Analytics*. **V.1.** The first section deals with the four scientific questions distinguished at the beginning of the second book of the *An. Post.* (if, what, which, and why), which are presented, subdivided and exemplified according to Avicenna's elaboration (§77). **V.2.** Why-demonstrations and that-demonstrations are then introduced (§78) and described (§79). **V.3.** The four crucial aspects of a demonstrative science are presented and discussed: subject-matter (§80), essential (or *per se*) accidents (§81), questions (§§82-83), and principles (§84). **V.4.** The four characteristics that premises must have for a true demonstration to take place are listed: truth and necessity (§85), priority (or being primary) (§86), and finally, with greater detail, essentiality (§§87-90).

1.5.2. A Hypertrophic Metaphysics

The *Metaphysics* [*Ilāhiyyāt*] of the *MF* is by far the longest macro-section of the work²⁶¹. This is because it includes many materials that are traditionally treated elsewhere in the system of the sciences, but which appear in the *MF* (and the *DN*) within the divine science, also due to the atypical position of this discipline in the text. Indeed, the anticipation of *Metaphysics* with respect to *Physics* seems to require the analogous anticipation of some materials normally treated within natural philosophy²⁶². The reader of a work such as the *MF* and the *DN*, as a matter of fact, needs to be filled in with proofs and arguments which they would normally have already encountered in their study of philosophy, but which would by

²⁵⁹ Cf. *infra*, Appendix 2.

²⁶⁰ For a more accurate discussion of this interesting simile, cf. *infra*, in the section dealing with the examples occurring in the *MF*, §1.8.1.1. *All That Glitters is Not Gold*.

²⁶¹ It comprises 107 pages in my Translation, as opposed to the 55 pages of *Logic* and the 67 of *Physics*.

²⁶² Cf. to this effect also the prospective references from *Metaphysics* to *Physics*, and the retrospective ones from natural philosophy to metaphysics, which are listed *supra*, §1.4.3. *Internal Cross-references*, in Table 6.

contrast appear only later on – after metaphysics – in the text of the ‘atypical’ *summae*. For instance, the geometric proofs [*adilla handasiyya*] against the atoms, enriched with several diagrams and illustrations, that appear in the discussion on the true nature of the body in *Metaphysics* I.1, §§106-120, and which are also present in the *DN*, do not normally belong to metaphysics in different *summae* by Avicenna. Most notably, for instance, the same arguments are given in the *K. al-Šifāʿ* – although admittedly in fuller and lengthier form – in the *Physics* proper of the work [*al-Samāʿ al-ṭabīʿī*]²⁶³. The anteposition of metaphysics to natural philosophy is not however as good a reason to explain also why the *Ilāhiyyāt* of the *MF/DN* also includes materials from Aristotle’s *Categories*, traditionally pertaining to *Logic*²⁶⁴. Logic, as a matter of fact, regularly precedes the two sections on theoretical philosophy (physics and metaphysics) in both the more traditional and the anti-traditional ordering of the *iter studiorum* displayed in Avicennan encyclopaedias. The choice of including the categorical discussion in *Metaphysics* must thus be explained through a different, and by the way well-known, theoretical need on the part of Avicenna, *i.e.* his increasing acknowledgment of the deeply metaphysical character of the doctrine of categories, in keeping with the more general process of «ontologization» of logic that can be seen at work in Avicenna’s system²⁶⁵. The intertwining of both tendencies – (i) anticipation of physical doctrines due to the preliminary position of *Metaphysics*, and (ii) inclusion of traditionally logical aspects having however clear ontological bearings – produces the characteristic hypertrophy of the section devoted to metaphysics in both the *MF* and the *DN*.

The *Ilāhiyyāt* of the *MF* is opened by a short **Preface**, which has as such no direct counterpart at the beginning of the *Metaphysics* of the *DN*, but which reproduces nonetheless Avicennan material taken from the General preface to the entire Persian *summa*²⁶⁶. The atypical ordering due to which *Metaphysics* precedes natural philosophy is explicitly addressed in this introductory statement (§91). After the Preface, there come two distinct Premises (sg. *muqaddima*), which deal respectively with the classification of the sciences (**First Premise**, §§92-96) and their subject-matters (**Second Premise**, §§97-100). In the First *muqaddima*, the threefold subdivision of both practical (politics, oeconomics, ethics) and theoretical (mathematics, physics, metaphysics) philosophy is presented, and justified on the basis of an underlying ontological classification. The **Second Premise** deals with the subject-matters of the theoretical sciences hitherto distinguished (§§97-98), in order to better grasp the subject-matter of metaphysics as culmination of the system and *regina scientiarum*. This subject-matter is identified with absolute existence [*al-wuġūd al-muṭlaq*] (§99), in keeping with Avicenna’s eminently ontological understanding of metaphysics. Philosophical theology however also belongs to metaphysics, since being is subdivided into

²⁶³ Cf. *infra* the Commentary *ad locos* for further information; for an overview of the figures, cf. also *Appendix 2*.

²⁶⁴ Cf. GUTAS 1988: 265-267 = GUTAS 2014: 300-303 and GUTAS 1988: 288 = GUTAS 2014: 326.

²⁶⁵ See the synthesis given in BERTOLACCI 2011^b: 37: «First, according to Avicenna, metaphysics provides the ultimate foundation not only for the doctrine of universals, as we have seen, but also for the doctrine of the categories; accordingly, he moves the traditional discussion of the basis of this doctrine from logic to metaphysics. Second, according to Avicenna, the doctrine of the categories in its entirety is, properly speaking, metaphysical rather than logical: if he deals with the doctrine of the categories in the logic of the *Šifāʿ*, rather than in the metaphysics (apart from examining its foundation there), he does so in order to comply with the traditional way of expounding the Aristotelian tradition». Cf. also GUTAS 1988: 265-267 = GUTAS 2014: 300-303, and BERTOLACCI 2006: 272-279.

²⁶⁶ Cf. *supra*, §1.4.2, Text 5.

cause and caused, and God is the cause of all existence (§100).

The **First Treatise** [*maqāla*] of *Metaphysics*, the longest of the work, presents and discusses eight fundamental subdivisions of being: (I.1) substance [*ḡawhar*] and accident [*‘araḍ*] (§§101-138); (I.2) universal [*kullī*] and particular [*ḡuz‘ī*] (§§139-147); (I.3) one [*wāḥid*] and manifold [*katīr*] (§§148-153); (I.4) anterior [*mutaqaddim*] and posterior [*muta’ahḥir*] (§§154-155); (I.5) cause [*sabab*, *‘illa*] and caused [*musabbab*, *ma’lūl*] (§§156-161); (I.6) finite [*mutanāḥ*] and infinite [*ḡayr mutanāḥ*] (§§162-165); (I.7) in potency [*bi-l-quwwa*] and in actuality [*bi-l-fi‘l*] (§§166-168); (I.8) necessary [*wāḡib*] and possible [*mumkin*] (§§169-175). I.1. Existence cannot be defined nor described (§§101-102). The treatment of being as substance (§§103-126) starts by using inherence in a receptacle as a criterion to distinguish between substances and accidents; however, forms inhering in matter are substances, since matter is defined as a receptacle [*maḥall*] which would not subsist without the inhering thing (as opposed to a subject [*mawḍū‘*], in which accidents inhere) (§§103-104). Matter, form, body, and intellect are substances (§105). There follows a discussion on the form of corporeality as three-dimensionality (§§106-109), and a lengthy doxography on the composition of the body (§§110-120). Three schools of thought are presented (§110) and then analysed one by one: (a) atomism, refuted in six geometrical proofs (§§111-116); (b) the opinion that body is not composed at all, also refuted (§§117-118); and, finally, the adopted Aristotelian hylomorphism, according to which the fundamental, and indeed the only real, composition of the body is the one occurring between the metaphysical parts (both substantial) of matter and form (§§119-120). Matter and form are inseparable (§§121-126). The treatment of being as accident (§§127-138) entails a discussion of the nine accidental categories distinguished by Aristotle. Accidents either require the consideration of another thing in order to be conceived, or do not require it. To the latter kind there belong quantity and quality (§127); to the former the remaining seven accidental categories (§128). After the preliminary exposition of all nine accidental categories, the text provides a new examination of them, articulating them in their divisions – when these are relevant – and contextually showing their accidentality. Quantity [*kammīyya*] is subdivided into continuous (four further articulations of which are also discussed) (§129) and discrete (§130). The category of quality [*kayfiyya*] includes colours [*alwān*] (§131) and figures or shapes [*aškāl*], among which the circle is said to play a foundational role (§132). The seven remaining categories are then shown to be accidental. The first and foremost of them is the one of relation [*idāfa*], while all the others are explained in terms of a relation [*nisba*] with other things (a circumstance which immediately shows their accidentality) (§133). The important problem of the nature of the predication of existence to the ten categories is then addressed (§134). Homonymous (aequivocal) predication is excluded (§§134-135), as well as the synonymous (univocal) one (§136). The doctrine of the so-called modulation of existence [*taškīk al-wuḡūd*] is presented (§137), and the reasoning which lies at its basis is extended to the predication of trans-categorical notions such as accident and one (§138). I.2. Since the nature of universal (and particular) has already been explained in *Logic*, the metaphysical treatment of them will only consider their states, which are said to be four. The first one, *i.e.* the mental nature of the universals, which do not exist *in re*, is expounded. By the same token, a strong criticism to the theory of Platonic ideas is performed (§139). A concrete example is then used to illustrate the theory of knowledge just expounded: different seal rings (that is, individuals) engraved with the same incision (that is, belonging to the same universal, *i.e.* to the same

genus or species) form the same picture (that is, the same universal notion as instantiated in the mind) when impressed in the wax (that is, the human mind) (§140). Without a differentia or an accident, numeric differentiation of a universal is unconceivable (§141), because the universal notion and its particular instantiations cannot ever immediately coincide (§142). While higher-level universals belong to the definition of lower-level ones (like 'body' for 'animal', or 'animal' for 'man': cf. *supra*, *Logic* V, §86), the differentiae do not belong to the quiddities of their universals, but only to their concrete existence (§143). Every accident is caused (§144), and an important (ultimately theological) consequence is drawn from this as regards the relation between quiddity and existence (§145). Generic and specific universals are then distinguished, thus grounding the preceding logical discussion of genera and species (§§146-147). **I.3.** The analysis of unity and multiplicity is particularly accurate in the *MF* with respect to the *DN*, perhaps also due to the pivotal theological implications of the notion of the unity of God [*tawhīd*] in Islamic milieu. Two main senses of one, *i.e.* a proper [*ḥaqīqat^{am}*] and a figurative [*maǧāz^{am}*] sense, are preliminarily distinguished, and three senses belonging to the proper meaning are listed (§148). Five different figurative meanings are then enumerated: oneness in genus, in species, in accident, in relation (or proportion, or analogy), and in subject-matter (§149). Unity in accident is further explored (§150). Notions deriving from unity (identity) and multiplicity (alterity, difference, opposition, and the plurality implied in being equivalent, similar, equidistant and correspondent) are listed (§151). The concept of opposition (one of the appendages of multiplicity) is further articulated into the oppositions of denial and affirmation; relation; privation and disposition; and finally contrariety (§§152-153). **I.4.** Anteriority is subdivided into five kinds: anteriority in time, in degree (§154), in dignity, in nature, and in essence (§155). **I.5.** The analysis of cause and caused starts by providing a relational definition of «cause», which can be understood only with reference to a thing already known (the «caused» or effect) that only exists through the cause itself. On its part, however, the cause logically exists by itself, also without its effect (§156). Internal (or intrinsic, or immanent) causes (§157) are then distinguished from external (or extrinsic, or transcendent) causes (§158). Everything which has a goal is defective, since the obtainment of the goal is a perfection for it (and, consequently, not obtaining it is a defect). Every action performed for the sake of a goal, thus, presupposes and entails the defectiveness of the agent (§159). Every agent becomes such for the occurrence of a new state with respect to its previous condition (§160). Essential and accidental causality (the latter merely figurative) are expounded (§161). **I.6.** Four kinds of infinite are listed: that of the motion of the celestial sphere, that of the number of the human souls detached from the body, that of bodies or distances, and that of causes (§162). The first two kinds are possible (§163), while the latter two are not, as the text demonstrates with various proofs (§§164-165). **I.7.** The notion of potency is subdivided into potency of acting and potency of being acted upon (or predisposition). A more fundamental distinction is also introduced between the potency and the actuality of existing things, and the radical potency, or actuality, to existence (§166). Prime matter is eternal, because everything that has a temporal origin requires a preceding possibility for its existence, which must be located in a (material) receptacle (§167). The potency of acting subdivides into a natural and a voluntary potency (§168). **I.8.** The notions of possible and necessary are defined in two different ways (§§169-170). A complex reasoning concerning the possibility of an eternal creation is then conducted (§§171-175). This includes the discussion of the doctrine of conservation as

continuous creation, analysed through a defective model (in which God as creator of the universe is likened to the builder of a house) (§172). The First treatise of *Metaphysics* is concluded by a qualification or clarification (but ultimately a refutation) of the proof provided by the thinkers – mentioned *supra* in §171 – who deny that the world should need its creator for its conservation in existence (§§173-175)²⁶⁷.

The **Second Treatise** of *Metaphysics* deals with the essence of the Necessary Existent (referentially identical to God) and His necessary concomitants [*lawāzim*]. The discussion starts by recalling the distinction between necessary and possible existence (cf. *supra*, *Metaphysics* I.8, §§169-175), and presents the first of twelve «things» [sg. *amr*], which can be known about the essence of that which is necessarily existent, *i.e.* (II.1) the fact that He is not an accident (§176), (II.2) nor a body. Two reasons for His incorporeality are given (§177). II.3. Moreover, God is neither form nor matter (§178). II.4. The fourth listed feature of the Necessary Existent is the crucial Avicennan affirmation of the identity of His (concrete) existence [*anniyya*, *wuġūd*] and His quiddity [*māhiyya*] (§179). II.5. Further, God does not depend on anything that in turn depends on Him (§180). II.6. Regardless of causality, He is not either in any mutual relationship [*taḍāyuf*] with anything else (§181). II.7. The seventh characteristic of the Necessary Existent is that He is one, without any possible equivalent or companion (§182). II.8. He has no attribute supervening with respect to His essence (identical with His existence) (§§183-185). II.9. The Necessary Existent is unchanging (§186). II.10. From Him, only one thing proceeds without an intermediary (this is the first formulation in the *MF* of the well-known emanative principle *ex uno non fit nisi unum*) (§187). II.11. The eleventh feature of the Necessary Existent is that He is not a substance (§188). The discussion of this characteristic Avicennan claim, to which al-Ġazālī gives however an autonomous turn²⁶⁸, entails a re-examination of the doctrine of modulation of existence, already touched upon in I.1, §137 (§189). II.12. The twelfth aspect has to do with the causal dependence of all things on the Necessary Existent, in Whom the causal chains end (§§190-191). The conclusion of the treatise elaborates on the relation between God as the Necessary Existent and the created things. The world is intrinsically possible, but coeternal with the Necessary Existent (§193)²⁶⁹. A simile which likens God to the Sun and the creation of beings with the emanation of light is presented but also criticized, on the grounds that the Sun is not pure brightness devoid of a subject (while God is pure existence), and that the action of the Sun is natural and unconscious, while God's one is intellectual and conscious (§§194-195).

The **Third Treatise** of *Metaphysics* continues the explicit treatment of philosophical theology, by dealing with the crucial theological topic of the divine attributes. The treatise is articulated in [A] a Premise (§§196-198), [B] eleven allegations [*da'awā*] (§§199-238), and [C] a substantial Epilogue (§§239-244). III.A. As for the **Premise**, it expounds a classification

²⁶⁷ The reasoning is here extremely convoluted: cf. the Commentary *ad loc.* for a detailed exposition.

²⁶⁸ This aspect is discussed in detail *infra*, §1.7.1.1. *Conventional Substances*.

²⁶⁹ This is probably the most explicit endorsement of Avicenna's eternalist thesis concerning the creation of the world on the part of al-Ġazālī. However, a long series of anti-eternalist statements are also interspersed within the text of the *MF*, in places in which nothing comparable is present in the *DN*, with the function of examples of different, and further, pieces of doctrine. I describe in detail this peculiar situation, which as I argue ends up rhetorically presenting the issue of the eternity (or origin in time) of the world as a genuine antinomy of human reason, in §1.8.2. *Anti-Eternalist Examples: Changing Avicenna from Within*, and again in §1.10. *The First Text of hikma*.

of five kinds of descriptions, together with their possible or impossible application to the First Principle, under the criterion that only the attributes that preserve God's unity can be predicated of Him (§§196-197). Using exclusively relational and negative attributes, a great many attributes of the First Principle can be deduced (§198). **III.B.1.** The first allegation nominally deals with the life of the First Principle, but the attribute of «living» is immediately shown to be coincident with the property of being self-knowing (§§199-200). **III.B.2.** The knowledge of the First Principle is identical to His essence, and accordingly it does not cause any multiplicity in Him (§201). Knowledge, known, and knower coincide in every act of knowledge (§202). **III.B.3.** The First Principle is omniscient because, by knowing Himself, He knows Himself as a principle for every other existent. God's knowledge of His effects is thus comprised, or included, in His knowledge of Himself as their cause (§203). **III.B.4.** Despite being relative to many things, God's knowledge is perfectly one (§204). The claim is substantially elaborated through the comparison with various kinds of human knowledge (§§205-206), and the absence of any multiplicity and internal articulation in the case of God is further substantiated through an elaborate simile (§§207-209)²⁷⁰. **III.B.5.** The text continues elaborating on how the First Principle knows things by presenting His foreknowledge of possible particulars (problem of future contingents). The first exposition in the Fifth allegation uses as an example the finding of a treasure, and argues that God knows the future contingents on the basis of His knowledge of all their causes (like an omniscient astronomer/astrologer) (§§210-211). **III.B.6.** In the Sixth allegation, the focus is rather on the First Principle's atemporal knowledge of the particulars, with the (already Avicennan) example of the eclipse (§§212-213). **III.B.7.** The Seventh allegation is about the will of the First, which is shown to always depend on knowledge (§§214-215). It is then explained how knowledge can be a cause for the existence, with concrete examples of Ġazālīan confection (§216). The knowledge-will of the First is further described (§217), in its ontological difference with our human cognitive and voluntary acts (§218). Linked with the concept of will is also the notion of providence, which is analysed also with the help of appropriate Qur'ānic quotations (§§219-221)²⁷¹. **III.B.8.** God is powerful, in the sense that He can act if He wants so, and He can also not act if He wants so (§§222-223). **III.B.9.** Since the notion of wisdom includes a theoretical and a practical side, the First will be wise if it can be demonstrated that He enjoys both a perfect knowledge (§224) and a perfect agency (§225). **III.B.10.** The First Principle is generous (§226). **III.B.11.** The Eleventh allegation deals with the joy of the First Principle and its ineffability. After an introduction on the topic and its relevant terminology (§227), the text presents six principles which help to understand the gladness and delight enjoyed by the First (§§228-233). This discussion represents altogether the longest insertion of ethical matters – and thus of practical philosophy – within an otherwise almost entirely theoretical work, and only finds some parallel in *Physics V* (see *infra*). The ethical matter is however built on a psychological basis, which is dealt with in *Physics IV*. Thus, the treatment of pleasure and pain in this section also represents one of the clearest cases of necessary anticipation in *Metaphysics* of topics of natural philosophy, in keeping with the indications given by Avicenna in the General Prologue of the *DN*, and by al-Ġazālī

²⁷⁰ This interesting simile, which likens God to a king and knowledge to the king's wealth, is treated again *infra*, §1.8.1.1. *All That Glitters is Not Gold*.

²⁷¹ For a more detailed analysis of these and others citations from the sacred book of Islam occurring in the *MF* cf. *infra*, §1.9.1. *Qur'ānic Quotations*.

in the Preface to *Metaphysics*. The results of the psycho-physiological excursus on pleasure and pain are then applied to the case of God (§234), and human pleasure is then compared to divine joy thanks to a long *verbatim* quotation of Aristotle, taken from *Metaphysics* Λ [XII] (§235)²⁷². The pleasure of the angels, inferior to that of God, is also treated (§§236-237), also with reference to human eternal happiness in the afterlife (§238). III.C. There follows the **Epilogue** of the Third treatise of *Metaphysics*. Man can describe God and His attributes only starting from what is known to him, that is to say, humankind itself (§239). Conversely, divine attributes that have no matching in the human nature cannot be properly known (§240). This is particularly the case with God's feature of being an existence without a quiddity, which is not instantiated in any created being (§241); this identity of existence and quiddity is thus precisely the ever unknowable aspect of God's essence (§242). A principle of 'learned ignorance' in negative theology, also corroborated by the quotation of traditional sources, is enunciated: the only truly attainable knowledge about God is the knowledge of the impossibility of truly knowing Him (§§243-244).

The **Fourth Treatise** of *Metaphysics* is devoted for the most part to philosophical cosmology. Its subject-matter is presented in close connection to that of the following Fifth treatise of *Metaphysics* (see *infra*) (§245). The treatise includes [A] a Premise, in turn articulated into three short subdivisions [A.1-3] (§§246-248), and three substantial [B] «Pillars» (further subdivided): (B.1) the first pillar deals with the sublunary beings (§§249-268); (B.2) the second with the supralunary bodies, *i.e.* the heavens (§§269-281); (B.3) the third with the souls and the intellects of those celestial bodies (§§282-293)²⁷³. IV.A.1. The first subsection of the Premise proposes a *divisio entis* which distinguishes intellects, souls, and bodies on the basis of their influencing [*ta'tīr*] or being influenced [*ta'attur*] (§246). IV.A.2. A second *divisio entis*, this time based on the perfection and imperfection of the classified beings, is presented (§247). IV.A.3. Finally, the Premise is completed by a sub-classification of the bodies: they can be either simple or composed; the simple, in turn, can either be susceptible of entering a composition, or entirely uncomposable (§248). IV.B.1. The First pillar (§249) concerns the establishment of: (IV.B.1.1) the rectilinear movement, from the acknowledgment of the existence of composite bodies; the existence of two distinct directions, from the rectilinear movement; the existence of a surrounding body, from the distinction of the two directions (§§250-251); (IV.B.1.2) the circular movement, from the existence of the rectilinear movement (§§252-255); (IV.B.1.3) time [*zamān*]²⁷⁴ and related notions (§§256-259); (IV.B.1.4) inclination [*mayl*] and related notions (§§260-263); (IV.B.1.5) the rectilinear movement of sublunary bodies (§264); (IV.B.1.6) the origin in the perpetual circular movement of the heavenly sphere of the sublunary rectilinear movements (§§265-267). A summary of the previous six allegations (IV.B.1.1-6) is then given (§268). IV.B.2. The table of contents of the Second pillar is given together with that of the Third one (§269): their conjoined topics will be dealt with in seven allegations. IV.B.2.1. The first allegation, corresponding to

²⁷² The presence itself, and then also the length and the quality of this quotation make it an extremely interesting addition to the text of both *DN* and *MF*: as such, it is discussed in detail *infra*, §1.6.1. *Explicit Nominal Quotations* (cf. in particular Tables 8-9).

²⁷³ For the complexities of the internal articulation of *Metaphysics* IV cf. *supra*, §1.4.1. *Divisio textus*.

²⁷⁴ The metaphysical treatment of time is another case in point of the displacement in *Metaphysics* of doctrines typically treated within natural philosophy. Interestingly, as noticed *supra*, §1.4.3. *Internal Cross-References*, the circumstance that the discussion of time would be «more appropriate» [*alyaq*] to the *Physics* is also noticed explicitly by al-Gazālī himself, with a faithfully Aristotelian move.

the first subsection of the second pillar, deals with the voluntary movement of the sky (§§270-271). **IV.B.2.2.** Having shown in the previous section that the mover of the heavens cannot be their nature, the second allegation excludes that it can be an intellect, thus concluding that it must be a soul (§§272-274). **IV.B.2.3.** The third allegation deals with the intellectual goal of the movement of the skies, which have no solicitude for the sublunary world (§§275-281). The treatment includes the discussion of key teleological notions such as ‘that for the sake of which’ and ‘that which is for the sake of another’ (§278, with important examples including that of the shepherd and his sheep, and of the Prophet and his community)²⁷⁵. **IV.B.2.4 = IV.B.3.1.** The Fourth allegation is actually the beginning also of the Third pillar distinguished *supra*. It deals with the heavenly motion caused by love of the First Principle, a key-concept of Aristotle’s *Metaphysics* Λ (§§282-288). **IV.B.2.5 = IV.B.3.2.** The fifth allegation – that is, the second allegation of the third pillar – deals with the multiplicity of the skies, which entails their difference of nature and species (§289). **IV.B.2.6 = IV.B.3.3.** The sixth allegation states the impossibility of a mutual causation between the celestial bodies (§§290-292). **IV.B.2.7 = IV.B.3.4.** The seventh and final allegation deals with the correspondence between the intellects, the souls and the bodies of each sky, stating that each of the heavens has a soul and an intellect, because each one has a differentiated movement and a different species than the others (§293).

The **Fifth Treatise** of *Metaphysics* is far shorter than the Fourth one, but is central in the economy of the work under many respects. It deals with the derivation of all beings from the First Principle, in an hierarchical process of emanation. As such, it forms a dyptic with the Fifth treatise of *Physics*, which considers the process of return of the creation to the First. These two opposite movements can be seen as the vestiges of the concepts, of remote Neoplatonic origin, of *πρόοδος* from the One and *ἐπιστροφή* to the One, finely elaborated in Avicenna’s metaphysics²⁷⁶. After the exposition of the difficulty in explaining the multiplicity of beings when starting from an absolutely one principle (§294), a solution, which consists in assuming a germinal multiplicity in the first intellect caused from the First Principle, is presented (§295). This germinal multiplicity reverberates and spreads throughout the emanative process, thus giving rise to the manifold beings of the cosmos without contravening the rule of *ex uno non nisi unum* (§296). The Avicennan-Fārābīan emanative scheme of the supralunary world, with ten intellects and nine spheres, is neatly expounded (§297), followed by a presentation of the manifold beings of the sublunary world (§298). The origin of sublunary matter is then discussed (§299), followed by its different determinations (§300), which end up in the genesis of the four elements (§301). Continuing the description of the progressive generation of the multiplicity of the sublunary world, the text articulates five classes of beings that derive from the mixture and the blending of the four elements: (i) meteorological phenomena, (ii) minerals, (iii) plants, (iv) animals, and (v) man (§302). These increasingly complex beings will be dealt *infra* in the *Physics*: (i)-(ii) in the Third treatise, (iii)-(v), in consideration of their soul as formal principle, in the Fourth one. Eternal (§303) and changing (§304-305) aspects in the astronomical influence on the sublunary world are detailed. Despite the presence of anomalies and mishaps, ours is however the best of the possible worlds (§306); the problem of theodicy is consequently

²⁷⁵ This is one of the passages of the *MF* characteristically reprised by Ibn al-Malāḥimī in his *Tuhfa al-mutakallimīna*: cf. *infra*, §2.1.3 and Table 22.

²⁷⁶ Cf. on this aspect SIGNORI 2020^a: 98.

formulated (§307) and analysed at length (§§308-313). The conclusive section of the treatise, and with it of the entire *Metaphysics*, offers by way of conclusion further reflection on the «secret of the divine decree» [*sirr al-qadar*] – a logical limitation of God’s omnipotency – which ought not be revealed to the masses.

1.5.3. An Eschatological Physics

The *Physics* [*Ṭabīʿīyyāt*] of the *MF* is the conclusive section of the work. This distinguishes it from the corresponding section of the *DN*, at least if taken in its fuller ‘Ĝūzġānīan’ form, which also comprises a fourfold section on *Mathematics* after the *Physics*²⁷⁷. As already remarked in what precedes, the *Physics* of the *MF* preserves then the capping role that the corresponding section on natural philosophy might also have had in some phase of the drafting of Avicenna’s Persian work, before the intervention of al-Ĝūzġānī²⁷⁸. The conclusive role of the *Physics* is ensured in particular by the very last chapters of the section, which are gathered in the *MF* in the Fifth (and last) treatise of the work. These chapters deal with the way in which the human intellectual soul can receive visions and science from the world of the unknown, as well as with the happiness and punishment reserved to her in the hereafter, and with the philosophical possibility of prophecy. The Fifth treatise thus constitutes an ethical, oneirological, and prophetological précis, which tightly links the subject-matter of natural philosophy – through the philosophical psychology addressed in *Physics* IV – to issues of metaphysical pertinence. Such an eschatological abridgment, with its ethico-political bearings, forms indeed the fitting conclusion for the *Metaphysics* of different *summae* of Avicenna’s, most notably the *K. al-Šifāʾ*. Interestingly, then, the displacement of *Physics* after *Metaphysics* in the *MF* and the *DN* creates the conditions for natural philosophy to inherit, so to speak, the prophetological theme which in other encyclopaedias crowns instead the metaphysical discussion. Thus, the *Physics* of the *MF* can rightly be defined eschatological, in that it includes the treatment of issues of ‘political metaphysics’ that have very little to do with Aristotelian natural philosophy in the narrow sense, and that had rather been first placed at the culminating point of the *iter studiorum* by al-Fārābī²⁷⁹.

Before this rather atypical conclusion, in which the style itself of al-Ĝāzālī’s prose shows a perceivable elevation, the preceding four treatises of the *Physics* are actually a fairly complete, though heavily abridged, introduction to Aristotelian natural philosophy, conformable to the wider presentations Avicenna had given of this material in different encyclopaedias of his. The *Physics* is introduced by a short **Preface**, which concisely resumes the epistemological framework expounded in the two Premises of *Metaphysics*²⁸⁰, before presenting a table of contents of the section. In this presentation, the indication of the subject-matter of the Fifth treatise is missing²⁸¹ (§315).

²⁷⁷ Cf. *supra*, §1.4.2.1. *Why Didn’t al-Ĝāzālī Do His Math?*.

²⁷⁸ See *supra*, §1.4.2. *The Order of the Sciences*.

²⁷⁹ Cf. *supra*, §1.4.2. *The Order of the Sciences*.

²⁸⁰ See *supra*, §§92-100.

²⁸¹ On this omission cf. *supra*, §1.2. *Chronological and Doctrinal Collocation*, especially the last section, addressing

The **First Treatise** [*maqāla*] programmatically deals with ‘what is common to all bodies’, namely form, matter, movement, and place. However, its actual treatment only focuses on the latter two. **I.1.** A broad definition of movement [*ḥaraka*] as transition is given as an introduction to the first main subdivision of the First treatise (§316). **I.1.1.** The categories in which a movement can occur (where, quantity, position, and quality) are presented, with a distinction between gradual and instantaneous movements (§317). The case of (instantaneous) movement in the category of substance is then addressed (§318). As for the movement in the category of quantity, it comprises both the physiological growth and decline of living bodies (§319), and the mechanical rarefaction and condensation of inorganic matter (§320). **I.1.2.** The analysis of movement on the basis of its possible cause allows to distinguish between accidental, violent and natural movements (§321). Three kinds of souls – vegetative, animal, and angelical – are associated with the natural movements (that is, those due to the essence itself of the moving thing), which are either due to nature proper or rather to a will. This is a not trivial anticipation of material belonging to philosophical psychology, which has no direct correspondence in the *DN* (§322)²⁸². **I.1.3.** Moreover, local movement can either be rectilinear or circular (§323). **I.2.** The second main subdivision of the First treatise of the *Physics* deals with place [*makān*]. Four properties that aim to describe it are listed (§324). Place cannot be matter, nor form. A third candidate to the role of place of a body could thus be the measure of the distance, or extension or space occupied by the body itself (§325), either in the plenum alone (§§326-328, with increasingly radical denials of the possible existence of an ‘extension’ itself), or also in the void (§§329-331). Only at the very end of the discussion devoted to place does al-Ġazālī – who is following here closely the structure of the *DN* – give the solution to the original problem (cf. *supra*, §324), by presenting the correct, Aristotelian definition of place as the inner surface of the containing body (§332).

The **Second Treatise** of the *Physics* deals with the simple bodies. The peculiar case of these simples represented by the heavens is briefly treated at the beginning, with a Ġazālīan addition with respect to the *DN* (§333). The bulk of the treatise is however devoted to the four elements, whose notable characteristics are presented in seven allegations (§334). **II.1.** The four primary qualities of hotness and coldness, wetness and dryness are determined, together with the secondary sensible (and especially tactile) qualities deriving from them (§335). The combination of the four primary qualities determines the nature of the four Aristotelian elements: earth (cold and dry), water (cold and wet), air (hot and wet), and fire (hot and dry) (§§336-337). **II.2.** The four primary qualities of the elements are accidents, as opposed to the school of thought that sees them as (substantial) forms of the elements (§338). **II.3.** The elements are susceptible of qualitative alteration (§§339-340). The case of heat, and how it is engendered, is treated at length; the discussion also includes the treatment of luminous rays (§§341-346). **II.4.** The elements do not have a fixated measure, but they are rather susceptible of increasing and diminishing (§§347-348). **II.5.** The fifth allegation deals with the mutual transformation of the elements, of which various examples are given (§§349-350). **II.6.** The next section globally deals with the sublunary reception of supralunary influences, the most important of which is light and heat (brightness is linked with the warmth experienced on earth, but the Sun is not in itself hot) (§§351-353). **II.7.**

Gabriel S. Reynold's thesis on the topic.

²⁸² See *infra* the Commentary *ad loc.* for a summarising table on this issue.

Each one of the elements has only one natural place, necessarily internal to the celestial spheres (§§354-356).

As for the **Third Treatise** of the *Physics*, it treats the mixture [*mizāġ*] of the elements in its various instantiation, up to the formation of inorganic materials (minerals) and phenomena (the meteorological events). **III.1.** Its first «speculation» [*naẓar*] has to do with the general features of the mixture (§357). The permanence of the potencies of the elements in the mixture stated in Aristotle's *De generatione et corruptione* – here quoted *verbatim* – is interpreted, with Avicenna, in an active sense (§358). Perfectly balanced blends are impossible in physical reality (§359). **III.2.** The second speculation treats the internal structure of the elemental spheres: the three- or four-layered earth (§360) and the connected problem of the emergence of dry land (§361); the four layers of air (and thus of atmosphere) (§362); the one, colourless stratum of the sphere of fire (§363). **III.3.** The meteorological discussion is introduced by means of the Aristotelian distinction of two kinds of exhalation [Gr. ἀναθυμίασις], vapour and smoke, which give rise to different atmospheric phenomena (§364). The third speculation deals in particular with those originating from the vapour [*buhār*], including clouds (§365), rain, snow, and hail (§367), the rainbow (§368), and finally the halo (§369). **III.4.** The fourth speculation addresses the meteorological phenomena coming from smoke [*duḥān*]. These include winds (§370), comets and other high-atmosphere (in Aristotelian understanding) phenomena due to the different behaviour of fine and thick smoke (§371), and further phenomena such as thunders, flashes, and lightnings (§372). **III.5.** The fifth and final speculation deals with minerals (which had already been anticipated in III.3, §366). Minerals come from the composition of smoke and vapour within earth (§373); they include metals, which can be forged (§374). They can be shaped thanks to some properties, like coagulation and fusion, which are however the pertinence of the science of alchemy (§375).

With the important **Fourth Treatise** of natural philosophy, the physics of the inorganic world is abandoned in order to deal with the soul [*nafs*] as formal principle of the living body. The treatment of psychology is however in perfect continuity with the previous inorganic mixtures of the elements, because souls, in their ascending hierarchy towards the human soul, inhere in increasingly more perfect mixtures. **IV.1.** The vegetative soul [*nafs nabātī*]²⁸³ has three operations, and consequently three faculties [*quwan*] performing them: the nutritive faculty, the faculty of growth, and the generative faculty (§§376-378). **IV.2.** The animal soul [*nafs ḥayawānī*] adds to those typical of plants two more faculties: a moving one, in turn subdivided into a desiderative and an irascible faculties (§§379-380), and a perceptive one. The treatment of the latter is further subdivided into the analysis of the external and the internal senses (§§381-382). **IV.2.1.** The five external [*zāhira*] senses are introduced (§383) and then treated one by one: touch (§383), olfaction (§384), hearing (§385), taste (§386), and, at more length, sight (§§387-389). The discussion of sight is also extended to include a brief treatment of the extramission and intromission theories of vision (§§390-392). The section on the external senses is concluded by a distinction between proper and common sensibles (§393). **IV.2.2.** The following section is devoted to the internal [*bāṭina*] senses: the common sense (§394), the formative faculty (or faculty of forms, or retentive imagination) (§395), the estimative faculty or estimation (§396), memory (§397), and the

²⁸³ Sometimes also in the feminine [*nabāṭīyya*], due to the oscillation of the grammatical gender of *nafs* in the text of the *MF*: cf. *infra*, Commentary *ad* §376.

imaginative faculty (or compositive imagination) (§398). In man, this is called cogitative faculty (§399-400). After a brief summary, the aforementioned, stratified structure of psychic faculties is said to be a sign of the existence of a soul *qua* principle of all these functions, which also uses the body (and its limbs) as her tool (§401). **IV.3.** This introduces the treatment of the human, rational soul, which only informs the best and most balanced of the elementary mixtures. The faculties of the rational soul include a knowing [*‘ālima*] and a practical [*‘āmila*] faculty (§402). The former is divided in turn into a speculative [*naẓariyya*] faculty, and a faculty of practical reasoning [*‘amaliyya*] (§§402-403). The practical faculty, also improperly called practical intellect, is directed to either the intellectual research of a positive outcome, or the intellectual flight from a negative one (§404), in parallel with the animal desiderative faculty (*supra*, §379). The human soul has an amphibious character, since it is placed midway between the lower side of animal life and bodily concerns, and the higher side of intellectual contemplation (§405). There follows a rather substantial description of the human cognitive process of abstraction, from the basic level of sensory perception (§406), through the internal senses (§§407-408), and up to the abstract intellect (§409). Intellection is involved with universals (§410). The human intellect [*‘aql*] has in turn several degrees of actualization: material intellect, intellect *in habitu*, intellect in actuality, acquired intellect, and finally – separated from the human intellect by an ontological gap – the agent intellect (§411). There follows a long discussion of the immateriality of intellects, with ten announced proofs (§§412-419), and a supplementary one (§420), which has to do with the infinite potency of intellect. The ten proofs – seven inductive and three apodictic – are based on the differences between intellectual knowledge and the functions depending on bodily organs (§§412-414), as well as with the conception of knowledge as unitary and indivisible (§§415-418), and with the property of self-intellection enjoyed by the intellect (§419). A demonstration of the immortality of the rational soul, based on the soul’s emanation from the Giver of forms, is presented (§§421-422). The soul comes to exist together with the body (§421), but she does not depend on it at all for her preservation in existence. The soul’s existence is then conditioned, but not caused, by the existence of her body (§§422-423). The final section of the Fourth treatise refutes the doctrine of metempsychosis (§424).

Finally, the **Fifth Treatise** of *Physics* is programmatically interested in the influence that the agent intellect exerts on the human rational souls, as seen from the point of view of the soul herself («what flows upon the souls from the agent intellect» [*mā yaḥḍu ‘alā al-nufūs min al-‘aql al-fa‘āl*]). This subject-matter provides a fitting crowning for both (i) the downward, metaphysical movement that goes from God, through the celestial intelligences and down to the tenth intellect – in all likelihood to be identified with the agent intellect or Bestower/Giver of Forms [Arabic *wāhib al-ṣuwar*, Latin *dator formarum*] – which presides over the sphere of the Moon²⁸⁴, and for (ii) the upward, physical movement that brings the soul from her earthly engagement up to the conjunction with that same intellect, which bestows the intelligible forms in various ways upon her²⁸⁵. As such, the treatise is articulated into ten topics. **V.1.** The human intellectual soul is a sign for the inductive demonstration of the existence of the agent intellect (§426). **V.2.** The emanation of knowledge from the agent intellect onto human intellectual soul is described through a complex luminous metaphor,

²⁸⁴ Cf. *infra*, Commentary ad §302 for further bibliography.

²⁸⁵ I take this formulation of these remarks from my SIGNORI 2020³: 82.

in which the agent intellect is likened to the Sun, the intellectual things to the sensible things, and the capacity of intellectual knowledge proper of the rational soul is equalled to the sense of sight of the animal one (§427). V.3. The third topic is the rational soul's happiness in the hereafter (§§428-429), followed by the specular treatment of (V.4) the soul's misery in the afterlife, seen as hindrance from the happiness described above. Both perpetual (§430, §432) and temporary *post mortem* afflictions (§431) are considered. V.5. The fifth topic introduces a rather unitary section on visions and dreams, which shows a dependence on Aristotelian treatises belonging to the so-called *Parva Naturalia*, such as *De somno et vigilia* and *De divinatione per somnum*. The fifth and longest section has to do with veridical dreams (§§433-436), while (V.6) the sixth one treats dream visions that are confused, and thus fallacious (§437). V.7. The seventh topic continues the reasoning by dealing with veridical visions occurring in the state of wakefulness (§§438-440), while the (V.8) eighth topic treats the false wakeful visions (§§441-442). This treatment is the occasion for important physiological asides, for instance on the important notion of spirit [*rūḥ*], and on the fatigue deriving from its weakness (§§433-434). Crucial notions such as that of interpretation [*ta'bīr*] of dreams and visions (§436), as opposed to *ta'wīl* as allegorical interpretation of the Qur'ān (cf. §439), are also introduced. V.9. The ninth section introduces the pivotal Islamic theme of prophecy [*nubūwwa*], which is articulated in three sorts or kinds (§435). V.9.1. The first kind involves the entire soul, and it has to do with the soul's power of acting at a distance (§§443-445). The reasoning is completed by the quotation of a traditionist source concerning the killing of a camel, which will be among the most strongly condemned doctrines of the Latin Algazel²⁸⁶ (§446). V.9.2. The second kind of prophecy is relative to the speculative faculty of the soul. If this is strong enough, the soul can conjoin to the agent intellect and thus perform a theoretical kind of prophecy. A philosophical basis for this is provided by the factual existence of people who can learn even without a teacher (§447). The given examples of untaught doctrines are metaphysical tenets already expounded in the *Metaphysics* of the *MF* (§448). The possible existence of a person endowed with such outstanding intellectual abilities as to be capable of learning everything quickly and without any teacher is affirmed (§449). Interestingly, the corresponding passage of the *DN* is autobiographical, but Avicenna's personal emphasis is entirely eliminated in the *MF*. V.9.3. The third kind of prophecy has to do with the imaginative faculty of the soul, which – under the appropriate circumstances – is able to imitate the intellectual knowledge perceived by the soul by means of wondrous images and sounds (§450). All three kinds of prophecy (V.9.1-3) might occur together in a single person, who will then be a perfect prophet [*nābī*] (the reference to Muḥammad is clear, although it remains implicit) (§451). V.10. The tenth, and final, topic of the Fifth treatise of the *Physics* concerns the necessary existence of the legislating prophet – as the vicar [*ḥalīfa*] of God on earth – for the greater perfection of the world (§452). The text substantiates the philosophical claim for the necessary existence of this prophet-*imām* with two Qur'ānic quotations that confirm God's providential guidance of His creation. The second part of the paragraph provides the clear description of a religiously inspired hierarchy, both descending and ascending, which connects the world with God Himself, and conversely God with the world and its inhabitants (§453).

²⁸⁶ Cf. MINNEMA 2017.

The *MF* is concluded by a short **Epilogue** (§§454-455), which reprises the formulations of the **Prologue** (§1) concerning the programmatically uncommitted report of the doctrines of the philosophers on the part of al-Ġazālī. A final mention of the *Tahāfut al-Falāsifa* also occurs (§454)²⁸⁷. The entire text is closed by an elaborate eulogy (§455).

²⁸⁷ For the different ways in which these concluding statements are transmitted in both the Arabic and the Latin tradition (with the text's ending placed at different points of the Epilogue), cf. *infra*, §2.1.1. *Trimming al-Ġazālī: A Decurated Arabic Manuscripts*, in particular Diagram 3.

1.6. Explicit Quotations

The analysis of the explicit quotations occurring in a medieval work of philosophy is of paramount importance for the study of its most direct sources. In the case of the *MF*, the issue is complicated by the typically derivative character of the quotations that appear in al-Ġazālī's text, since they most often reproduce a similar citation already present in Avicenna's *DN*. The further sources that can be detected through the systematic analysis of the explicit quotations are thus in most cases secondary with respect to the primary and fundamental source represented by the Persian *summa* penned by Avicenna. This peculiar circumstance notwithstanding, the study of the citations appearing in the *MF* is not devoid of interest, specifically because not all the quotations are mere reproductions of Avicenna's ones, but some rather entail a reference to Avicenna himself, sometimes quoted under the generic label of the «group» [*qawm*], *i.e.* of the group of the philosophers (in the narrower, Avicennan sense expressed at this time by the word *falāsifa*)²⁸⁸.

The presence, in the *MF*, of such 'external' references to the author of the main source of the writing is crucial, because it creates within the text a partial detachment with respect to the basic level of interpretation, which would read the *MF* merely as a translation of the *DN*. While a proper translation could in principle be more or less faithful without losing its theoretical status of version, and thus ultimately of (attempted) reproduction, of a preceding text – its original –, the presence of articulated statements concerning the author himself of the translated text *within* the alleged translation certainly produces a logical gap, in which the personality of al-Ġazālī as reworker of Avicenna's original can be glimpsed with remarkable clarity. While this never happens with an explicit nominal quotation (§1.6.1) – Avicenna's name is never made within the *MF* –, the analysis of the indefinite descriptions employed throughout the work will show the presence of such an interesting, partially critical detachment from Avicenna's source in many different cases (§1.6.2). It is important to stress, however, that the vast majority of al-Ġazālī's text still presents itself as a version of Avicenna's one, so that the scholarly label of 'translation' to designate the *MF* should probably not be abandoned yet. However, this handy description needs now further, and more accurate, qualification.

1.6.1. Explicit Nominal Quotations

In the *MF* there appear seven explicit nominal quotations, all of which point to only two previous thinkers: Euclid [Greek Εὐκλείδης, Arabic *Iqlīdis* or *Uqlīdis*] (three citations), and Aristotle [Greek Ἀριστοτέλης, Arabic *Aristūṭālīs* or *Aristāṭālīs* or, in abridged form, *Aristū*] (four citations). The two authors can be considered as the most important, and thus paradigmatic, representatives of mathematics (and especially geometry) and philosophy

²⁸⁸ Cf. §1.1, *Title*, and GRIFFEL 2021: esp. 96-107.

respectively, although it should be recalled that mathematics certainly belonged to the system of *falsafa* in Avicenna's understanding of it²⁸⁹. Remarkably, all the explicit nominal quotations are also present in al-Ġazālī's source, the *DN*. While all three Euclidean citations are situated in *Logic*, and more precisely at the end of it, the Aristotelian quotations are mostly located in the *Physics*, while one – which is the longest *verbatim* quote, the only *verbatim* one referring to Aristotle, and in all likelihood the most important of the entire set – occurs toward the end of the Third treatise of *Metaphysics*.

The following Tables 8 and 9 provide a summary of the seven explicit nominal quotations that appear in the *MF* and in the *DN*, respectively. While all the nominal references made in the *MF* are also present in the *DN*, Avicenna's explicit quotations far exceed al-Ġazālī's ones. Indeed, the Persian text quotes Aristotle eight times (plus one), and Euclid five times (plus one). In particular, Aristotle's name appears once in *Logic*, once in *Metaphysics*, and six times in *Physics*, to which one must add an occurrence of the honorific epithet «Great philosopher» in close connection with an explicitly nominal quote. Euclid, for his part, is mentioned by name three times in *Logic*, plus the backreference to his «book» just after an explicit nominal citation. Moreover, he is quoted twice in the *Mathematics* added by al-Ġūzġānī, and precisely in the prefaces added by him, respectively at the beginning of *Geometry* and *Arithmetics* (these two quotes, which are not properly Avicennan and which moreover occur in a section of the *DN* not reported in the *MF*, are, as such, obviously absent in al-Ġazālī's text).

The comparison between the two sets of quotations reveals at least two very interesting features. First of all, it is noteworthy that, in two cases out of seven, the explicit nominal quotations of the *MF* specifically correspond to the semi-explicit citations in the *DN*, *i.e.* to those cases in which the name of the quoted author is inferable from the immediate context, but not explicitly made by Avicenna in relation to the specific tenet then reported by al-Ġazālī. This happens both for Euclid (Table 8, [2b] in the *DN* corresponds to Table 9, [2] in the *MF*, while the passage of the *DN* reported in Table 8, [2], where the name of Euclid is explicitly made, has no correspondence in the *MF*) and for Aristotle (Table 8, [10], in which the phrase «the great philosopher» replaces the name of Aristotle made immediately afterwards [10b], corresponds more closely to Table 9, [6] than to [10b]). Second, and perhaps more importantly, al-Ġazālī virtually omits all the marks of praise with which Avicenna – contrary to his typically acknowledged mature *usus* – embellishes in the *DN* almost every mention of the name of Aristotle. The most notable of these cases is represented by Table 8, [7] = Table 9, [4], on the happiness of the First²⁹⁰, but also numbers [8], [9], [10] and [11] in Table 8 – in which the expression «great philosopher» appears – are cases in point. As can be readily seen by the comparison of the two Tables, none of these praising expressions is retained by al-Ġazālī in the *MF*, the only partial exception being Table 9, [5], in which the Aristotelian doctrine of place is said to have reached the *consensus omnium* («on which all have agreed»). Both circumstances – the presence of the laudatory tones in the *DN*, and their absence in the *MF* – are of great historical interest, and call for future exploration in order to be fully understood and explained.

²⁸⁹ Cf. *supra*, §1.4.2. *The Order of the Sciences*.

²⁹⁰ More on this below, in Table 10 and the following discussion.

TABLE 8. *Explicit nominal quotations in the DN*

	SECTION	CHAPTER	PAGE	AUTHOR	QUOTATION	MF
1	<i>Logic</i>	<i>Composed syllogisms</i>	AM (I) 58	Euclid	A ce sujet, nous donnerons un exemple emprunté à la géométrie: soit la première figure du Livre d'Euclide.	Table 9, [1]
2	<i>Logic</i>	<i>Different kinds of principles of demonstration</i>	AM (I) 80	Euclid	Les définitions qu'on pose comme principe au début [de la science démonstrative]. Ainsi dans le livre d'Euclide, les définitions du point, de la ligne et de la figure.	---
2b	<i>Logic</i>	<i>Different kinds of principles of demonstration</i>	AM (I) 80	[Euclid]	Les prémisses premières et autres que premières, à savoir celles en lesquelles il n'y a point de doute; ce qu'on appelle axiomes. C'est ainsi que dans ce livre [d'Euclide], on a établi comme principe ceci: deux choses étant égales, leurs moitiés sont égales; si l'on en retranche une même quantité, leurs restes sont égaux.	Table 9, [2]
3	<i>Logic</i>	<i>Different kinds of principles of demonstration</i>	AM (I) 80-81	Euclid	L'exemple de ces deux [postulat et hypothèse], ce sont ces principes qu'on lit dans le livre d'Euclide, étant convenu qu'on ne peut se dispenser d'être en accord avec lui. C'est ainsi qu'on dit qu'il faut accepter ceci: «Autour de tout point on peut tracer un cercle.»	Table 9, [3]
4	<i>Geometry</i>	Preface by al-Ġūzġānī	AM (II) 91	Euclid	Cet opuscule est une sorte de résumé d'Euclide: ça et là, la voie des applications y est frayée et, par cette méthode, il conduit à l'Almageste.	---
5	<i>Arithmetics</i>	Preface by al-Ġūzġānī	AM (II) 190	Euclid	Dans cet opuscule, j'ai recueilli de la science de l'arithmétique ce qui en constitue les principes (comme je l'ai déjà rappelé); d'autre part, ce que notre grand Maître (qu'Allah l'ait en sa miséricorde) avait laissé de côté en renvoyant [le lecteur] à l'ouvrage d'Euclide, dans son livre dont je donne ici l'abrégé, j'en fais	---

	SECTION	CHAPTER	PAGE	AUTHOR	QUOTATION	MF
					mention pour que l'exposé soit complet.	
6	<i>Logic</i>	<i>Syllogism by absurdity</i>	AM (I) 60	Aristotle	Pour traduire ce discours par syllogismes directs, les hommes se sont donné la peine d'un long travail, puis ils l'ont abandonné. Aristote y a fait des allusions en disant qu'il en parlerait; mais il s'est contenté de dire que le syllogisme par l'absurde vient du [syllogisme] hypothétique; c'est ce que je vais expliquer.	---
7	<i>Metaphysics</i>	<i>Completion of the speech on this issue</i>	AM (I) 173	Aristotle	Comme il a bien dit, le chef des sages, le guide et le maître des philosophes, Aristote, au sujet de cette félicité que l'Être nécessaire a en Lui-même et de celle des êtres qui leur vient de Lui et par Lui: «Si le Premier de tous les êtres a perpétuellement par Lui-même la même quantité de félicité que nous avons par Lui à une heure donnée où nous le concevons, où nous méditons sur Sa grandeur et où nous nous représentons une vérité se rapportant à Lui, ce sera donc une immense félicité; alors que cette quantité [de félicité] que notre intelligence conçoit et que notre condition nécessite n'est pas du tout comparable à celle qu'Il a par Lui-même, et qui est plus grande et plus merveilleuse; ²⁹¹ bien plus! l'Être premier est félicité subsistant par elle-même, cet état [de l'Être premier], il ne faudrait pas le nommer félicité; mais parmi les termes connus, il n'en est pas un qui convienne mieux à ce sens.»	Table 9, [4]
8	<i>Physics</i>	<i>Result of the speech on 'What is</i>	AM (II) 27	Aristotle	C'est la doctrine la plus juste, celle du grand philosophe Aristote, sur laquelle on s'est mis d'accord	Table 9, [5]

²⁹¹ Following a suggestion contained in a paper orally presented by Amos BERTOLACCI (*Commenting on Aristotle Outside A Commentary: On Avicenna's Exegesis of the Arabic (and Persian?) Translations of the Metaphysics in some of His summae, Workshop Philosophy and Translation in the Islamic World, Zurich, 21-22 June 2018*, org. U. Rudolph, R. Wisnovsky), it could be surmised that the actual quotation of Aristotle ends here, and that the remainder does not belong to the *verbatim* citation (despite being considered as such by the French translators).

	SECTION	CHAPTER	PAGE	AUTHOR	QUOTATION	MF
		<i>place?</i>			après lui.	
9	<i>Physics</i>	<i>Demonstration of the state of natural and non-natural heat, and of natural and non-natural coldness</i>	AM 28 (II)	Aristotle	Sur chacune de ces trois [causes][<i>scil.</i> de la chaleur], il y a des divergences entre les anciens philosophes et le philosophe Aristote qui est venu après eux.	---
10	<i>Physics</i>	<i>On mixture</i>	AM 44 (II)	[Aristote]	Par ces facultés dont le Grand Philosophe [Aristote] a dit qu'elles subsistent, il n'a pas entendu les facultés passives (comme les gens peu instruits l'ont imaginé) mais les facultés actives.	Table 9, [6]
10b	<i>Physics</i>	<i>On mixture</i>	AM 44 (II)	Aristotle	En déclarant que la faculté subsiste, Aristote a voulu dire que mixture n'est pas corruption.	Table 9, [6] ~
11	<i>Physics</i>	<i>Examination of the vanity of the opinions of the ancients on vision</i>	AM 58 (II)	Aristotle	Il y a divergence au sujet de ce qu'est la vision. De ces gens qui ont précédé Aristote, le grand philosophe, un groupe a imaginé que de l'oeil émanent un rayon et une clarté qui atteignent telle chose, la touchent et la voient. Propos absurdes!	---
12	<i>Physics</i>	<i>Examination of the vanity of the opinions of the ancients on vision</i>	AM 59 (II)	Aristotle	Or, selon la doctrine d'Aristote, voir une chose plus petite [qu'elle n'est] a une cause évidente, comme nous allons le rappeler.	---
13	<i>Physics</i>	<i>Examination of Aristotle's doctrine on vision</i>	AM 60 (II)	Aristotle (twice: title and text)	Voici la doctrine d'Aristote. L'oeil est comme le miroir [...]	Table 9, [7]

TABLE 9. *Explicit nominal quotations in the MF*

	LOCUS	PAGE	§	AUTHOR	LOC. CIT.	D/V	QUOTATION	DN
1	<i>Logic</i> IV.4	D96.13	56	<i>Iqlīdis</i> Euclid	Euclid, <i>Elements</i> , Proposition I.1	D	The example of hierarchical ordering is the first figure by Euclid.	Table 8, [1]
2	<i>Logic</i> V.3	D125.15	84	<i>Iqlīdis</i> ²⁹² Euclid	Euclid, <i>Elements</i> , I, Common notions 2-3	V	[...] like their speech in the first [book] of Euclid: «When equal [quantities] are taken from equal [quantities], the remainder will be equal; and when equal [quantities] are added, [the resulting quantities] will be equal».	Table 8, [2b]
3	<i>Logic</i> V.3	D125.23	84	<i>Iqlīdis</i> Euclid	Euclid, <i>Elements</i> , I, Postulate 3	V	[...] as it is said in the first [book] of Euclid: «It is inevitable that we concede that every point can be a centre; it is indeed possible that around it a circle be drawn».	Table 8, [3]
4	<i>Metaph.</i> III.b.11	D248	235	<i>Aristūṭālīs</i> Aristotle	Aristotle, <i>Met.</i> Λ [xii] 7, 1072 ^b 24- 26 + <i>Met.</i> Λ [xii] 7, 1072 ^b 14- 31, <i>passim</i>	V	Aristotle has already said: «Even if He did not have, of the pleasure of the perception of the beauty of His essence, anything but the pleasure that we have for the perception of Him, whenever one turns his attention to His beauty, and we interrupt our contemplation of all but Him, and we become aware of His majesty, His beauty, and His glory; of the realization of all [things] according to the best of the rulings from Him; of their obedience to Him according to the way of the subjugation; and of the persisting of that perpetually and forever, without	Table 8, [7]

²⁹² In this one and in the following occurrence (numbers [2] and [3] in Table 9), Duniyā prints the *hamza* above the *alif*, as if to suggest the reading Uqlīdis instead Iqlīdis (with subscribed *hamza*) as in occurrence [1]. I have however normalized the spelling.

	LOCUS	PAGE	§	AUTHOR	LOC. CIT.	D/V	QUOTATION	DN
							possibility of change – that pleasure would not have comparison with [any other] pleasure».	
5	<i>Physics</i> I.2	D317.	332	<i>Aristāṭālīs</i> Aristotle	Aristotle, <i>Phys. Δ</i> [IV] 4, 212 ^a 6-6a	D/V	What is firmly established about it [<i>i.e.</i> 'place'] is the opinion of Aristotle, on which all have agreed, that is that [«place»] is an expression referring to [(d)] the surface of the containing body, namely the surface internally touching the contained [body] [...]	Table 8, [8]
6	<i>Physics</i> III.1	D335.	358	<i>Aristū</i> [D-Alt: <i>Aristūṭālīs</i>] Aristotle	Aristotle, <i>De gen. et</i> <i>corr.</i> I 10, 327 ^b 29-31	D	Where Aristotle said that the potencies of the elements remain in the blends, he did not intend with them but the active potencies. Indeed, the denial of the potencies of the interaction is a sign of the corruption. He drew inferences from this only with regard to the fact that the blend is not a corruption.	Table 8, [10] + [10b] ~
7	<i>Physics</i> IV.3	D353.	389	<i>Aristāṭālīs</i> Aristotle	Alexander of Aphrodisias, <i>De anima</i> B (II) (<i>Mantissa</i>), ed. BRUNS 1887: 127- 130	D	This is what I establish in Aristotle about the quality of the perception.	Table 8, [13]

As for the analysis of the explicit nominal quotes in the *MF*, as reported in Table 9 above, some considerations are in order. The first three nominal quotations all refer to Euclid's *Elements*, although the title of the book itself is never mentioned explicitly²⁹³. This notwithstanding, al-Ġazālī provides some quite specific indications of the location of the quoted excerpt in Euclid's text, by mentioning in quotation (1) «the first figure by Euclid» [*al-šakl al-awwal min Uqlīdis*], and in quotations (2)-(3) «the first [book] of Euclid» [*fī awwal Uqlīdis*]. While the Arabic expression *awwal* might also be interpreted more generically as

²⁹³ On the Arabic Euclid see DE YOUNG 1984 and BRENTJES 1994; for its figures in Arabic tradition cf. also DE YOUNG 2005.

«beginning» (an interpretation that the Latin version also seems to presuppose²⁹⁴), the fact that the axioms and the postulate quoted are indeed to be found in the first book of the *Elements* may suggest a more specifying translation. The first quotation is moreover particularly interesting because, besides the doctrinal reference to Euclid's construction of an equilateral triangle, it also entails the reproduction of the very figure of it. This figure was already present in the *DN*, and it was later transmitted also to the Latin translation of the *MF*²⁹⁵. Quotations (2) and (3) are *verbatim* quotes, which are used as examples of the logical notion – which has indeed in both cases a clear origin in Euclid's geometry – that is time by time expounded. In particular, while Euclid's construction of the equilateral triangle was used in quotation (1) as an instance of the difference in the ordering of geometrical and philosophical (*i.e.* syllogistic) reasonings, in cases (2) and (3) the text of the *MF* rather explains the concepts of «axioms» or common notions [Arabic *'ulūm muta'ārafa*; cf. Greek κοίνοι ἐννοιαί (= ἄξιώματα)], and that of «postulates» [Arabic *muṣādarāt*] by quoting, unsurprisingly, an axiom and a postulate from the very beginning of Euclid's treatment.

As for the Aristotelian quotations, the one occurring in *Metaphysics* is a lengthy *verbatim* quote – although substantially reworked – from chapter 7 of book *Lambda* of Aristotle's *Metaphysics*, which deals with the happiness that can be attributed to the First Principle. The quote is immediately interesting because of its provenance from the most theological book of Aristotle's *Metaphysics*, which demonstrably enjoyed an outstanding fortune in Arabic context precisely for its divine subject-matter²⁹⁶. What is more, Avicenna himself clearly attached a special importance to the section of Aristotle's *Metaphysics* comprising chapters Λ 6-10, as shown by Amos Bertolacci on both contextual and doctrinal grounds²⁹⁷. The Persian background of this quotation (4) in the *MF*, and its relationship with other Arabic texts by Avicenna, are also in themselves of peculiar interest. In the *DN*, as a matter of fact, the same quote is introduced not only by the mention of Aristotle's name, as it happens in the *MF*, but also by an extolling praise of the Stagirite, which is to be considered as an atypical feature when compared with Avicenna's tendential reduction in the usage of the proper name of Aristotle – and of the connected laudatory tones – in the progress of his career²⁹⁸. Moreover, the existence itself of a lengthy *verbatim* quotation of Aristotle's *Metaphysics* in Persian *darī* is of great historical interest, both if we are to presuppose Avicenna's

²⁹⁴ The Latin rendition is «in principio Euclidis»: cf. LOHR 1965: 286.142.

²⁹⁵ For systematic information on all the figures present in the Arabic and Latin tradition of the *MF*, as well as in the Persian tradition of the *DN*, cf. *infra*, Appendix 2.

²⁹⁶ This holds true, with different nuances and degrees, for all major thinkers of the so-called classical, or formative, age of Arabic philosophy, namely al-Kindī, al-Fārābī, and of course Avicenna himself. The peculiar philosophical importance of *Lambda* in the Arabic tradition is also mirrored by the greater number of its Arabic translations with respect to the other books of Aristotle's *Metaphysics*, of which two main translations – by Uṣṭāṭ (9th century) and by Iṣḥāq ibn Ḥunayn (d. 910) – are extant. *Lambda*, by contrast, was also translated by Šamlī (9th century), Abū Bišr Mattā ibn Yūnus (d. 940; perhaps even twice, moreover with the commentaries by Alexander of Aphrodisias and Themistius), and Yaḥyā ibn 'Adī (d. 974). Furthermore, an anonymous paraphrastic rendition of book *Lambda* also circulated in Arabic milieu: see, for all these data, the synthesis by BERTOLACCI 2006: 34 (and its reprise by JANSSENS 2018: 7 and fnn. 15-17).

²⁹⁷ See BERTOLACCI 2006: 50-53, also with reference to the analysis of the explicit definite quotations of Aristotle's *Metaphysics* which are to be found in the *Ilāhiyyāt* of the *K. al-Šifā'*: cf. BERTOLACCI 2006: 327-328, which details the conspicuous presence of quotations from Aristotle, *Metaph.* Λ 7-8 in Avicenna, *Ilāhiyyāt* IX.2-3.

²⁹⁸ This trend is documented by GUTAS 1988: 286-288 = GUTAS 2014: 323-326.

own translation of that excerpt²⁹⁹, or else the groundbreaking existence – which would have gone hitherto unnoticed – of a more substantial version of the *Metaphysics* in Persian before the years of Avicenna³⁰⁰.

To the better understanding of the quote, a detailed comparison is required of the text of the quotation in Aristotle's Greek original³⁰¹, Avicenna's Persian *DN*³⁰², al-Ġazālī's Arabic *MF*³⁰³, and the corresponding lemma of Avicenna's Arabic commentary on book *Lambda* of the *Metaphysics*, the only extant part of his *Kitāb al-Inṣāf* [*Book of the Fair Judgment*]³⁰⁴.

TABLE 10. *Comparison of Aristotle's, Avicenna's and al-Ġazālī's texts on the pleasure of God*

ARISTOTLE, <i>METAPH.</i>	AVICENNA, <i>ŠARĤ AL-LĀM</i>	AVICENNA, <i>DN</i>	AL-ĠAZĀLĪ, <i>MF</i>
<p>εἰ οὖν οὕτως εὖ ἔχει, ὡς ἡμεῖς ποτέ, ὁ θεὸς ἀεὶ θαυμαστόν. εἰ δὲ μᾶλλον, ἔτι θαυμασιώτερον. ἔχει δὲ ὧδε.</p>	<p>ثم قال: فلن كان إله أبداً كما لنا في وقت ما فلذلك عجيب وإن كان أكثر. فأكبر عجباً، فله ذلك.</p> <p>[15] كأنه يقول: لو لم يكن للأول بين الاعتباط بنائه إلا القدر الذي لنا في الاعتباط به حين ننقطع بكنه الإلتفات العقلي إلى جبروته وافضين للمعشوقات الطبيعية، ناظرين إلى الحق من حيث هو حق، منقطعين إليه عن الباطل من حيث هو باطل فننقطع به وبذواته من حيث تنصل به، ثم دام ذلك القدر سريداً، فلذلك عجيب عظيم جداً. وإن كان أكثر من ذلك سرمداً، أو غير مقيس إليه، فلذلك أعجب وأعظم.</p>	<p>اگر مر اول همه چیزها را از خود همیشه آن مقدار خوشب است که ما را بوی بود، آن ساعتی که او را اندر یابیم و اندر بزدگی وی اندیشه کنیم و حقی را اندر باب وی تصور کنیم، خود بزرگ است و این مقدار که خود ما اندر باید و حالما واجب کند خود قیاس ندارد بآنکه ورا از خود بود، و آن بزرگتر و عجیتر، بلکه هستی اول خوشی است قائم بنفس خویش، و نیابستی که آن حال را خوشی خواندندی، ولیکن لفظی نیست از لفظهای معروف از آن اندر خورتنی باین معنی.</p>	<p>لو لم يكن له من اللذة بإدراك جمال ذاته إلا ما لنا من اللذة بإدراكها التفتت إلى جماله، وقطعنا نظراً عما دونه، واستشعرنا عظمته وجماله وجلاله، وحصول الكل على أحسن النظام منه، واهديها له على سبيل التسخير، ودوام ذلك أزلاً وأبداً من غير إمكان تغير، فكانت تلك اللذة لا تقاس بها لذة.</p>
<p>If, then, God is always, as we are sometimes, in this good state, that is wondrous; and if its state is better, that is still more wondrous. And God is in this state.</p>	<p>Puis [Aristote] dit: ^{72b24-26} si Dieu [possède] éternellement cet état que nous ne possédons qu'à un moment donné, cela est admirable; et si [son état] est encore meilleur, alors c'est encore plus admirable. Or Il possède ce [dernier état].</p>	<p>Si le Premier de tous les êtres a perpétuellement par Lui-même la même quantité de félicité que nous avons par Lui à une heure donnée où nous le concevons, où nous méditons sur Sa grandeur et où nous nous représentons une vérité se rapportant à Lui, ce sera</p>	<p>Even if He did not have, of the pleasure of the perception of the beauty of His essence, anything but the pleasure that we have for the perception of Him, whenever one turns his attention to His beauty, and we interrupt our contemplation of all but Him, and we become</p>

²⁹⁹ Extremely unlikely, if not utterly impossible, from the original Greek; more likely, but still improbable, from one of the available Arabic versions.

³⁰⁰ Cf. now the oral communication Amos BERTOLACCI (*Commenting on Aristotle Outside A Commentary: On Avicenna's Exegesis of the Arabic (and Persian?) Translations of the Metaphysics in some of His summae, Workshop Philosophy and Translation in the Islamic World*, Zurich, 21-22 June 2018, org. U. Rudolph, R. Wisnovsky and the ensuing forthcoming publication in print.

³⁰¹ ARISTOTLE, *Metaphysics* Λ [XII] 7, 1072^b24-26; English translation by JUDSON 2019: 32.

³⁰² AVICENNA, *DN*, ed. MO'IN 1952: 111.2-4; French translation by ACHENA-MASSÉ (1) 1955: 173.14-27.

³⁰³ Cf. *supra*, Table 9, [4] for references to the Arabic edition; the English translation is mine (cf. *infra*, Translation, §235).

³⁰⁴ AVICENNA, *Commentary on Book Lambda of Aristotle's Metaphysics* [*Šarḥ maqāla al-Lām...*], chapter 7, ad 1072^b24-26, in GEOFFROY-JANSSENS-SEBTI 2014: 58.35-60.10 (French); 59.166-61.173 (Arabic). Avicenna's commentary on *Lambda* only covers chapters 6-10, and makes use of Uṣṭāṭ's translation: cf. JANSSENS 2003^c; GEOFFROY 2003; and see BERTOLACCI 2006: 17.

<p><15> Cela revient pour lui à dire: même si le Premier ne tirait de la délectation de Son essence que ce que nous-mêmes en tirons lorsque nous délectons de Lui, consacrant le summum de [notre] attention intellectuelle à Sa toute-puissance, abandonnant les désirables du monde sensible, contemplant le Vrai en tant qu'Il est Vrai, nous consacrant à Lui, détournés du vain en tant que vain (c'est alors que nous nous délectons de Lui et de nos essences en tant qu'elles se trouvent en jonction avec Lui); si telle capacité durerait éternellement, cela serait admirable et grandiose. Mais s'il a une capacité éternelle meilleure [que la nôtre] ou sans commune mesure avec elle, alors c'est encore plus admirable et grandiose.</p>	<p>donc une immense félicité; alors que cette quantité [de félicité] que notre intelligence conçoit et que notre condition nécessite n'est pas du tout comparable à celle qu'Il a par Lui-même, et qui est plus grande et plus merveilleuse; bien plus! L'Être premier est félicité subsistant par elle-même; cet état [de l'Être premier], il ne faudrait pas le nommer <i>félicité</i>; mais parmi les termes connus, il n'en est pas un qui convienne mieux à ce sens.</p>	<p>aware of His majesty, His beauty, and His glory; of the realization of all [things] according to the best of the rulings from Him; of their obedience to Him according to the way of the subjugation; and of the persisting of that perpetually and forever, without possibility of change – that pleasure would not have comparison with [any other] pleasure.</p>
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As can be seen from the preceding comparative table, the passage from Aristotle's *Metaphysics* quoted in Avicenna's *DN* and in al-Ġazālī's *MF* is a crucial section of Book *Lambda*, which globally deals with the intellectual rejoicing of the god, in comparison with human intellectual pleasure. However, Avicenna's (and consequently al-Ġazālī's) purportedly *verbatim* quotation already bends Aristotle's passage towards a distinctly religious and monotheistic interpretation, since the highest pleasure conceded to man is immediately said to be the contemplation of God (as opposed to the exercise of thought itself, as in Aristotle's original text). From this shift, which represents the most relevant innovation of the passage and which is present in both Avicenna and al-Ġazālī, the greater (and indeed greatest) state of pleasure enjoyed by God is said to derive. Since our greatest pleasure lies in the contemplation of God, albeit we are imperfect and defective contemplators, it is certain that God – *qua* perfect knower of Himself as a perfect known – will draw a much greater pleasure than ours from His own activity of self-contemplation. To be even more precise, one could explain the passage in the following terms: man and God can both contemplate the highest of the possible objects of perception (God himself), but while man, as an imperfect

perceiver, is condemned to a weaker perception of that sublime object of perception, God is not only the perfect perceived, but also a perfect perceiver, so that His perception of His own essence is strongest, and His pleasure consequently most intense.

In Aristotle's passage, only the activity of thinking is an object of comparison between God and man, and Aristotle accordingly emphasizes two reasons why God's contemplation is «wondrous» [θαυμαστόν]: (i) the first and foremost is that God is «always» [ἀεί] in the state of intellectual bliss in which we are just «sometimes» [ποτέ]; (ii) the second is that this state might even be «better» or greater [μᾶλλον] in God, which adds up to the increase in pleasure already caused by reason (i). In Avicenna and in al-Ġazālī, the second reason (ii) – *i.e.* the greater intensity of God's pleasure – receives the lion's share of the philosophical attention, while the first one (i) is much more marginal. However, Avicenna's Persian text seems more faithful than al-Ġazālī's Arabic one to the *littera* of Aristotle's *Metaphysics*, inasmuch as it reproduces the Greek opposition between the temporariness of our pleasure («à une heure donnée» [Persian *ān sā'ate*]) and the perpetuity of God's one («perpétuellement» [Persian *hamīša*])³⁰⁵. In the *MF*, by contrast, the only hint at the aspect of eternity is not relative to the perpetuity of the contemplation enjoyed by God (and thus of the pleasure deriving from it), but rather to the perpetuity and immutability of those predicates that demonstrate God's perfect supremacy on all creation, such as the proceeding of all things from Him and their obedience to Him. In other words, al-Ġazālī's attention does not seem to be ever focused on the eternity of God's act of perception – a perpetuity emphasized by Aristotle, and at least mentioned by Avicenna –, but rather always on the greater perfection of that perception, due to the greater perfection of the perceiver (also confirmed, but merely as a side-thought, by His eternity and the eternity of His divine status). The difference in 'ontological' degree between God and man seems thus to be sufficient to fully absorb in itself any possible difference due to 'chronological' extension (eternity vs. time).

On another note, the preceding Table 10 allows a comparison of the two quotations in the *MF* and the *DN* with the parallel passage of Avicenna's *Commentary on Book Lambda of Aristotle's Metaphysics* [*Šarḥ maqāla al-Lām...*], the sole extant part of his *K. al-Inšāf* [*Book of Fair Judgment*]³⁰⁶. Despite the different nuances in tone and emphasis, it is striking that al-Ġazālī's Arabic formulation of the purported quotation has exactly the same negative hypothetical structure³⁰⁷ employed in Avicenna's commentary, as opposed to Aristotle's lemma as it is quoted – according to Uṣṭāṭ's Arabic translation – in the same Avicennan text. On the contrary, the hypothetical clause employed in the Persian quotation of the *DN* is affirmative («If...» [*agar*]), thus being closer to the original formulation of the Arabic Aristotle³⁰⁸ than to Avicenna's reworking of it in the commented portion of his *Šarḥ*. In

³⁰⁵ For the aspect of the temporariness of human bliss as opposed to the eternal joy of divine life cf. also ARISTOTLE, *Metaphysics* Λ [XII] 7, 1072^b14-15: διαγωγῇ δ' ἔστιν οἷα ἡ ἀρίστη μικρὸν χρόνον ἡμῖν («And it is a life such as the best we enjoy, and enjoy but for a short time», transl. Ross). For a discussion of Avicenna's peculiar reading of this passage in his *K. al-Inšāf* cf. JANSSENS 2018: 137.

³⁰⁶ Some sparse notes by Avicenna on Aristotle's *De anima* have been recognized by GUTAS 2004 as belonging to the same Avicennan project, although not to the original copy of *K. al-Inšāf* that was lost, and to which the glosses to *Metaphysics* Λ surely pertain.

³⁰⁷ In Arabic *law lam yakun li-l-awwal*^f [*la-hu MF*] [...] *min* [...] *dāt-hi illā* [...] *la-nā* [...] («even if He did not have...»), and so on; cf. the texts presented in Table 10 for further and detailed comparison.

³⁰⁸ Again, specifically in Uṣṭāṭ's translation. More detailed comparison with the further available Arabic texts of

contrast with the formal aspect represented by the grammatical structure of the sentence, it is worth noticing, from the point of view of wording, that the terminology of «pleasure» [*laḍda*], which is consistently employed by al-Ġazālī throughout the quotation, is not used by Avicenna in his commentary on 1072^b24-26 – being replaced there by the term *igtibāt* («rejoicing»), which glosses the generic «state» [*ḥāl*] appearing in the lemma –, while it does appear in a previously cited lemma of the Arabic version of Aristotle's text³⁰⁹. It has been shown that Avicenna, in his commentary on *Lambda*, makes use of the anonymous paraphrase of it that circulates in Arabic alongside the various aforementioned translations, as well as of Themistius' commentary on the same book (which bears by the way in itself strong similarities with the anonymous paraphrase)³¹⁰. It might then be worthwhile to look carefully at those texts in order to find more hints about the possible source of Avicenna's commentary on 1072^b24-26, and of the close resemblance it has with al-Ġazālī's reworking of the *DN*-quotation in his *MF*.

As for quotation (5), I have classified it as ambiguously doctrinal/*verbatim*, because the direct quotation of Aristotle's text is not explicit, although the citation is *in concreto* extremely faithful to its well-known source, the definition of place given by Aristotle in *Physics* Δ [IV]. It is remarkable that the quotation of Aristotle comes at the very end of the discussion on place conducted in the second part of the First treatise of the *Physics* of the *MF*, as a sort of seal to the preceding treatment. The fact that «the opinion of Aristotle» [*ra'y Aristātālīs*] is said to be the object of a widespread *consensus* («on which all have agreed», for which cf. also *infra*, §1.6.2, for the discussion of the indefinite descriptions³¹¹) is another hint of the loyal Aristotelian allegiance not only of the *MF*, but also of its Avicennan source.

Quotation (6) is also interesting in its own right, inasmuch as it entails a partial Avicennan misunderstanding, or at any rate a free and somewhat jaunty elaboration – also mediated by the Arabic translation, and transmitted to al-Ġazālī – of Aristotle's text, already noticed by independent scholarship on Avicenna's reception of the *De generatione et corruptione*³¹². Finally, quotation (7) has to do with perception [*idrāk*], and more particularly with Aristotle's doctrine of sensation as expressed both in the *De anima* and in minor treatises of the *Parva naturalia*, most notably the *De sensu et sensato*. The occurrence of the quotation in the psychological section of the *MF/DN* would however suggest the context of

book *Lambda* might offer new insights on the issue, although the similarity between al-Ġazālī's text and Avicenna's commentary in the *K. al-Inṣāf* is already ascertained.

³⁰⁹ See *ad* 1072^b16: *fa-inna l-laḍdat^a fi'l^m li-dālīka* (GEOFFROY-JANSSENS-SEBTI 2014: 59.155). The term *laḍda* is in any case plainly applied to the case of God and His self-perception in the *Metaphysics* of the *K. al-Ṣifā'*: cf. *Ilāhiyyāt* VIII.7, esp. §4 in BERTOLACCI 2007: 683-685, Arabic text in QANAWATĪ-ZĀYID 1960: 368.16-370 (see in particular 369.3 [*iltidād*]; 369.6 [*laḍda*], and *passim*).

³¹⁰ Cf. JANSSENS 2018: 135-136.

³¹¹ See in particular Table 11, [54].

³¹² As also witnessed by this passage of the *MF*, Avicenna understood the criterion of potential presence of the elements in the mixture [(1)] in the seemingly paradoxical sense that the elements are *actually* present in the blend, or, more precisely, that what remains in the blend are «the active potencies» [Arabic *al-quwā al-fā'ila*, Latin *virtutes agentes*]. As explained by MCGINNIS 2013^a: 88, this is to say that the power [*quwwa*] of the elements is in the mixture inasmuch as their «species form» remains in the mixture: for this notion in the *MF* cf. also *supra*, §357, where al-Ġazālī equals the «forms» of the elements as cause for the elemental qualities with the «potencies» that remain in the mixture. For further discussion on Avicenna's peculiar interpretation of the relevant passage in Aristotle (*De gen. et corr.* I 10, 327^b29-31), perhaps mediated by some kind of textual slip in the Greek-Arabic translation of Aristotle's text, see MCGINNIS 2013^a: 88 and fn. 51 and STONE 2008: 112-113.

Aristotle's treatise on the soul as the most likely source for the (in itself rather generic) citation.

1.6.2. Indefinite Descriptions

While the explicit nominal quotations occurring in the *MF* are circumscribed in both absolute number and number of the authors quoted (only Euclid and Aristotle), the series of the indefinite descriptions used throughout the text reaches a much wider size, taking into account – although implicitly – a great many thinkers and their differentiated doctrines. As mentioned in the introduction to the present section, the set of the indefinite descriptions can be logically divided into two subsets, one comprising the references already present in Avicenna's *DN*, and the other comprising the references added by al-Ġazālī. The most clearly Ġazālīan of those are the indefinite descriptions occurring in the *Prologue* of the text, which are obviously absent in the *DN*. In particular, the *Prologue* contains a reference to the «philosophers» [*falāsifa*] whose doctrines will be reported in the text with alleged uncommitment. Given the clear dependence of the *MF* on the *DN*³¹³, the identification of those *falāsifa* with a specific and prominent *ḥaylasūf* – Avicenna himself as the author of the Persian *summa* – seems both transparent and inevitable. Analogously, the reference in the *Prologue* to the «people of truth» (or 'of the True') [*ahl al-ḥaqq*] – a common expression for the Aš'arites –, who follow the Peripatetic philosophers in logical matters although diverging from them in terminology³¹⁴, appears to be a self-reference by al-Ġazālī to himself, or in any case to a specific wave of logically oriented theologians among which the Ḥuġġa al-Islām certainly represents a towering personality³¹⁵.

However, further cases of such 'Ġazālīan', rather than 'Avicennan', descriptions of other authors also occur elsewhere throughout the *MF*. In particular, expressions designating the philosophers' technical (or conventional) usage of some terms (Arabic trilateral root *ṣ-l-ḥ*, in the VIII stem) almost certainly conceal an indefinite reference to Avicenna and the Avicennan *falāsifa*, because the technical words pinpointed by this rhetorical token – e.g. 'substance' [*ġawhar*]³¹⁶, 'movement' [*ḥaraka*]³¹⁷, 'place' [*makān*]³¹⁸ – turn out to be those typical of Peripatetic jargon³¹⁹. While – *iuxta* the *Prologue* – the doctrines of the *falāsifa* should

³¹³ Cf. *supra*, §1.3, *A Translation from Persian*.

³¹⁴ A further analysis of this important claim *infra*, §1.7.1, *What's In a Name? Technical Usage and Lexical Convention*. Cf. *ivi*, Table 12, n. [1].

³¹⁵ Scholarship on al-Ġazālī's historically crucial introduction/adoption of Peripatetic logic in Muslim theological (and juridical) discourse is abundant and thorough: cf. e.g. LOHR 1965: 226-227; BRUNSCHVIG 1971; MARMURA 1975; JANSSENS 2010^b. Richard Frank's synthetical judgment on al-Ġazālī's profound reception of Aristotelian logic is still important: «One of the most interesting facets of Avicenna's apparent influence on al-Ghazālī, and the least tangible, is to be seen in certain of his basic attitudes. Among these is his overweening confidence in the power of the Aristotelian logic and in the scope of 'demonstrative science' that is presumed to be accessible to those endowed with superior intellect» (FRANK 1987-1989: 275).

³¹⁶ See *infra*, nn. [17]-[20], [22]-[23], and [38] in Table 11.

³¹⁷ See *infra*, n. [45] in Table 11.

³¹⁸ See *infra*, n. [54] in Table 11.

³¹⁹ In this regard, it is interesting that the Latin translation sometimes supplies a reference to the 'philosophers',

be presented by the text of the *MF* in an even-handed and neutral manner, the fact that al-Ġazālī refers to them by means of descriptions emphasizing the technical adoption of a conventional vocabulary, which has nothing to do with the essence of the things described, has the effect of an already semi-critical detachment with respect to the philosophers' views – and thus also with respect to Avicenna's *DN* as the main source for the *MF*³²⁰.

This relevant feature notwithstanding, it is important to stress that indefinite descriptions apparently referring to philosophers adopting the same position later endorsed by the text (and thus considerable by all means to be peculiar cases of self-reference by the author of the text itself) are not uncommon even in texts of philosophy far less thickly layered than the *MF*. In other words, it is perfectly possible that an author, in expounding a doxography comprising various positions on a given topic, also quotes his own stance, without of course any critical detachment of the kind detected above in the case of al-Ġazālī. This is for instance the case, in the *MF*, of descriptions [22] to [24] in Table 11 below, which express different opinions on the nature of the body, among which the Peripatetic (and Avicennan) hylomorphic position is also preliminarily presented to the reader (number [24]). In the absence of any critical (or even semi-critical) mark, such a usage would not feel out of place in a full-heartedly philosophical text such as Avicenna's *DN*, either.

The analysis of the indefinite descriptions occurring in the *MF*, thus, shows once again the compresence of the two levels of (apparently) uncommitted followership – which expresses itself in the faithful reproduction of Avicenna's text, from its doctrines to its cross-references, without perceivable variation –, and of (partially) critical account – which reveals itself, surreptitiously and subtly, in some slightly aloof expressions, not entirely adherent to the expounded subject-matter. While this distinction might appear somewhat opaque, and not easy to grasp at this level of the analysis, the following sections on *Lexicon* and *Examples* will provide more material for the definition of this peculiar Ġazālīan stance. As for now, the following Table 11 summarizes the set of 72 indefinite expressions used in the *MF* to describe, in a nuanced and interesting way, akin (and less akin) thinkers.

in the third person plural, where the corresponding Arabic text only has an occurrence of the root *ṣ-l-ḥ* (especially the word *iṣṭilāḥ*: cf. *infra*, §1.7.1. *What's in a Name? Lexical Usage and Technical Convention*). A good example occurs in *Metaphysics* I.1, §117 of my Translation, where al-Ġazālī writes: «[...] that susceptible [thing] is called, with a technical term [*bi-l-iṣṭilāḥ*], «matter» [*hayūlā*]». This Latin translation of this passage introduces in the text a definite verb, *convenerant*, with *philosophi* as its subject: «Et hoc receptibile vocatur hyle, secundum quod convenerant phylosophi» (MUCKLE 1933: 14.6-7). Likewise, in *Metaphysics* I.8, §171, the impersonal phrase «It has already been agreed [*iṣṭalaḥa 'alā*]» is translated «Iam autem convenerunt philosophi in hoc ut appellarent» (MUCKLE 1933: 46.16-17). By contrast, some of the third-person expressions used by al-Ġazālī to detach himself from the theses he is expounding are rendered into Latin with impersonal formulas which obscure the careful layering of the original Arabic: compare for instance cases [2], [19], and [30] in the following Table 11 (Latin sentences marked with an asterisk in the Table differ in some significant way from their Arabic anti-graph).

³²⁰ I will deal more extensively with this important aspect below, in sections §1.7.1 and §1.7.1.1, dealing with al-Ġazālī's *Lexicon* in the *MF*, and more particularly with the occurrences of *iṣṭilāḥ*.

TABLE 11. *Indefinite descriptions of other thinkers occurring in the MF*

	Arabic	English	Latin	locus	§	identification
1	<i>falāsifa</i>	philosophers	<i>philosophorum</i>	Prologue	§1	esp. AVICENNA, <i>DN</i>
2	<i>ahl al-ḥaqq</i>	the Aš‘arites	* <i>si qua in his fuit a veritate deviatio</i>	Prologue	§1	Aš‘arite theologians adopting Aristotelian logic, esp. AL-ĠAZĀLĪ himself
3	<i>qawl ba‘d-him</i>	some of them say	<i>quidam dicunt</i>	<i>Log. II.4</i>	§21	Supporters of the thesis that fire is soul-like (perhaps equivalent to the converse, <i>i.e.</i> that the soul is fire-like); maybe HERACLITUS (?)
4	<i>al-fuqahā’ wa-l-mutakallimūna</i>	the jurists and the theologians	* <i>doctores legis</i>	<i>Log. IV</i>	§50	Experts of Islamic right [<i>fiqh</i>] and theology [<i>kalām</i>] (= <i>uṣūl al-fiqh</i> and <i>uṣūl al-dīn</i>)
5	<i>aḥass^u l-ḡadal-lyyīna [...] aḥdatū [...]</i>	the most sensible among the dialecticians [...] have brought forth [...]	<i>dialectici per-penderunt [...] adinvenērunt aliam viam</i>	<i>Log. IV</i>	§50	Logicians, perhaps belonging to the jurists and the theologians mentioned in [4], who developed a two-fold way of correcting the method of exemplification, as in [8] and [9] below
6	<i>qālū</i>	They said [...]	<i>dicentes</i>	<i>Log. IV</i>	§50	= <i>supra</i> , [5]
7	<i>salakū</i>	[...] they proceeded [...]	<i>processerunt</i>	<i>Log. IV</i>	§50	= <i>supra</i> , [5]
8	<i>qālū</i>	They said [...]	<i>Dixerunt enim</i>	<i>Log. IV</i>	§51	Proponents (within [5]) of the method of evaluation from all sides [<i>al-ṭard wa-l-‘aks</i>]
9	<i>qālū</i>	They said [...]	<i>Dixerunt</i>	<i>Log. IV</i>	§52	Proponents (within [5]) of the method of probing and subdivision [<i>al-sabr wa-l-taqṣīm</i>]; perhaps also AL-ĠAZĀLĪ himself (?), <i>e.g.</i> in <i>al-Mustaṣfā min ‘ilm al-uṣūl</i> ; <i>al-Manḥūl min ta’līqāt al-uṣūl</i> ; <i>Ṣifā’ al-</i>

	Arabic	English	Latin	locus	§	identification
						<i>ǧalīl</i> ; <i>Asās al-qiyās</i>
10	<i>aḵṭar al-ǧadal-lyyīna lā yahtammūna bil-ḥaṣr</i>	Most dialecticians do not attach importance to the encompassment	<i>Plures autem dialectici non curant omnes comprehendere</i>	<i>Log. IV</i>	§52	Proponents of the ‘elephant in the room’ argument against the risks of missing relevant cases for one’s analysis (likely = <i>supra</i> , [9])
11	<i>bal-yaqūlūna</i>	they rather say [...]	<i>dicentes adversario [...]</i>	<i>Log. IV</i>	§52	= <i>supra</i> , [10]
12	<i>aw-yaqūlūna</i>	or else they say [...]	<i>vel [...]</i>	<i>Log. IV</i>	§52	= <i>supra</i> , [10]
13	<i>wa-naẓara l-‘awāmm wa-l-ẓāhīrūna bayna ahl’ l-‘ilm’</i>	The common people and the so-called men of science speculate	<i>Et putat vulgus et simplices doctores</i>	<i>Log. IV</i>	§66	Generic reference to common people and self-styled scholars accepting the value of the ‘famous’ propositions (in part close to ἐνδοξα).
14	<i>ka-qawl’-him</i>	like their speech	* <i>ut hoc quod dicitur</i>	<i>Log. V.3</i>	§84	Mathematicians such as EUCLID. Cf. <i>supra</i> , Table 9, [2].
15	<i>‘inda-hum</i>	according to them	---	<i>Log. V.4</i>	§90	Peripatetic philosophers authors of a metaphysics called <i>Ilāhiyyāt</i> , esp. AVICENNA, (<i>DN?</i>)
16	<i>‘ādat’-hum</i>	their current habit	<i>Usus fuit apud philosophos</i>	<i>Met., Preface</i>	§91	Peripatetic philosophers adopting the traditional ordering of the philosophical sciences, with <i>Physics</i> preceding <i>Metaphysics</i> ; cf. e.g. AVICENNA, <i>K. al-Šifā’</i> (≠ <i>DN</i>)
17	<i>qad iṣṭalahū</i>	They have already technically adopted [...]	---	<i>Met. I.1</i>	§104	Peripatetic philosophers adopting the technical Aristotelian understanding of ‘substance’ [<i>ǧawhar</i>], esp. AVICENNA, <i>DN</i>
18	<i>waṣafū</i>	they have characterized [...]	* <i>eo quod sic convenerunt philosophi</i>	<i>Met. I.1</i>	§104	= <i>supra</i> , [17]
19	<i>aṭlaqū</i>	they have	* <i>dicatur</i>	<i>Met. I.1</i>	§105	= <i>supra</i> , [18]

	Arabic	English	Latin	locus	§	identification
20	<i>ḥālafū fī ḥādā l-mutakallimīna</i>	applied [...] they have been in disagreement with the theologians	* <i>in quo discordamus ab imperitis</i>	<i>Met. I.1</i>	§105	= <i>supra</i> , [17] + Muslim theologians who considered the form an accident rather than a substance
21	<i>‘inda l-mutakallimīna</i>	according to the theologians	---	<i>Met. I.1</i>	§105	Muslim theologians mentioned in [20]
22	<i>yastab‘adūna</i> [<i>yastadallūna A</i>]	They have excluded [this] [...]	---	<i>Met. I.1</i>	§105	= <i>supra</i> , [17]
23	<i>qālū</i>	[...] [they] have said [...]	---	<i>Met. I.1</i>	§105	= <i>supra</i> , [17]
24	<i>wa-qad iḥtalafa al-nās fī tarkīb al-ḡism</i>	People have disagreed about the composition of the body	<i>Diversa enim senserunt homines de compositione corporis</i>	<i>Met. I.1</i>	§110	Very general term, which aims to include both philosophers (Greek and Arabic) and Muslim theologians (cf. <i>infra</i> , [26] and [29]) who have expressed opinions on the nature of the body
25	<i>wa-qad iḥtalafū ‘alā talāṭatⁱ maḍāhib^a</i>	They have disagreed according to three schools of thought	<i>de qua re sentencie tres fuerunt</i>	<i>Met. I.1</i>	§110	= <i>supra</i> , [24]
26	<i>qā’il^m yaqūlu</i>	Someone said	<i>Quidam enim dixerunt [...] Illi vero vocabant [...] dixerunt</i>	<i>Met. I.1</i>	§110	Atomists, both Greek (such as LEUCIPPUS, DEMOCRITUS and EPICURUS) and esp. Islamic, such as the <i>mutakallimūna</i> of the Baṣrian Mu‘tazila
27	<i>qā’il^m yaqūlu</i>	Someone said	<i>Alii vero dixerunt</i>	<i>Met. I.1</i>	§110	Supporters of the thesis that body is not composed at all
28	<i>qā’il^m yaqūlu</i>	Someone said	<i>Alii dixerunt</i>	<i>Met. I.1</i>	§110	Supporters of hylemorphism, <i>i.e.</i> Peripatetic philosophers; esp. AVICENNA, <i>DN</i>
29	<i>al-maḍhabⁱ al-awwal^f</i>	[...] of the first school of	<i>prima sententia illorum qui</i>	<i>Met. I.1</i>	§111	= <i>supra</i> , [26]

	Arabic	English	Latin	locus	§	identification
		thought	<i>dixerunt</i>			
30	<i>al-maḏhab' al-ṭānī, wa-huwa qawl' man ya-qūlu</i>	[...] of the second school of thought, namely of the speech of the one who says [...]	* <i>secunde sentencie qua dicitur quod</i>	<i>Met. I.1</i>	§117	= <i>supra</i> , [27]
31	<i>qawm^{un}</i>	a group	<i>Quidam vero audientes hoc quod dicimus</i>	<i>Met. I.2</i>	§139	PLATO and Platonists as supporters of the realism of universals (Cf. Avicenna, <i>K. al-Šifā', Ilāhīyyāt VII.2</i>)
32	<i>zannū</i>	they have believed [...]	<i>putaverunt</i>	<i>Met. I.2</i>	§139	= <i>supra</i> , [31]
33	<i>allāḏīna i'ta-qadū</i>	Those who believed [...]	<i>Qui autem dixerunt</i>	<i>Met. I.8</i>	§171	Thinkers who take the notion of «act» [<i>fi'l</i>] to only mean 'giving origin', thus excluding the conservation in existence of the originated
34	<i>wa-rubbamā taḡāsara ba'q'hum 'alā an ya-qūlu</i>	perhaps someone among them had the audacity to say [...]	<i>Et fortassis presumet dicere aliquis</i>	<i>Met. I.8</i>	§171	Subset of [33] composed by further thinkers – portrayed as audacious to the point of being heretic – who argued that the world would not cease to exist should God cease to exist
35	<i>yastadillu</i>	they signaled [...]	<i>conantur hoc ostendere</i>	<i>Met. I.8</i>	§171	= <i>supra</i> , [34]
36	<i>al-'awāmm lā yafhamūna</i>	the common people do not understand [...]	<i>vulgus</i>	<i>Met. I.8</i>	§175	Non-philosophers or laypeople Cf. <i>infra</i> , [41][42][43][44]
37	<i>yataḡayyalūna mā yataḡayyalūna</i>	[...] they imagine what they imagine	<i>imaginant quod imaginant</i>	<i>Met. I.8</i>	§175	= <i>supra</i> , [36]
38	<i>fi iṣṭilāḡ' l-qawm'</i>	in the technical usage of the group [of the philosophers]	<i>secundum quod convenerunt</i>	<i>Met. II.b.11</i>	§188	Peripatetic philosophers adopting the technical Aristotelian understanding of 'substance' [<i>ḡawhar</i>], esp.

	Arabic	English	Latin	locus	§	identification
						AVICENNA, <i>DN</i> = <i>supra</i> , [17]
39	<i>ha'ulā'i</i>	these [...]	<i>secundum philosophos</i>	<i>Met.</i> III.b.8	§222	Thinkers who deny that God can destroy the universe (that is, maintainers of the post-eternity of the world); maybe AVICENNA himself (and other eternalist Aristotelians)
40	<i>bi-luġat' l-qawm'</i>	in the language of the group [of the philosophers]	<i>a philosophis</i>	<i>Met.</i> IV.b.2	§269	Peripatetic philosophers who dealt with the intellectual movers of the skies, esp. AVICENNA, <i>DN</i>
41	<i>'inda l-'awāmm</i>	among the common people	<i>vulgus</i>	<i>Met. V</i>	§314	Non-philosophers or laypeople Cf. <i>supra</i> , [36][37]
42	<i>la-ẓannū</i>	[...] they would believe [...]	* <i>putaretur</i>	<i>Met. V</i>	§314	= <i>supra</i> , [41]
43	<i>li-ba'ḏ'-him</i>	to some of them	<i>eis</i>	<i>Met. V</i>	§314	Subset of [41]
44	<i>la-ẓanna</i>	[...] they would believe [...]	* <i>putaretur</i>	<i>Met. V</i>	§314	= <i>supra</i> , [43]
45	<i>bi-ṣīlāḥ' l-qawm'</i>	in the technical usage of the group [of the philosophers]	<i>secundum quod convenerunt philosophi</i>	<i>Phys. I.1</i>	§316	Peripatetic philosophers adopting Aristotle's broad understanding of movement; esp. AVICENNA, <i>DN</i>
46	<i>wa-ẓanna fariq^m</i>	A faction believed	<i>quidam autem putaverunt</i>	<i>Phys. I.2</i>	§325	Supporters of the doctrine of place as form, not further specified. (Aristotle, <i>Phys. Δ</i> [IV] 2, 209 ^b ₁₁₋₂₁ criticizes this position together with the one, attributed to PLATO – cf. esp. <i>Ti-maeus</i> , doctrine of the χώρα –, which identifies place and matter.)
47	<i>wa-qāla fariq^m</i>	[Another] faction said	<i>Alii dixerunt</i>	<i>Phys. I.2</i>	§325	Supporters of the doctrine of place as extension; cf. <i>infra</i> [49][50] for their identification

	Arabic	English	Latin	locus	§	identification
48	<i>tumm^a iḥtalafa hā'ulā'i</i>	These [thinkers] then differentiated themselves	<i>isti divisi sunt in hoc</i>	<i>Phys. I.2</i>	§325	= <i>supra</i> , [47]
49	<i>fa-qāla fariq^{um}</i>	a faction said	<i>quibusdam ex eis dicentibus quod</i>	<i>Phys. I.2</i>	§325	Subdivision of [47] composed by thinkers that posit extension as ideally void, but always filled with bodies (and thus tantamount to a ple- num). These include ex- ponents of Greek atom- ism such as LEUCIPPUS, DEMOCRITUS and EPICU- RUS, and atomist theolog- ians of the Baṣṣrian Mu'tazila
50	<i>aṣḥāb al-ḥalā'</i>	the advocates of the void said [...] they have established	<i>alitis vero qui tenent sententiam de inhani- dicentibus [...] isti posuerunt</i>	<i>Phys. I.2</i>	§325	Subdivision of [47] composed by thinkers that posit extension in a void, <i>i.e.</i> supporters of the existence of the void (intracosmic vacuum); <i>e.g.</i> JOHN PHILOPONUS Cf. <i>infra</i> , [53]
51	<i>al-madḥab al- awwal</i>	the first school of thought	<i>sententiam eorum qui dicunt</i>	<i>Phys. I.2</i>	§326	= <i>supra</i> , [49]
52	<i>mā qālū-hu</i>	what they said	<i>quod dixerunt</i>	<i>Phys. I.2</i>	§326	= <i>supra</i> , [51]
53	<i>arbāb al-ḥalā'</i>	the supporters of the void	<i>auctores sentencie de inhantitate</i>	<i>Phys. I.2</i>	§329	= <i>supra</i> , [50]
54	<i>huwa [scil. ra'y Aristāṭālīs] allādī aḡma'a 'alay-hi al-kull</i>	on which all have agreed	<i>omnes tenent</i>	<i>Phys. I.2</i>	§332	Peripatetic philoso- phers, esp. followers of ARISTOTLE's opinion on place. Cf. <i>supra</i> , Table 9, [5]
55	<i>ka-mā ḡanna-hu qawm^{um}</i>	as a group be- lieved	<i>sicut quidam putaverunt</i>	<i>Phys. II.2</i>	§338	Thinkers who main- tained that the four pri- mary qualities are sub- stantial forms of the ele- ments; <i>e.g.</i> PORPHYRY (?); PHILOPONUS
56	<i>wa-qad ḥālafa</i>	A group	<i>Quidam autem</i>	<i>Phys. II.3</i>	§340	= <i>supra</i> , [55]

	Arabic	English	Latin	locus	§	identification
	<i>qawm^{un}</i>	however has already diverged [...]	<i>contra dixerunt ad hec</i>			
57	<i>qālū</i>	they have said [...]	<i>dicentes</i>	<i>Phys. II.3</i>	§340	= <i>supra</i> , [56]
58	<i>fa-takallafū li-hāḍīhi l-aqsāmⁱ waḡh^{un}</i>	they have apparently struggled with these divisions	<i>adinvenerunt modum quo probarent hoc</i>	<i>Phys. II.3</i>	§340	= <i>supra</i> , [56]
59	<i>wa-qālū</i>	they have said [...]	<i>dicentes</i>	<i>Phys. II.3</i>	§340	= <i>supra</i> , [56]
60	<i>wa-innamā takallafū</i>	They only struggled [...]	<i>non invenerunt autem hoc, nisi</i>	<i>Phys. II.3</i>	§340	= <i>supra</i> , [56]
61	<i>li-anna-hum ḡannū</i>	[...] because they believed [...]	<i>quia putaverunt</i>	<i>Phys. II.3</i>	§340	= <i>supra</i> , [56]
62	<i>lam yuḡiddū waḡh^{un}</i>	they apparently did not seriously apply themselves to [understand] [...]	<i>et ideo non invenerunt quomodo</i>	<i>Phys. II.3</i>	§340	= <i>supra</i> , [56]
63	<i>fa-takallafū</i>	hence they have struggled [...]	<i>et ideo propter illud advenerunt dicere hoc</i>	<i>Phys. II.3</i>	§340	= <i>supra</i> , [56]
64	<i>fasād istinbāfⁱ-him</i>	[...] the corruption of their inference	<i>de destructione adinventionis eorum</i>	<i>Phys. II.3</i>	§340	= <i>supra</i> , [56]
65	<i>wa-qad ankara hādā qawm^{un}</i>	A group has already disavowed this [...]	<i>quamvis quidam negaverint hoc</i>	<i>Phys. II.5 (II.4 Lat)</i>	§349	Supporters of the thesis that the elements cannot transform into one another; <i>e.g.</i> EMPEDOCLES (?)
66	<i>al-yūnāniyyūna</i>	The Greeks	<i>Graeci</i>	<i>Phys. IV.2.1</i>	§384	= ARISTOTLE, <i>Hist. anim.</i> VI.5, 563 ^a 5 ff.
67	<i>wa-ammā man qab^f-hu [scil. Aristāṭālīs] fa-qālū</i>	As for [those] who were before him [<i>i.e.</i> Aristotle], they said [...]	<i>qui autem praecesserunt eum dixerunt</i>	<i>Phys. IV.2.1</i>	§390	Supporters of the extramission theory of vision, such as EUCLID and PTOLEMY.
68	<i>qālū</i>	They [also] said	<i>et dixerunt</i>	<i>Phys.</i>	§390	= <i>supra</i> , [67]

	Arabic	English	Latin	locus	§	identification
		[...]	<i>quod</i>	IV.2.1		
69	<i>ṭā'ifa min al-aṭibbā'</i>	a party among the physicians	<i>quidam medicorum</i>	<i>Phys.</i> IV.2.1	§391	Supporters of the combined extramission-intramission theory of vision such as PLATO and, probably more to the point given the medical reference, GALEN; in Arabic context, ḤUNAYN IBN IṢHĀQ and AL-KINDĪ.
70	<i>iḥtālū</i>	they employed artful means	<i>adinvenērunt aliud modum</i>	<i>Phys.</i> IV.2.1	§391	= <i>supra</i> , [69]
71	<i>qālū</i>	they said	<i>dicentes</i>	<i>Phys.</i> IV.2.1	§391	= <i>supra</i> , [69]
72	<i>wa-huwa allāḍi ḡanna-hu qawm^{un}</i>	[This] is what a group believed	<i>sicut quidam putaverunt</i>	<i>Phys.</i> IV.3	§424	Supporters of the doctrine of the metempsychosis (<i>e.g.</i> PLATO)

1.7. Lexicon

There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy.

William SHAKESPEARE, *Hamlet*, 1.5.167-8

The question of the lexicon employed by al-Ġazālī in his Arabic elaboration of Avicenna's Persian material is not merely formal³²¹. Rather, it constitutes a privileged vantage point to assess in a finer way his position vis-à-vis Avicenna's doctrines, which are mostly endorsed in the text of the *MF* from the point of view of mere content, but also subtly changed as for linguistic and expository patterns. Some very clear examples of this strategy of conscious, underground alteration of the *DN* will be provided *infra* in section §1.8, devoted to al-Ġazālī's exemplifying methods. In the present section, al-Ġazālī's stance toward the philosophers' jargon³²² will rather constitute the focus of the attention. The first chapter (§1.7.1) will be devoted to the theologian's frequent qualification of some of the key-concepts of *falsafa* as lexical conventions, merely technical expressions which touch only in part on the true essence of things. Interestingly, such an attitude – which can be evaluated in various ways, but which is certainly not entirely receptive of Avicenna's genuinely *falsafī* approach – is perfectly mirrored in a crucial passage occurring in one of the five introductory sections of the *TF*, in which certain philosophical problems are qualified as constituting a mere «investigation on language» [*baḥṭ 'anī l-luġatī*]³²³, and thus promptly dismissed.

The second chapter (§1.7.2) will rather discuss al-Ġazālī's connected tendency to replace the philosophers' most characteristic technical vocabulary with different expressions, closer to the language of religious revelation. The attention will there be focused on the interesting case-study of the substitution of the lexicon of separate intellects, mostly used by the *falāsifa* to describe the movers of the heavens, with the angelical jargon proper of the religious discourse. Interestingly, the relationship between philosophical and revealed angelology is a topic laden with consequences for the subsequent tradition, not only in Arabic,

³²¹ For some exquisitely formal linguistic aspects cf. *supra*, §1.3, *A Translation from Persian*. The specific importance of the philosophical jargon in al-Ġazālī's work was used as a criterion to establish the dating of different writings of his by LAZARUS-YAFEH 1966, with a clearly different focus than the one employed in what follows.

³²² The issue of how Arabic translators and philosophers dealt with the terminology of Greek philosophy, which they received either directly or *via* Syriac mediation, is a complex and most fundamental one, which extends well beyond the scope of this Introduction. For a comprehensive analysis of this problem in Arabic *falsafa* cf. the Arabic monograph by JÉHAMY 1994; for a shorter specimen, in French, of his ideas, with a peculiar focus on Averroes' ultimate reception of Arabic philosophical terminology, see JÉHAMY 1999. As stated in JÉHAMY 1999: 54-55, al-Ġazālī's *MF* constitutes one of the sources employed in the more ample treatment of philosophical terminology brought about in JÉHAMY 1994, along more explicitly vocabulary-oriented works such as al-Kindī's *Epistle on the Definitions of the Expressions and their Descriptions* [*Risāla Ḥudūd al-alfāz wa-rusūmī-hā*], and Avicenna's *Book of Definitions* [*Kitāb al-Ḥudūd*].

³²³ *TF*, Second preface, MARMURA 2000: 5, quoted *infra*, §1.7.1.1. *Conventional Substances*, in Text 21.

but also in Latin and Hebrew. Both discussions will eventually lead to the definition of a distinctly Ġazālīan nuance of ‘nominalism’, which appears to be adopting in most cases – at least in the *MF* – the positions originally held by Avicenna, showing however their agreement with those of Islamic revelation. Through a self-conscious and sophisticated usage of a different lexicon than Avicenna’s, al-Ġazālī is able to underline the possible harmony that emerges, at a deeper level of the analysis, between the theses of the philosophers and those of more religiously inclined thinkers³²⁴.

1.7.1. What’s in a Name? Technical Usage and Lexical Convention

What’s in a name? That which we call a rose
By any other name would smell as sweet.

William SHAKESPEARE, *Romeo and Juliet*, 2.2.43-44

In an illuminating interview published on the Sunday edition of Italian newspaper «la Repubblica» in 2006³²⁵, the medievalist, semiologist and well-known writer Umberto Eco explained that the title of his best-selling novel *Il nome della rosa* [*The Name of the Rose*] has nothing to do with the rose evoked by Shakespeare’s Juliet in the ever-famous lines quoted above. The Latin verse of Bernard of Cluny’s *De contemptu mundi* cited and paraphrased at the end of Eco’s book – *stat rosa pristina nomine, nomina nuda tenemus* («the pristine rose only exists in name, and bare names is what we hold»)³²⁶ – is indeed a mournful variation on the literary *topos* of the *ubi sunt*, lamenting (in Eco’s own words) the fact that «things do not exist anymore, and only words remain». Shakespeare’s text, by contrast, means quite the opposite: only things in their autonomous and irreducible individual existence count, independently of the several, changing names we may give them³²⁷. The distinction between these two kinds of ‘nominalism’ – both of which have only something in common with the traditional label of nominalism as attributed, for instance, to William of Ockham’s position in the Latin medieval dispute on the universals³²⁸ – can also be of use for

³²⁴ I will further discuss this central issue in the following sections §1.8 (*Examples*), §1.9 (*The Authority of Revelation*), and conclusively in §1.10 (*The First Text of ḥikma*), to all which I refer for further elements supporting my view.

³²⁵ Antonio GNOLI, *Umberto Eco: “Così ho dato il nome alla rosa”*, La Domenica di Repubblica, 9 July 2006; republished 21 February 2016, consulted online 24/11/2021.

https://www.repubblica.it/cultura/2016/02/21/news/umberto_eco_cosi_ho_dato_il_nome_alla_rosa_133898314/

³²⁶ The one quoted by Eco is a variant reading of the line by BERNARD OF CLUNY, *De contemptu mundi*, I 952, which is now commonly accepted to read instead *Stat Roma pristina nomine, nomina nuda tenemus* (cf. ed. CRESSON 2009: 126 and 257 fn. 88). For the motif, cf. also OVID, *Met.* 15, vv. 429-430: *Oedipodioniae quid sunt, nisi nomina, Thebae? quid Pandioniae restant, nisi nomen, Athenae?*

³²⁷ ECO in GNOLI (quoted above in fn. 325): «La mia citazione significa che le cose non esistono più e rimangono solo le parole. Shakespeare dice esattamente l’opposto: le parole non contano niente, la rosa sarebbe una rosa con qualunque nome».

³²⁸ WILLIAM OF OCKHAM, *Summa totius logicae* I.14: «Verumtamen sciendum, quod universale duplex est:

understanding al-Ġazālī's stance vis-à-vis the lexicon of philosophy and that of revelation in the *MF*.

As a matter of fact, the text of al-Ġazālī's *summa* is full of indications of the conventional nature of philosophical jargon, which are complemented by a parallel usage of lexicon taken from revelation, either as a replacement of, or together with, the original Avicennan, *falsafī* terminology³²⁹. The systematic analysis of these indications – carried out in both this and the subsequent section §1.7.2, on the angelical vocabulary – will suggest, altogether, that al-Ġazālī's peculiar form of 'nominalism' is like Juliet's, and not like Bernard of Cluny's, one: the entities described by philosophy are indeed susceptible of rational acknowledgment, even though one is by no means forced to adopt, in order to describe them, the innovative jargon with which the philosophers clad their alleged discoveries. Rather, close inspection reveals that, for al-Ġazālī, those entities are in many cases the very same already described by Muslim revelation and theology, which are thus shown to deeply agree with *falsafa*, despite and beyond the misleading coating of different vocabularies.

In the present paragraph, I will analyse in particular the occurrences of the technical word *iṣṭilāḥ* in the *MF*, briefly retracing its background in Arabic linguistic discussions, and then showing the contexts in which the term is used throughout the treatment of philosophy developed in al-Ġazālī's work. The case of *iṣṭilāḥ* is taken here as a litmus test because of its relatively widespread presence throughout the *MF*, which makes it easy to assess the presence of the 'lexicalist' tendency just described³³⁰. Further cases of the same general attitude on the part of al-Ġazālī can however be recognized in the text also without any specific usage of the root of *iṣṭilāḥ*: for instance, in *Logic IV*, §50 al-Ġazālī writes that «the jurists and the theologians» call *qiyās* ('analogy', in this context, but 'syllogism' in the Peripatetic jargon) the logical procedure of exemplification [*tamṭīl*]. In underlining this aspect – absent in the *DN*, but present in other Avicennan works, such as notably the early *summa* known as *The Compilation* [*K. al-Maǧmū'*] or *al-Ḥikma al-'Arūḍiyya*³³¹ –, al-Ġazālī emphasizes the linguistic issue of the lexical superimposition of philosophical and

Quoddam est universale naturaliter, quod scilicet naturaliter est signum praedicabile de pluribus ad modum proportionaliter, quo fumus naturaliter significat ignem et gemitus infirmi dolorem et risus interiorem laetitiam: et tale universale non est nisi intentio animae, ita quod nulla substantia extra animam nec aliquod accidens extra animam est tale universale. [...] Aliud est universale per voluntariam institutionem. Et sic vox prolata, quae est vere una qualitas, est universalis, quia scilicet est signum voluntarie institutum ad significandum plura. Unde sicut vox dicitur communis, ita potest dici universalis; sed hoc non habet ex natura rei, sed ex placito instituentium tantum». The Latin text is taken from the selected edition (and English translation) of the *Summa totius logicae* printed in BOEHNER-BROWN 1989: 34. For a presentation of Ockham's well-known kind of 'nominalism' see e.g. PANACCIO 1999.

³²⁹ For a study on the specific question of how names [*asmā'*] can refer to things in al-Ġazālī cf. KUKKONEN 2010.

³³⁰ By contrast, the term *iṣṭilāḥ* occurs as far as I am aware only twice in the *Ilāhiyyāt* of Avicenna's *K. al-Šifā'*, both in chapter IV.3, concerning the notions of «whole» [*kull*] and «total» [*ǧamī'*]: cf. MARMURA 2005: 147: «You know that these expressions ought to be used according to accepted idiom [*iṣṭilāḥ*]. [...] All this talk seems superfluous, however; for conventional usage [*iṣṭilāḥ*] has rendered them thereafter running the same course». Only the first of these two occurrences of *iṣṭilāḥ* seems to entail the same Ġazālīan usage analysed in what follows, while the second calls for a unifying, rather than for a distinguishing, function of the conventionality implicit in the notion of *iṣṭilāḥ*.

³³¹ Cf. AVICENNA, *al-Ḥikma al-'Arūḍiyya*, ed. ŠĀLIḤ 2007: 90.9-10: «Exemplification is that which the jurists of our time call 'analogy'» [*al-tamṭīl huwa allādī yusammay-hu fuqahā' zamānī-nā qiyās^{am}*], where however the «theologians» [*mutakallimūna*] are not mentioned. Cf. *infra* the Commentary *ad* §50 for further reflection on the issue.

theologico-juridical vocabulary³³². An analogous case of overlapping between different disciplinary lexica, with the ensuing linguistic and conventionalist problems – which do not touch, however, on the gist of things – is studied in a further subsection of this part (§1.7.1.1. *Conventional Substances*). There, I will focus on the cases of ‘nominalistic’ and critical detachment having to do with the Peripatetic notion of «substance» [*ḡawhar*] and with its application to God, impossible for Avicenna, but way less arduous for al-Ġazālī, even in the heavily Avicennan *MF*. By way of conclusion, I will also indicate a striking parallel passage for this Ġazālīan attitude in the *TF*, thus substantiating my thesis of a perceivable doctrinal continuity between the refutative and the philosophical work³³³.

Previous scholarship has shown the conceptual equivalence between Arabic *iṣṭilāḥ* and Greek θέσις, as opposed to *tawqīf*, read sometimes in connection to the natural – *i.e.* by φύσις – origin of language envisaged in certain Greek debates³³⁴. Properly, however, the Arabic notion of *tawqīf al-luġa* (lit. ‘the setting up of language’) is used in Muslim debates to indicate the «revelationist nature of the origin of language»³³⁵, a thesis which gradually developed into the belief of its divine inspiration and revelation to Adam³³⁶. A different linguistic distinction, active however in the same time-period and in the same cultural *milieus* (of both *uṣūl al-fiqh* and *uṣūl al-dīn*) as the *iṣṭilāḥ* / *tawqīf* opposition, and thus also somewhat similar to the latter in its progressive development, was the one between *ḥaqīqa*, as the veridical usage of language, and *maġāz*, as the figurative or metaphorical (also: tropical) usage of it³³⁷. In these complex debates, inextricably interwoven with the theological

³³² Another example might be the insistence on «what is meant with [that] expression» [Arabic *al-murād bi-l-laḡz*] in *Logic* V.1, §102, which interestingly also contains a case of ‘translation’ from Arabic into Persian, in order to show that the (true) conceptual problems are not merely linguistic, and cannot be solved by simply resorting to another natural language. As opposed to these authentic issues, al-Ġazālī seems to say that some of the problems of *falsafa* are indeed merely linguistic in nature, and as such can indeed be dissolved *via* linguistic analysis. Cf. *infra* in this and the following examples for various examples which aims to substantiate this claim.

³³³ A further, decisive hint for the importance of linguistic and lexical issues in al-Ġazālī’s engagement with *falsafa* can be gathered from the passage of his *Mi’yār al-’ilm fi fann al-mantiq* [*The Standard for Knowledge in the Art of Logic*] which makes the relation of this work with the *TF* explicit. See *Mi’yār al-’ilm*, ed. KURDI 1927: 26.7 ff.: «[In the *Tahāfut*] we dispute with them [scil. the *falāsifa*] in their language [*bi-luġat’-him*] and we address them according to their technical terms [*’alā iṣṭilāḥāt’-him*] that they agreed upon [*allātī tawāṭu’ū ’alay-hā*] in logic. In this book [sc. *Mi’yār al-’ilm*] the meanings of those technical terms [*ma’ānī tilka l-iṣṭilāḥāt*] will be explained». An English translation of this passage is also given by GRIFFEL 2006: 10 fn. 33. On the relation between *TF* and *Mi’yār* cf. also MARMURA 2000: xviii.

³³⁴ See VERSTEEGH 1977 and VERSTEEGH 1993, which revises some of the previous findings in the direction of a more autonomous Arabic-Muslim origin of the linguistic problems at stake. Both contributions are quoted and discussed in SHAH 1999: 29 and 42-43 notes 10-11.

³³⁵ SHAH 1999: 28.

³³⁶ Cf. WEISS 1974: esp. 35. For the «names» [*asmā’*] of things given by God to Adam cf. *Qur’ān* 2.31. Compare, by contrast, the medieval Latin doctrine of Adam as *impositor* of the names of creatures: see for instance CAMERON 2012: esp. 346.

³³⁷ Cf. *e.g.* HEINRICH 1984, and see SHAH 1999: 29; for a specimen of the distinction cf. also GEISLER 2017. Al-Ġazālī sided with those arguing for the presence of *maġāz* expressions in the *Qur’ān*: cf. SHAH 2000: 60. BERNARD 1990: 235 emphasises al-Ġazālī’s own usage of the device of the figurative sense in the *MF* as a tool to hollow out some of Avicenna’s tenets in the *DN*, despite a (superficial) adherence to the formulation of those teachings; for the example given by Bernard, relative to the conception of potentiality and involving the typical *fiqh* example of

evaluation of the invariability of the sacred language of the Qurʾān (*al-luġa al-fuṣṣḥā* in the highest possible sense of the phrase), some important aspects emerge with a certain clarity and can thus be laid out synthetically. First of all, the distinction – although obviously linguistic in nature – pertains in cultural practice to both the juridical (*fiqh*) and the theological (*kalām*) discourses; second, it is widely used especially in discussions on the origin of language; and third, the conventionalist thesis (*iṣṭilāḥ*) seems to have appealed in particular to Muʿtazilite theologians, while al-Aṣʿarī himself was allegedly a fervent supporter of the revelationist theory (*tawqīf*)³³⁸. In time, however, the debate gradually became less heated, and the opposition between the two doctrines less stark.

This elaborate context, which by necessity could only be sketched here, is at the same time far wider – for the vastity of the cultural interests at stake, and for the great number of scholars involved – and more specific – for the theological-linguistic topic which forms its theoretical bulk – than the one addressed here. This notwithstanding, the reconstruction of the main lines of those debates can be of help for grasping the importance and the theoretical weight, as it were, of the term *iṣṭilāḥ*, prominently employed by al-Ġazālī in the slightly atypical context of a philosophical treatise. While the usage of *iṣṭilāḥ* in the *MF* can certainly be, in its turn, far less technical than the meanings globally summarised above, it seems nonetheless safe to assume that the term was likely not entirely neutral under his pen, but retained some of its most impactful conventionalist resonances. Accordingly, I have translated the *maṣḍar* of the VIII stem *iṣṭilāḥ*, as occurring in the *MF*, either as ‘conventional’ or ‘technical term’ (i) – when it is used as a designation for a single word, or an otherwise circumscribed phrase –, or else as ‘technical usage’ (ii), in the more dynamic sense of the ‘action of employing a «technical term» in sense (i)’. The verb of the VIII stem *iṣṭalaḥa* (‘alā), from which the *maṣḍar* derives, means in turn, in the *MF*, ‘to adopt a technical expression’, or ‘to agree (conventionally)’ on the meaning of such an expression, and it has been translated accordingly in the relevant occurrences³³⁹.

Even though I have not conducted a systematic inquiry into al-Ġazālī’s wider usage of *iṣṭilāḥ*, and especially not in the promising area represented by his writings on *fiqh*, an important example from his major work on theology, the *Iḥyāʾ ulūm al-dīn*, could suffice for now³⁴⁰ as an indication of the global importance the theologian attributed to the notion of ‘technical usage’/ ‘lexical convention’, which appears not only in the mainly philosophical *MF*, but also in very different – and certainly mature as for topic and general conception – works of his.

TEXT 14. al-Ġazālī, *Iḥyāʾ, Kitāb al-maḥabba*, Chapter 10, transl. ORMSBY 2016: 100³⁴¹

By linguistic convention (or: ‘with a technical term’) [*iṣṭilāḥ*], «love» [*maḥabba*] denotes the soul’s inclination for a thing that befits it, whereas «passion» [*īṣq*] is the

the inebriating power of wine, cf. in particular §166 in the following Translation (and see also the Commentary *ad locum*).

³³⁸ Cf. the report by Ibn Taymiyya quoted in SHAH 1999: 29-30, and the important syntheses on the same topics provided by WEISS 1974.

³³⁹ Cf. *infra*, Table 12, [3] and [8].

³⁴⁰ Cf. *infra*, §1.7.1.1, for a further example from the *Iḥyāʾ* concerning the notions of substance and accident (Text 16).

³⁴¹ Slightly modified. For the insistence on *iṣṭilāḥ* cf. also ORMSBY 2016: esp. xxv-xxvii.

term for an overmastering and exuberant inclination.

By contrast, a partially parallel case involving a linguistic care in Avicenna makes use of a very different terminology in order to describe the distinction between natural and technical usages of the Arabic language.

TEXT 15. Avicenna, *K. al-Šifāʾ*, *K. al-Nafs*, ed. RAHMAN 1959: 92.7-10

Let us speak at first about brightness [*ḍawʿ*]. We say, then, that it is called «brightness» and it is called «light» [*nūr*] and it is called «rays» [*šūʿāʿ*], and [that] it seems that there is not much distinction [*tafāwut*] between them in the positing of language [*fi waḍʿ^a l-luġat^t*]³⁴². However, in our usage [*fi stiʿmāl-nā*] we need to separate between them, in order for there to be three [different] meanings [*maʿānī*] approximately equal to one another [*mutaqāriba*] [...]

The passage, which introduces the well-known Avicennan doctrine of the different kinds of light³⁴³, does not distinguish between *tawqīf* and *iṣtilāḥ*, but rather between *waḍʿ* ('positing') and *istiʿmāl* ('usage'). While this opposition is also present in the linguistic and theological sources reflecting on the origin and the development of language³⁴⁴, it is nonetheless clear that it is quite different than the one employed by al-Ġazālī. In particular, indeed, Avicenna does establish a sort of personal technical convention (compare the expression «in our usage» [*fi stiʿmāl-nā*] in Text 15), at the expenses of the common, 'posited' meaning of language (represented in the passage by the expression *waḍʿ*). However, he does not betray at any point the preoccupation – which seems in itself decidedly Ġazālīan – about the merely conventional nature of the philosophical problems he is illustrating by way of lexical analysis, which look then by all means to be entirely substantive to him. Indeed, the linguistic distinction of three different words – *ḍawʿ*, *nūr*, and *šūʿāʿ* – is functional to the formulation of a conceptual distinction, that is, to the intellectual – and genuinely philosophical – definition of three different *maʿānī*. By contrast, what al-Ġazālī's emphasis on *iṣtilāḥ* seems altogether to imply is that Peripatetic philosophers – and Avicenna *in primis* – sometimes see philosophical problems where there are actually not but lexical discrepancies, which cover and disguise the presence of one and only *maʿn^{am}*³⁴⁵.

This Ġazālīan tendency to finding – or sometimes only alluding to – a deeper agreement between his own positions and those of the philosophers, below and beyond the ambiguities of different jargons, emerges since the very beginning of the *MF*, in the *Prologue* of which the Ašʿarites [*ahl al-ḥaqq*] are said to be at variance with the *falāsifa* in logical

³⁴² *i.e.* in its primordial assignment of meaning; cf. SHAH 2000: esp. 49.

³⁴³ For its important aftermath in the Latin Middle Ages, with the notions of *lux*, *lumen*, and *splendor*, cf. *e.g.* FIORAVANTI 2014: 488-489, who discusses – in relation to the quotation of the doctrine in Dante's *Convivio* III XIV 6 – the passage of the Avicenna Latinus (*Liber de anima sive sextus de naturalibus* III.1, ed. Van Riet 1972: 171), as well as its reprises in the encyclopaedia by Vincent of Beauvais, and especially in Bartolomeo da Bologna's *Tractatus de luce*. Cf. also SIGNORI 2016: 53 fn. 1.

³⁴⁴ SHAH 2000: esp. 52-53 and *passim*.

³⁴⁵ An exception to this detached stance seems to be represented in particular by occurrence number [2] in the following Table 12, which states the unavoidability of the technical adoption of two different expressions in order to describe two different notions, in a mood very similar to the genuinely Avicennan one (as represented most notably in Text 15 from the *K. al-Nafs*).

matters only because of their different *iṣṭilāḥāt* (see below, number [1] in Table 12). While the possibility of the underlying agreement between al-Ġazālī – as a prominent member of the ‘people of the Truth’ – and the «group» [*qawm*] of the philosophers is not always as clear as in this crucial passage, the same, highly interesting ‘reduction to *iṣṭilāḥ*’ occurring in the *Prologue* also regards a further, wide range of Peripatetic technical terms. It is important to stress that virtually all these wordings were originally employed, in their primeval *falsafī* and Aristotelian contexts, as a genuine way of conceptualizing reality, and that they were carefully distinguished in order to solve philosophical problems undoubtedly perceived as authentic. By contrast, al-Ġazālī’s theoretical attitude towards the Peripatetic vocabulary appears to be pointing at a sort of dissolution of its conceptual necessity, substituted by the mere possibility of its usage under certain (conventional) assumptions, which must in turn be made explicit³⁴⁶.

Giving at last concrete examples of this highly interesting tendency, «matter» [*ḥayūlā*]³⁴⁷ is thus deemed by al-Ġazālī to be a «technical term» to designate what is susceptible of continuity and disjoinment, and this entails in turn a complementarily conventional definition of «form» (see [6] in Table 12, but cf. also [2]-[4]). Again, the term «contrary» [*didd*] is said to mean what the Peripatetics take it to mean only for those who consciously adopt their idiosyncratic *iṣṭilāḥ* (compare Table 12, [7]). In that context, al-Ġazālī makes it clear that some consequences of the philosophical analysis of contrariety are only necessary given their own definition of what a contrary is. Implicitly, thus, one could surmise that under a different lexical convention, different consequences would also arise, without prejudice to the analysis of how things truly stand. On the same lines, the wide variety of meanings attributed to the word «movement» [*ḥaraka*] by Aristotle and the Aristotelians is also explained by the token of lexical convention, and not by a deeper understanding of a common reality underlying the different kinds of qualitative and local changes described by the Greek Peripatetics under the label of κίνησις ([13])³⁴⁸. Even the key

³⁴⁶ This attitude can find a conceptual parallel in the *TF*, which does not aim at refuting the theses of the philosophers in their entirety, but rather at showing that there is an equally tenable alternative to what the *falāsifa* purport to be the only rational scenario, reached *via* apodictical demonstration. In other words, al-Ġazālī does not need to prove the philosophers utterly wrong to obtain his refutative goal, but he is rather satisfied with showing that they are not necessarily right. Often, then, he proceeds to show that the tenet held by the philosophers to be necessary is actually only one of the possible explanations of the given phenomenon (for the mise à point of this attitude in the *TF* cf. GRIFFEL 2005: 286-291; GRIFFEL 2016: 439-441 and GRIFFEL 2021: 83-84). Likewise, the *MF* – with its insistent reduction of philosophical lexicon to *iṣṭilāḥ* – shows that the terminology of the Peripatetic *falāsifa* is merely one of the possible vocabularies that can be employed in the philosophical enterprise, and not the apodictically necessary one.

³⁴⁷ It is not without significance that «matter» is called *ḥayūlā*, and not *mādda*, in both §104 and §117 (cf. *infra*, Table 12, numbers [2]-[4] – esp. [4] –, and [6], respectively), because the term *ḥayūlā* is indeed a technical calque from Aristotelian Greek ὕλη (and as such is also reproduced in the Latin translation, which has for it a variety of graphical renditions, such as *yle*, *hile*, and the more etymologically sound *hyle*). Al-Ġazālī thus seems to correctly perceive the philosophical calque from Greek as more heavily connotated in the technical/conventional sense captured by his usage of *iṣṭilāḥ*, and accordingly he does not indicate a proper technicality of jargon when he uses instead the more ‘Arabic’ *mādda* in the text. This important formal difference notwithstanding, the common meaning of «matter» of the two concurring terms seems to be entirely equivalent and well-established throughout the text of the *MF*.

³⁴⁸ The case of «movement» [*ḥaraka*, κίνησις] is in a sense the opposite with respect to the conceptual distinction of meanings – corresponding to as many different words – employed by Avicenna in the excerpt of the *K. al-Nafs* of the *Šifā’* quoted *supra*, which is also the same conceptual tool displayed by al-Ġazālī in occurrences

Avicennan notions of «possible» [*mumkin*] and «necessary» [*wāğib*] end up to be described in the text of the *MF* as the product of a sort of technical agreement among philosophers ([8])³⁴⁹. As for cases [5]-[5b] and [9]-[11] in Table 12, they all deal with the technical meaning of «substance» [*ğawhar*], and they form altogether a crucial set of evidence which will be analysed in detail in the following §1.7.1.1. Finally, occurrence number [12] has to do with the noetic terminology employed by the *falāsifa* for the heavenly movers, and as such it will best be read in connection with the discussion on al-Ġazālī's angelical lexicon carried below in §1.7.2.

TABLE 12. Occurrences of *iştilāḥ* and its cognates in the *MF*

	LOCUS	§	TOPIC	TEXT
1	<i>Prologue</i>	1	Truth-value of logic as a philosophical discipline	The Aš'arites are at variance with them only because of the technical terms [<i>iştilāḥāt</i>] and the adductions [of proofs], and not [because of] the concepts and the intentions, since their goal is the refinement of the methods of the argumentations, and that is the thing to the sake of which all the speculators collaborate.
2 3 4	<i>Metaphysics</i> I.1	104	Inherence in a receptacle, and terminological distinction based on the self-subsistence of the receptacle without the inhering thing.	Therefore, one cannot avoid the technical usage of two distinct expressions [<i>iştilāḥ 'alā 'ibāratayni muḥtalifatayni</i>] (2). They have already technically adopted [<i>wa-qaḍ iştalaḥū 'alā</i>] (3) the specification of the term «accident» for that which behaves like the colour and the heat for the garment, and the name of «subject» has been given to the receptacle of the accident. Therefore, the notion of «accident», according to this technical usage [<i>'alā ḥādā l-iştilāḥ'</i>] (4), [indicates] that which inheres in the «subject», [while] the notion of «subject» [indicates] that which subsists by itself, without the notion of what inheres. As for that which behaves like humanity, it is called «form», and its receptacle is called «matter».
5 5b	<i>Metaphysics</i> I.1	105	Identification of matter, form, body, and intellect as substances.	This is then the exposition of these subdivisions in the intellect, together with the explanation of these technical terms [<i>ḥādīhi l-iştilāḥāt</i>] (5) [...] It derives from this that they have applied [<i>aṭlaqū</i>] (5b) the name of sub-

[2]-[4] (esp. [2]) in Table 12 below. In the case of movement, indeed, Aristotle (and the Peripatetic thinkers following his lead) does not distinguish concepts by means of lexical distinctions, but rather groups different notions under one and the same linguistic heading.

³⁴⁹ Al-Ġazālī's own perplexities (in the *TF*) on Avicenna's understanding of modal concepts are addressed in GRIFFEL 2019: esp. 425 (cf. also SIGNORI 2020^b: 178-179).

	LOCUS	§	TOPIC	TEXT
				stance to that which is a receptacle and also to that which inheres [in that receptacle], and in this they have been in disagreement with the theologians, since the form is – according to the theologians – an accident following the existence of the receptacle.
6	<i>Metaphysics</i> I.1	117	Attribution of the names of matter and form on the basis of the notions of continuity and divisibility	But the continuity is not susceptible of disjunction, therefore it is inevitable [to presuppose] another thing as susceptible of the continuity and the disjunction together, and that susceptible [thing] is called, with a technical term [<i>bi-l-iṣṭilāḥ</i>], «matter». The received continuity is called «form» [...]
7	<i>Metaphysics</i> I.3	153	Technical terminology of contrariety	Once [posited] that the contrary is an expression referring to two things succeeding consecutively to one another in a single subject, with the condition that there is the greatest [possible] difference between them, according to this technical usage of the term [<i>‘alā hādā l-iṣṭilāḥ</i>] it necessarily follows that there is not but one contrary, since what is at the extreme degree of distance is undoubtedly one.
8	<i>Metaphysics</i> I.1	169	Names of possible (that whose existence does not depend upon its essence) and of necessary (that whose existence depends upon its own essence)	It has already been agreed [<i>iṣṭalaha ‘alā</i>] to call the first one «possible», and to call the second one «necessary».
9 10 11	<i>Metaphysics</i> II.11	188	Linguistic convention concerning substance (cf. [5][5b]) and possible application of the term to God.	«Substance», however, in the technical usage of the group [of the philosophers] [<i>fi iṣṭilāḥ l-qawm</i>] (9), is an expression referring to a nature and a quiddity whose existence is not in a subject [...] That, then, whose quiddity and whose concrete existence are one is not called «substance» according to this technical usage [<i>bi-hādā l-iṣṭilāḥ</i>] (10), unless someone invents [another] technical term [<i>iṣṭilāḥ^{an}</i>] (11), making it an expression referring to an existence that has no receptacle. In this case, we do not deny its application to Him.
12	<i>Metaphysics</i> IV.a.1	246	Noetic terminology for active and yet incorruptible (celestial) substances	[...] that which influences without being influenced, to which one refers with the technical term [<i>iṣṭilāḥ</i>] of «abstract intellects», which are substances that are neither divisible, nor composed [...]

LOCUS	§	TOPIC	TEXT
13 <i>Physics</i> I.1	316	Technical lexicon of movement in philosophy	As for its true nature, it is well-known that «movement» only applies to the transfer from a place to [another] place; and yet it becomes, in the technical usage of the group [of the philosophers] [<i>bi-ṣṭilāh' l-qawm'</i>], an expression referring to a more common notion than that, namely the travel from an attribute to another attribute, with a gradual passage to it.

1.7.1.1. Conventional Substances

As it emerges from the previous Table 12, the main target of al-Ġazālī's critical 'nominalistic' attention is probably to be identified with the Peripatetic notion of «substance» [*ġawhar*], of which he denounces on several occasions the character of *iṣṭilāh*³⁵⁰. In the case of this fundamental Aristotelian notion, al-Ġazālī had indeed to face a peculiar case of philosophical jargon, in which an already existent, and already specialized Arabic word – the polysemous *ġawhar* – was taken as a technical translation of the Greek οὐσία, which is etymologically unrelated to its Semitic rendition³⁵¹. As a matter of fact, it is well-known that the Arabic *ġawhar* – which likely has a remote Persian origin – normally translates in non-technical language to 'jewel', 'precious stone'. In this sense, the term is also used by al-Ġazālī, in the plural, in the title of his theological work *Jewels of the Qur'ān* [*Ġawāhir al-Qur'ān*] (as well as throughout this work, and in yet other contexts of his vast oeuvre)³⁵². Al-Ġazālī shows a specific interest in the notion of substance, and in the equivocity of the Arabic *ġawhar*, also in other works of his. This interest emerges in particular in the textbook on logic, explicitly preparatory to the study of the *TF*, titled *Mi'yār al-'ilm fī fann al-manṭiq* [*The Standard for Knowledge in the Art of Logic*], which also compares the vocabularies of *falsafa* and *kalām* on this very issue³⁵³.

³⁵⁰ Cf. *supra*, Table 12, numbers [5]-[5b] and [9]-[11].

³⁵¹ The case of *ġawhar* is also taken by JÉHAMY 1999: 51 as emblematic of the generalized Arabic effort to find into the common vocabulary an equivalent for some philosophical terms not otherwise translatable. For a terminological analysis of 'substance' in various philosophical languages cf. ZONTA 2012^b.

³⁵² Complete title *Ġawāhir al-Qur'ān wa-durar^a-hu*, ed. KĀMIL-AL-ŠARQĀWĪ 2011; cf. the Italian translation in CAMPANINI 2000, who chooses to render the *ġawāhir* of the title as 'pearls' [*Le perle del Corano*]. I was able to find in this treatise 17 occurrences of *ġawhar* (1) and *ġawāhir* (16), all with the concrete meaning of 'pearl' or 'jewel'. Cf. also JABRE 1970: 57 (n. 39 [a]). On the *Ġawāhir* see the recent and informative essay by TAMER 2015.

³⁵³ See *Mi'yār al-'ilm*, ed. KURDĪ 1927: 202.19-203.2. The chapter on substance in the *Mi'yār* is discussed at some length in GRIFFEL 2006: 21-29, in its relation with the similar chapter that is to be found in the philosophical work, probably also written by al-Ġazālī, transmitted by Arabic MS London, British Library, Or. 3126 and studied in detail in Griffel's article. From the quoted discussion and the comparative table between the two texts offered *ibidem* in *Appendix II* (GRIFFEL 2006: 37-38), it can be inferred however that the comparison between the

Apart from the mineralogic sense of ‘gem’, and the very specific and somewhat extravagant meaning of «*diversified wavy marks, streaks, or grain of a sword*», the authoritative lexicographic entry on *ǧawhar* prepared by Edward Lane lists as third main sense of the word «[t]he essence of a thing; or that whereby a thing is what it is; the substance of a thing; the constituent of a thing; the material part thereof», giving then further specifications and partial extensions of this meaning. Lane’s entry also registers as synonymous the four different expressions *ǧawhar*, *dāt*, *māhiyya*, and *ḥaqīqa*, all of which have, by contrast, well-distinguishable technical senses – as ‘substance’, ‘essence’, ‘quiddity’, and ‘true [nature]’, respectively – in the lexicon of the *falāsifa*. Moreover, Lane indicates the sense of «in-divisible atom» assumed by the expression *ǧawhar fard* (to which we shall return briefly), and lastly informs the reader about the meaning of «substance, as opposed to accident» that the term *ǧawhar* assumes in what he significantly for our present purpose, if imprecisely for today academic standards, calls «the conventional language of scholastic theology»³⁵⁴. A clear bipartition of the semantics of *ǧawhar* between the common meaning of «(gem)stones» [*al-ḥiǧāra*], and the technical one of the «quiddity of the thing» [*māhiyya al-šay’*], is also to be found in a well-known passage of al-Fārābī’s *Book of Letters* [*Kitāb al-Ḥurūf*]³⁵⁵.

Al-Ġazālī’s own usage of the term *ǧawhar* in his oeuvre – with the exception of the *TF* (and the *MF* itself) – can be reconstructed from Farid Jabre’s meritorious, though incomplete, *Essai sur le lexique de Ghazali*³⁵⁶. Once again, as in the general entry by Lane and in Modern Standard Arabic, the first and principal sense given to *ǧawhar* is that of ‘jewel’ or ‘pearl’, followed by the meaning of ‘intimate’, ‘hidden sense’ or ‘aspect’ of the thing, and only in the third place by the philosophical meaning of ‘substance’³⁵⁷. Most notably for what concerns us here, Jabre quotes for this latter technical meaning a rather derogative statement that is to be found in al-Ġazālī’s *Iḥyā’ ulūm al-dīn*:

TEXT 16. al-Ġazālī, *Iḥyā’* I, ed. HALABĪ: 94-95 (quoted in JABRE 1970: 57 n. 6)

The expression[s] [*lafẓ*] ‘substance’ [*ǧawhar*] and ‘accident’ [*araḍ*], these being technical terms [*iṣṭilāḥāt*] with which the Companions [*aṣḥāb*] were not acquainted.

This very clear assessment takes into account the linguistic standard of the time of Muḥammad – and thus implicitly of the Qur’ān itself – through the hint to the Companions

technical language of philosophy and that of theology concerning the notion of *ǧawhar* is not to be found in the text in the London manuscript, but only in the *Mi’yār* (see point [8] at p. 39 in Griffel’s *Appendix II*).

³⁵⁴ See LANE: 475^c-476^a, s.v. *ǧawhar* (cf. also the entry *ǧawharī*, with the meanings of ‘jeweller’, and only secondarily of ‘substantial’, *ivi*: 476^a). The label of ‘scholastic’ is of course highly improper for an Islamicate milieu, and theology was not the main cultural domain in which the meaning of ‘substance’ for *ǧawhar* developed and became widespread, this being rather the one of Aristotelian *falsafa*, from the translation movement onwards. Cf. ZONTA 2012^b: 326: «In effetti, nella traduzione araba delle *Categorie*, realizzata da Iṣḥāq ibn Ḥunayn entro il 910 (così com’è giunta sino ad oggi), è appunto *ǧawhar* il termine che designa sempre la ‘sostanza’; anche nelle diverse traduzioni arabe della *Metafisica*, così come ci sono state trasmesse dal Commento grande di Averroè, è più o meno costantemente questo il termine impiegato per rendere il concetto greco di οὐσία».

³⁵⁵ See AL-FĀRĀBĪ, *Kitāb al-Ḥurūf*, ed. MAHDĪ 1990: 66/100.13-15. For various analyses of this passage, and of the contiguous one on the senses of being, cf. RACHID 1978, MENN 2008, and ZONTA 2012^b: esp. 326.

³⁵⁶ JABRE 1970.

³⁵⁷ JABRE 1970: 57 (n. 39).

of the Prophet, his immediate contemporaries. The technical (or conventional) senses of *ġawhar* and *‘araḍ* which later became standard in the tradition of philosophy, al-Ġazālī explains, were not yet developed at this formative stage of Classical Arabic. In this light, occurrences numbered from [2] to [5b] in preceding Table 12 – all belonging to two contiguous passages of the text of the *MF* (§§104-105 in my translation) – look all the more interesting, as they involve both the technical words so explicitly (and critically) addressed in the *Iḥyā’*.

In case number [4], the notion of «accident» [*‘araḍ*] is defined in its philosophical sense, but al-Ġazālī stresses that this definition is only given, and only holds true, «according to this [*i.e.* of the philosophers] technical usage [*‘alā hādā l-iṣṭilāḥ’*]». The reason for this special caution becomes clearer in occurrence [5b] (in the immediately following §105 of my Translation), which explains that the attribution of substantiality to «form» [*ṣūra*] by the (Aristotelian) philosophers is at odds with the theologians’ [*mutakallimūna*] understanding of it in terms of an «accident». Indeed, the terms *ġawhar* and *‘araḍ* bear in Muslim *kalām* a different meaning than in *falsafa*: as mentioned in surveying Lane’s lexical note above, *ġawhar* often has in the works of the *mutakallimūna* a strong atomistic connotation (*ġawhar fard*, lit. ‘the single substance’ if one is to use the Peripatetic understanding of the word, is the space-occupying atom of *kalām* physics), while *‘araḍ* – despite being translatable as ‘accident’ – is used to cover a different set of entities than the corresponding *falsafī* term³⁵⁸. In such a complex and differentiated context, in which the same words are used with different technical meanings in different cultural groups (and to serve partly different and partly interrelated goals), it becomes clearer why al-Ġazālī – a leading theologian of Sunnī Islam writing about Avicennan *falsafa* – is so insistent on the demarcation, *via* the concept of *iṣṭilāḥ*, of the various linguistic domains which correspond to different technical usages of the same lexical material. Unsurprisingly in the light of the aforementioned

³⁵⁸ For *kalāmī* atomism cf. PRETZL 1931; PINES 1936; and more recently the decisive contribution by DHANANI 1994 and DHANANI 2015 (on post-Avicennan atomistic accounts in *kalām*). From our terminological point of view, the preliminary annotations by PINES 1936: 3-4 are still important. Pines gives a list of expressions referring to atoms in al-Aṣṣārī, taken as paradigmatic example of the diversified lexicon of *kalām* on the issue. These include *al-ġuz’ allādī lā yataġazza’* («the part which is not partitioned», a phrase which Pines connects with the importance of the problem of infinite division in early Islamic atomism), *al-ġuz’ al-wāḥid* («the one/single part»), as well as *al-ġawhar al-wāḥid* («the one/single ‘substance’»), *al-ġawhar al-wāḥid allādī lā yanqasimu* («the one/single ‘substance’ which is not divided»), as well as the abridged forms *ġuz’* and *ġawhar*, simply taken. Pines goes on to quote PRETZL 1931: 122 fn. for the latter’s thesis that *ġawhar* originally designated in Arabic the atom, which Pines rejects however with persuasive arguments. Pines’ conclusions (*ivi*: 4) confirm however the pervasiveness of the terminology of *ġawhar* for designating the atom in later Muslim theology: «Es steht fest, daß im Verlauf der weiteren Entwicklung des Kalām das Wort *ġawhar* auch ohne Zusatz die Bedeutung Atom besitzt». For the notion of ‘accident’ [*‘araḍ*] in the context of Islamic atomism cf. also the erudite discussion by PINES 1936: 16-26, who quotes *inter alia* a passage of al-Aṣṣārī’s *Maqālāt al-Islāmīyyīna* [*Theological Opinions of Those Who Profess Islam*] in which, interestingly, also our key-term *iṣṭilāḥ* (which PINES 1936: 17 translates with German «Neologismus») appears in connection with the terminology of *‘araḍ* and *ma‘ānī*. PINES 1936: 17 concludes «daß schon z. Z. von Abu’l-Huḍayl und Nazzām das Wort *‘araḍ* in seiner philosophischen Bedeutung keine Neuprägung darstellt, sondern von den Mutakallimūn als ein lange feststehender Terminus betrachtet wird. Daß für die Wahl des Terminus seine Verwendung im Koran ins Gewicht fiel, scheint mir durchaus plausibel zu sein». While historically plausible, this is however partly at odds with the assessment of novelty and technicality which al-Ġazālī attributes to the words *ġawhar* and *‘araḍ* in the passage of the *Iḥyā’* quoted above in Text 16.

considerations, this keen attention becomes especially noteworthy in the case of the crucial *ġawhar* / *‘araḍ* distinction.

To the intricacies of this interdiscursive scenario, one might further add the no less subtle complications that arise, within the boundaries of the philosophical discourse itself, apropos the applicability to different objects of the label of *ġawhar* in the technical sense of ‘substance’. A crucial instance of these philosophical problems is the issue of the substantiality of God in Avicenna’s thought, a topic which has already received some scholarly attention³⁵⁹. With a theoretical move which is *prima facie* somewhat surprising, but which soon reveals itself to be perfectly in keeping with his own technically Aristotelian assumptions, Avicenna’s mature answer to this issue is that the First Principle is not a substance, as is made clear for instance in this conclusive reasoning taken from chapter VIII.4 of the *Ilāhiyyāt* of his *Kitāb al-Šifā’*.

TEXT 17. AVICENNA, *K. al-Šifā’, Ilāhiyyāt*, VIII.4, §§17-18, MARMURA 2005: 277-8

(17) Someone may say, “Although you have avoided assigning the name ‘substance’ to the First, you do not avoid assigning Him its meaning. This is because He exists in no subject; and this is the meaning of substance, which you have rendered a genus.”

(18) We answer: This is not the meaning of the substance we have made a genus. Rather, the meaning of [the latter] is that it is the thing having an established quiddity whose existence is not in a subject – for example, a body and a soul. The proof that it would not be a genus at all if this is not intended by “substance” is that the thing referred to by the expression “existent” does not require its being generic. The negation that follows it does not add [anything] to it above and beyond existence, except the relation of distinctiveness. This [latter] meaning does not include any realized thing after existence, nor is it a meaning of something in itself; but it is only in terms of relation. Hence, the existent is not in a subject. It is only the affirmative meaning in it that can belong to some entity [that] is the existent. What comes after it is a negative, relative thing, extraneous to the haecceity belonging to the thing. Taken in this way, this meaning would not be a genus. This you have learned in a perfected way in the *Logic*.

Some considerations are required to unpack this long text. First of all, it is worthwhile to notice that Avicenna himself is aware of a possible objection to his interpretation of the nature of God, aiming at dismissing his doctrine as purely verbal. The fictional objection he presents is based, indeed, on the idea that one cannot actually help to think of God as a substance, even if one is not willing to assign to Him the proper *name* of ‘substance’ [*ġawhar*]. As a consequence, God would fall within the genus ‘substance’, just like every other substantial, yet created and contingent, being. This is, however, an unacceptable consequence for Avicenna, whose philosophical system emphatically posits the ontological singularity of the Necessary Existent [*wāġib al-wuġūd*] with respect to every other being, which only exists through Him. He therefore rebuts the objection, by explaining that being a substance means having an «established quiddity», different than the actual existence of the thing. In particular, to say that «*X* exists not in a subject» holds true if we substitute *X* with both God and every sublunary or supralunary substance, but this still does not make

³⁵⁹ Cf. LEGENHAUSEN 2017. For a brief overview on the same topic, see also DE SMET 1995: 45-46.

the First Principle fall into the same genus of those actual Avicennan substances. Existence, as a matter of fact, is not a genus for Avicenna³⁶⁰, and the addition to it of a sheer negation – *i.e.* the clause «not in a subject» [*lā fi mawḍūʿ*^{dn}] – cannot at any rate transform it into one. The true philosophical definition of substance, by contrast, implies something more than the mere existence with the addition of a negation, and namely a proper quiddity [*māhiyya*], *i.e.* an essential, informative description about the thing, such that one can be sure that, if that thing actually exists, it exists not in a subject. According to Avicenna, however, this kind of quiddity famously does not apply to God, and God, therefore, is not – and cannot be – a substance.

In a later passage, in chapter 7 of the same Eighth treatise of the *Ilāhiyyāt* of the *Šifāʾ*, Avicenna confirms this idea, even though he does so in a more nuanced manner.

TEXT 18. AVICENNA, *K. al-Šifāʾ, Ilāhiyyāt*, VIII.7, §13, transl. MARMURA 2005: 296

Thus, those [attributes] that intermix with negation [are such that, for example,] if [*law*] one, without due respect, says of the First that He is a substance, he would not mean [anything] but His existence with the negation of His being in a subject³⁶¹.

In Text 18, Avicenna seems indeed to admit – although unwillingly, as the formula «without due respect» seems to imply – at least to the possibility of applying to God the term ‘substance’, thus taking into account again the hypothesis of a purely verbal interpretation of the substantiality of the First. If someone said that God is a substance, he would only mean that He exists not in a subject, and nothing more. Avicenna’s point appears to be that even if one allows for God to be called a ‘substance’, His nature is still such that He cannot be considered a substance endowed with a quiddity. In other words, one cannot deny Avicenna’s own understanding of God as the one and only Necessary Existent on the basis of one’s calling Him a substance, nor can one vice versa deny the Aristotelian meaning of substance just in order to make the Creator fit into the category. In fact, what could appear *prima facie* as a merely verbal issue reveals itself as a deep philosophical problem, since the very ontological gap between the Creator and His creatures turns out to be at stake. The anonymous objection is thus to be rejected not on the basis of a generic reluctance to employ the word ‘substance’ for the First Principle, but rather on the basis of the necessity of safeguarding the absolute ontological priority of God, Who cannot be part of the same genus of His creatures under a proper Avicennan understanding of all the concepts involved.

Moreover, it should be noticed that «if» – in the English translation of Text 18 provided by Marmura – translates the Arabic particle *law*, which is mostly used in conditional clauses to express an impossibility (in a similar way to English third conditional). The passage then goes on to establish other conditional clauses (referring to God being One, Intelligent, First, and so on), which are by contrast introduced by the particle *idā*, usually employed to express possible conditionals. This grammatical peculiarity strengthens the impression that Avicenna holds the substantiality of God to be a metaphysical, or perhaps even logical,

³⁶⁰ For the important doctrine of the so-called ‘modulation’ of existence [*taškik al-wuġūd*] in Arabic philosophy, a conceptual heir of Aristotle’s homonymy πρὸς ἕν (the ‘focal meaning’ of the fortunate label coined by OWEN 1960) and a forerunner of the Latin *analogia entis*, cf. at least TREIGER 2010 and, more recently, ZAMBONI 2020.

³⁶¹ The same passage recurs identical in the *Book of Salvation*: see AVICENNA, *K. al-Naġāt, Ilāhiyyāt*, ed. DĀNĪSPĀZŪH 1985: 602.

absurdity³⁶². This is definitely not the case with al-Ġazālī, as this short text from the *TF* – which provides an interesting *locus parallelus* to Avicennan Text 18, quoted above – will begin to show.

TEXT 19. al-Ġazālī, *TF*, Discussion 5, transl. MARMURA 2000: 90

If [*idā*] it is said, “Substance,” it means that inherence in a subject is negated [*maslūb*] of [His] existence. This, then, is a negation [*salb*].

Following the Avicennan framework we sketched before, this Ġazālīan text aims to show that the concept of substance is a merely negative one. Here in the *TF*, al-Ġazālī seems however almost unaware of the important clarifications provided on the same topic by Avicenna in the *Šifā*, to the effect that the concept of ‘substance’ becomes a genus (and becomes therefore philosophically useful) only if one employs a narrower notion of it, namely if one adds to the negative concept of «existence not in a subject» the positive idea of a certain quiddity. Moreover, the conditional clause with which al-Ġazālī opens his definition of substance is introduced with *idā*, i.e. with the particle for possible conditional clauses. As before for Avicenna, this small grammatical point is definitely not without importance, since it allows one to confirm, albeit indirectly, that al-Ġazālī holds the substantiality of God to be at least a logical possibility, in contrast with Avicenna’s own way of phrasing it as a sheer impossibility, mediated by the unreal conditional *law*. Al-Ġazālī’s personal way to see the problem is thus clearly more elastic than Avicenna’s, since the definition of substance he provides – or with which, at least, he would have no preliminary quarrel – is broader than the philosophical master’s one.

Crucially for what concerns us now, the very same doctrinal context traced by these important Avicennan and Ġazālīan texts is addressed again by al-Ġazālī in the Second treatise of the *Metaphysics* of the *MF*, in a passage which – although derived from the *DN* – is full of the linguistic and ‘nominalistic’ indications on which I have focused the attention before (points [10]-[11] in the preceding Table 12). I report the most important excerpt of that passage in the following Text 20.

TEXT 20. al-Ġazālī, *MF*, *Metaphysics* II.11, §188 (= Table 12, [10]-[11])

That, then, whose quiddity and whose concrete existence are one [thing] is not called «substance» [*ġawhar^{am}*] according to this technical usage [*bi-hādā l-iṣṭilāḥ^{at}*], unless someone invents [*illā an yaḥtari^{at}*] [another] technical term [*iṣṭilāḥ^{am}*], making it an expression referring to an existence that has no receptacle. In this case, we do not deny its application to Him.

فما ماهيته وأنيته واحدة لا يسمى
جوهرًا بهذا الاصطلاح، إلا أن
يخترع اصطلاحاً فيجعله عبارة عن
وجود لا محل له فلا نمنع إذ ذاك
من إطلاقه عليه.

³⁶² I wish to thank Amos Bertolacci for having brought to my attention, in the context of an academic course on Arabic notions of substance held at the Scuola Normale Superiore in 2016-2017, Avicenna’s specific use of the Arabic *law* in this passage. For the definition of the semantics of the *law* of irreality in technical Arabic discussions on grammar cf. VERSTEEGH 1991.

Compared to Avicenna's attitude described above, al-Ġazālī looks once again much more willing to apply to God the contested status of substance (at least in some definite sense), but he is careful to state that he feels so only about the gist concept, not the technical name, of it. Given that the term *ġawhar* has been technically crystallized in philosophy in the sense of that which, if it has a quiddity distinct from its existence, exists not in a subject (conditional definition of substantiality), this specific *iṣṭilāḥ* cannot apply as such to the Avicennan God, whose existence and quiddity famously coincide – which was precisely Avicenna's own final conclusion. Contrasting however immediately this alleged conclusion, which appears then only intermediary for him, al-Ġazālī promptly adds the somewhat radical idea that there is no impediment to the actual invention [*iḥtirā'*] of an another, different technical term, which could keep the gist of the meaning of the word *ġawhar* intact, without however the limitations of being inapplicable to the First Principle, even if understood in Avicennan sense. This is, by all means, a remarkable occurrence of what I have called al-Ġazālī's 'nominalistic' approach. According to him, there seems indeed to be an actual, substantive agreement between philosophers and theologians on the entities at stake, only obscured by the nuances of different jargons – or, to be more precise, by the differentiated technical applications, in different cultural contexts, of a potentially common (Arabic) vocabulary.

Strikingly for our present purposes, a very similar dissolving attitude towards problems which, in the understanding of the *falāsifa*, were to be seen as genuine dilemmas is to be found at the very beginning of al-Ġazālī's refutative work, the *Incoherence of the Philosophers* [*TF*]³⁶³. The second of the five prefaces that al-Ġazālī puts at the beginning of his refutation expounds a classification of the different possible reasons of doctrinal contrast between the *falāsifa* and other thinkers of the Islamic milieu. In tracing this classification, al-Ġazālī dwells on a kind of conflict which is purely verbal, and he gives precisely the substantiality of God as an example of it.

TEXT 21. al-Ġazālī, *TF*, [Second] introduction, transl. MARMURA 2000: 5 (emphasis added)

Let it be known, then, that the dispute between [the philosophers] and others of the sects has three parts. *There is a part in which the dispute reduces to the purely verbal, as, for example, their naming the world's Creator – exalted be He above what they say – a substance, with their explanation of substance as that which does not exist in a subject – that is, [as] the self-subsisting that does not need that which substantiates it. They did not intend by substance, as their opponents intend, that which occupies space. We will not plunge into a refutation of this because, once the meaning of self-subsistence [qiyām bi-l-nafsⁱ] becomes agreed upon [ṣāra muttafiq^{an} 'alay-hi], then*

³⁶³ Other examples of this same dismissive attitude towards the 'disputes about names' are to be found elsewhere in the *TF*. A particularly clear occurrence appears at the beginning of the Eighth discussion of the *TF*, devoted to the refutation of Avicenna's thesis on the nature of God as pure existence without a quiddity. Here, al-Ġazālī writes: «If [the philosophers] want to call [*in aḥabbū an yusammū-hu*] [this existence] consequent and necessary concomitant, then there is no quarrel in names [*fa-lā mušāḥḥat^{an} fi l-asāmī*] once it is known that there is no agent for [His] existence, but that this existence continues to be pre-eternal without [having] an efficient cause. If, however, they mean by "the consequent" and "the effect" that it has an efficient cause, this is not the case. If they mean something else, this is conceded; and there is nothing impossible in it, since proof has only shown the termination of the regress of causes» (cf. MARMURA 2000: 116).

the discussion regarding the use of the term "substance" to express this meaning becomes a *lexical investigation* [*baḥṭ 'an' l-luġat*]. If language sanctions its use, then the permissibility of its use in religion reverts to investigations within the religious law. For the prohibiting and permitting of terms derives from what the outer meaning of the religious texts indicates. Now, you may say that this [type of] naming has been mentioned by the theologians in relation to the [divine] attributes but was not introduced by the lawyers in the discipline of the religious law. *You must not, however, allow the true nature of things to become confused for you because of customs and formalities.*

In this text, the crucial philosophical problem regarding the concept of substance, and consequently the substantiality of God, is matter-of-factly diminished to the rank of a purely lexical investigation [*baḥṭ 'an al-luġa*]. Interestingly, the position of the *falāsifa* here expressed does not immediately coincide with Avicenna's one, because the philosophers mentioned in the *TF* are said to apply the concept of *ġawhar* to God, in contrast with the elaborate attention not to do so displayed on the topic by Avicenna. The contrast envisaged by al-Ġazālī in the *TF* is thus, less subtly than in the *MF*, the one between the *kalāmī* understanding of *ġawhar* as space-occupying entity, and the broad *falsafī* understanding of it as self-subsisting entity³⁶⁴. This main difference with the *MF* notwithstanding, the crucial similarity between the two texts, which lies in their common usage of the notion of *ġawhar* as a paradigmatic example of nominalistic disputes, cannot (and should not) be underestimated.

The final sentence of Text 21 is, in turn, a most clear affirmation of the true interest and focus of al-Ġazālī's own intellectual research, as he declares there to be interested in the true nature of things, and decidedly not in a dispute about names. Therefore, once accepted the existence of some entities – *e.g.* substances – what is important for him seems to be the research and finding of an agreement on the core essence of those things, that is to say, on their definitions, on their true nature, in sum on their *ḥaqq* or *ḥaqīqa*, to use the Arabic terms that al-Ġazālī himself significantly employs in this context of his *TF*. It is thus worth stressing, by way of conclusion, that while al-Ġazālī clearly understands very well Avicenna's way of addressing the problem of substance *qua faylasūf*, he is nonetheless willing to emphasize the largely verbal nature of the problem as he himself – *qua* theologian deeply interested in philosophy – sees it. Otherwise, his insistence in the *MF* on the idea that the application of the term 'substance' is merely a matter of technical usage [*iṣṭilāḥ*] would not be comprehensible. On the contrary, this emphasis must be put in connection with the similar attitude displayed in the *TF*, thus showing that al-Ġazālī – despite the differences between his formulations of the issue in the two works – is coherently persuaded of the verbal nature of the problem of the substantiality of God in both writings, and thus probably also throughout his career. As we shall see in the next section, the same exegetical tool will also prove useful for the understanding of the angelical lexicon prominently employed by al-Ġazālī in the *MF*.

³⁶⁴ The passage of the *TF* and its implications are also briefly discussed by JANSSENS 2001: 5-6, who also retraces in broad strokes Avicenna's own evolution of thought on the issue of the substantiality of God. Janssens concludes that «one gets the impression that he [*i.e.* al-Ġazālī in the *TF*] consciously disregards this later evolution in Ibn Sinā's thought» (*ivi*: 6).

1.7.2. Angels and Intellects

È adunque da sapere primamente che li motori di quelli [cieli] sono sostanze separate da materia, cioè intelligenze, le quali la volgare gente chiamano Angeli.

DANTE ALIGHIERI, *Convivio*, II IV 2

The convergence, and ultimate identification, between the heavenly intellects of philosophical cosmology and the angels of the various religious traditions is a distinct feature of medieval thought, in all three monotheisms. Existing scholarship on this central issue, however, is still surprisingly scanty, especially with regard to al-Ġazālī himself, who rather plays an arguably crucial role in the shaping and diffusion of this characteristic doctrinal tenet³⁶⁵. In this section, I will show that the angelic terminology in the *MF* is preponderant with respect to Avicenna's own more philosophical lexicon, as employed in the fundamental source for the *MF*, the *DN*. Moreover, I will indicate the presence of a significantly similar vocabulary in the *TF*, which is commonly regarded as expressing al-Ġazālī's mature views in a much clearer way than what can emerge from a philosophically sympathetic work such as the *MF*. Even more to the point, the presence of similar ways of presenting the views of the *falāsifa* in both the *MF* and the *TF* can serve as an important element to gauge the proximity of the two works to one another, thus attaining a more nuanced position than current scholarship has on the topic³⁶⁶.

A brief *excursus* into the Latin aftermath of the identification between angels and intellects will serve us as a useful starting point for the discussion of al-Ġazālī's own way of addressing the problem. Albert the Great, himself an adversary of the identification, wrote for instance, in his commentary to Peter Lombard's *Sententiae*, an interesting lexical *quaestio* on the issue whether the term *intelligentiae* is the philosophical equivalent of the

³⁶⁵ A seminal contribution by ALLGAIER 1985 traces back a possible origin of this long-lasting correlation to Proclus, but mostly discusses Thomas Aquinas' reception of it. DAVIDSON 1992: 134 refers to the identification of angels and intellects as a «commonplace» already in the classical phase of *falsafa*, while SUAREZ-NANI 2002 and PORRO 2006 provide an analysis of it in a much later period (13th-14th century). Two collections of essays are available on the topic. IRIBARREN-LENZ 2008 deals with issues of philosophical angelology up to the 17th century, but exclusively in Latin milieu, while the collection edited in AGAMBEN-COCCIA 2009 meritoriously tries to provide a broader framework for the phenomenon: see in particular, for Arabic philosophy, LIZZINI 2009^a (on al-Fārābī) and LIZZINI 2009^b (on Avicenna); for Jewish philosophy, ZONTA 2009^a (on Abraham Ibn Da'ud) and ZONTA 2009^b (on Maimonides). However, no contribution yet addresses explicitly the case of al-Ġazālī, who, on the contrary, plays, as I will argue, a crucial role on the topic. By contrast, scholarship on the problem of the heavenly movers in themselves, often disregarding the 'religious' identification with the angels, is vast and authoritative: cf. at least WOLFSON 1958; WOLFSON 1962; WEISHEIPL 1961; ZAMBELLI 1991; JANOS 2011 (specifically focused on Avicenna), and of course the important cosmological pages in DAVIDSON 1992. On Islamic angelology, also considered in theological and philosophical contexts, cf. *e.g.* BURGE 2012 and JACOBSEN BEN HAMMED 2019.

³⁶⁶ The relation between *TF* and *MF* was substantially undermined by Jules Janssens, who argued that the connection between the two works is at best tenuous, and perhaps even entirely made up *a posteriori*: cf. JANSSENS 2001 and JANSSENS 2003^b; and see *supra*, §1.2. *Chronological and Doctrinal Collocation* for a discussion of the implications of this position for the dating of the *MF*.

theological *angeli* as a name for entities which are, in themselves, to be understood as separate substances [*substantiae separatae*].

TEXT 22. Albert the Great, *In II Sent.*, dist. 3, art. 3, (*An Theologi vocant Angelos illas substantias separatas quas Philosophi vocant Intelligentias?*), ed. BORGNET (XXVII) 1894: 64^b

Ita dicit Avicenna, quod intelligentiae sunt quas populus et loquentes in lege Angelos vocant. Item, Hoc idem dicit Algazel ante finem *Metaphysicae* suae. Item, Rabbi Moyses dicit hoc in secunda collectione *Ducis neutrorum*: ergo videtur, quod ipsi hoc intelligunt.

In this instructive Albertinian text, the acknowledgment of the identification between intellects and angels performed by common people and religious thinkers is traced back to Avicenna himself, as well as to the *Metaphysics* of al-Ġazālī's *MF* and to Maimonides' *Guide of the Perplexed* [Latin *Dux neutrorum*]. It is remarkable that the angelic jargon for the separate substances is attributed in this passage not only to laypeople (Latin *populus*, equivalent to Arabic *‘amma*)³⁶⁷, but also to the *loquentes in lege*, i.e. to theologians adherent to one of the three monotheistic faiths (or *leges*)³⁶⁸. Latin *loquentes*, when used in connection to Arabic and Muslim sources, can be further identified with a direct calque from the Arabic *mutakallimūna*, in the etymological sense of its trilateral root *k-l-m*. Thus, its presence in Albert's passage contributes to the strong characterisation of the angelical terminology as religiously inspired, and thus close to the discourse of revelation.

On a slightly different note, Albert's pupil Thomas Aquinas draws in his *Summa theologiae* a historically fascinating distinction between the different Latin terms employed for the heavenly movers in Peripatetic texts translated from Arabic and from Greek, respectively.

TEXT 23. Thomas Aquinas, *Summa theologiae*, I, q. 79, art. 10, resp.³⁶⁹

[...] hoc nomen intelligentia proprie significat ipsum actum intellectus qui est intelligere. In quibusdam tamen libris de arabico translatis, substantiae separatae quas nos angelos dicimus intelligentiae vocantur, forte propter hoc quod huiusmodi substantiae semper actu intelligunt. In libris tamen de graeco translatis dicuntur intellectus seu mentes.

Setting for the moment aside the interesting distinction between *intelligentia* – of Arabic-Latin derivation, according to Aquinas – and *intellectus* or *mens* – rather employed in Greek-Latin translations –, it seems noteworthy to me that Thomas' overall perception concerning Arabic terminology is that the *falāsifa* mainly used for the *substantiae separatae* the noetic wording of *intelligentiae*, as opposed to the angelic lexicon employed for them in the

³⁶⁷ This characteristic Latin attribution of the identification of angels and intellect to the *populus*, or *vulgus*, is also mirrored in Dante Alighieri's excerpt quoted as an *esergo* to this section («le quali *la volgare gente* chiamano Angeli», emphasis added).

³⁶⁸ The *lex Moysi*, *lex Christi*, and *lex Mahometi*, in common medieval Latin formulations: cf. for many examples the repertory on the Prophet Muḥammad edited by DI CESARE 2012.

³⁶⁹ On this important passage by Aquinas cf. also PORRO 2006: 319-320.

Latin world («*quas nos angelos dicimus*»). Remarkably, then, the linguistic impression of an outstanding Latin reader of Arabic philosophy such as Aquinas, who was certainly more than well acquainted with Avicenna, is altogether that of a limited usage of the angelical terminology, as opposed to the properly noetic one. Such an impression, certainly correct as for Avicenna himself, would arguably have been different if based on al-Ġazālī alone, despite the common Latin perception of Algazel as a faithful follower of Avicenna³⁷⁰.

There is indeed a well perceivable trend, in both the *MF* and the *TF*, to substitute some specific philosophical expressions with other expressions, which would seem *prima facie* to be better suited to a theological, or at least religiously-based, context. In the *MF*, in particular, al-Ġazālī nonchalantly uses as synonyms terms that belong to different disciplinary lexica, widely employing the word «angel» [*malak*] – with its deep Qur’ānic and theological implications – instead of heavenly «intellect» (or «soul»). In Avicenna, by contrast, these same words are used as synonyms only when the exposition is not exclusively philosophical, but leaves room to more frankly theological or religious discussions. These are exceptional cases in both the *DN* and the *K. al-Šifā’*, but they are instead the rule – as I will argue – in the *MF*.

The difference in emphasis between al-Ġazālī and Avicenna on this lexical issue is remarkable. The angelic terminology appears indeed in Avicenna’s *DN* only at the end of the *Physics*, more specifically in chapters §47 and §51³⁷¹. In the first of these texts, which globally corresponds to *MF, Physics V.7*, Avicenna uses the Persian expression *firištah* («angel» or «messenger»)³⁷² as an introduction to a dense section on the various ways of conjunction with the invisible world that are possible for the human soul. The angelic reference, rendered in the French translation of the *DN* as «[l]’union de l’âme humaine au monde spirituel et aux résidences (des êtres de) substance angélique»³⁷³, has a mildly explanatory function, and looks overall like a synonymous formula for the preceding «spiritual world». If one considers that in the title of the chapter a further expression appears that is equivalent to the English «invisible world» or «world of the unknown», as in the Arabic *ġayb*, it is easy to acknowledge the conscious choice of lexical variety made in this specific case by Avicenna, who uses here, in just a few lines of text, no less than three different phrases to express the very same concept. As a confirmation of al-Ġazālī’s different *usus* on this topic, this Avicennan occurrence of the angelic terminology has no correspondence in the text of the *MF*, in spite of the much greater abundance of the angels of the Arabic treatise as opposed to the Persian one³⁷⁴.

As for §51 in the *DN*, it is the conclusive paragraph of the *Physics* of the work, which corresponds to §§447-453 in my translation. In discussing the notion of «holy soul» [*naḥs qudsī*] – remarkably omitted in the *MF*³⁷⁵ – Avicenna employs there three times the lexicon of angels.

³⁷⁰ More on this important chapter of Latin reception of the *MF* *infra*, §2.2. *Latin*.

³⁷¹ Cf. ACHENA-MASSÉ (II) 1958: 84 ([§47] *Examen de la cause de l’union de l’âme humaine au monde intelligible*) and 89-90 ([§51] *État de l’âme sainte qui est celle des prophètes*) = ed. MEŠKĀT 1952: 135 [§47] and 145 [§51]. Cf. *infra*, Appendix 1, for a summarising table of the parallels between *MF* and *DN*.

³⁷² STEINGASS: 919.

³⁷³ *DN*, ACHENA-MASSÉ (II) 1958: 84.9-11.

³⁷⁴ Cf. *infra*, Table 13.

³⁷⁵ The omission is already discussed in JANSSENS 1986: 167 fn. 6; cf. also SIGNORI 2018: 364-368.

TEXT 24. *DN, Physique* [§51], ACHENA-MASSÉ (II) 1958: 89.21-90.1

L'âme sainte est l'âme raisonnable des sublimes prophètes qui connaît les intelligibles, sans professeur ni livres, par intuition intellectuelle et par son union au monde des Anges [*'alam firīstagān*] [a]; qui, par vision et en état de veille, s'élève jusqu'à l'univers invisible et y reçoit révélation. La révélation est la liaison qui s'établit entre les anges [b] et l'âme humaine pour qu'ils l'informent des divers états [des choses]; elle agit sur la matière de l'univers, afin de produire des miracles et de faire disparaître la forme de la matière pour y substituer une autre forme: c'est le degré suprême de l'humanité, lié au degré angélique [c].

The holy soul is the rational soul of the lofty prophets which knows the intelligibles, without teacher nor books, by means of an intellectual intuition and of her conjunction with the world of the angels [*'alam firīstagān*] [a]; and [the soul] which, in [oneiric] vision and in the state of wakefulness, rises up to the invisible world and here receives a revelation. The revelation is the link between the angels [b] and the human soul, so that they inform her about the different states [of things]. [The soul] acts upon the matter of the world, in order to produce miracles and to make the form of matter disappear and to replace it with another form. This is the highest degree of humanity, connected to the angelical degree [c].

This Avicennan text – quite heavily interested by religious lexicon in comparison to Avicenna's standard technical vocabulary – constitutes a clear antigraph for occurrences [26]-[32] of the *MF* in the following Table 13. Moreover, case [b] in Text 24 appears to express a parallel concept to important occurrence [23] in the Table, because in both cases the conjunction between the «angels» and the human soul is said to be the place in which revelation occurs. Occurrence number [25], instead, despite being located in a passage of the *MF* which topographically corresponds to §51 in the *DN*, is not implied by Avicenna's passage, and will thus be best considered as an exclusively Ġazālīan addition³⁷⁶. Despite the remarkable presence of angelical lexicon in this important Avicennan text, comparison with the *MF* shows very clearly the impact of al-Ġazālī's reworking of the passage, which tends to further increase the relative importance of the 'revealed' angelological terminology already used by Avicenna.

What is more, and most notable for our purposes, is however that all the other occurrences of the angelic lexicon in the *MF* remain essentially devoid of any counterpart – either direct or mediated – in Avicenna's Persian text. It is the case, in particular, of all the passages in the *MF* which state the synonymy of «angels» and «souls» or «intellects»³⁷⁷, in the very direction of the chiefly linguistic analysis already discussed at length. Against this background, the following Tables 13 and 14 summarise the presence of the angelical lexicon [Arabic *malak*, pl. *malā'ika*] in both the *MF* (32 occurrences) and the *TF* (36 occurrences).

³⁷⁶ The fact that the prophet, in his conjunction with the intelligences (or even with God Himself), might be able to see the «angel», *i.e.* an image of extraordinary beauty and intellectual purity, is not in itself implied in the considerations on the intellectual degrees which also appear in the *DN*.

³⁷⁷ For the late antique and medieval debate on the ensoulment of the heavens, which is not to be confused with the issue of their being subject to intellectual movers, cf. the unsurpassed analysis by WOLFSON 1962.

TABLE 13. Occurrences of the term «angel» [malak] in the MF

LOCUS	PP. / §§	ARABIC TEXT	TRANSLATION
1 <i>Logic</i> , Preface	D33.9-11, §2	كإدراك المعنى المراد بلفظ (الجسم) و (الشجر) و (الملك) و (الجن) و (الروح) وأمثاله	[...] as the perception of the notion intended by the expression «body», «tree», «angel», «demon», «spirit», and the like
2 <i>Logic</i> , Preface	D34.5-6, §2	وأما الذي يتحصل بالطلب، فكعرفة حقيقة (الروح) و (الملك) و (الجن) وتصور الأمور الخفية ذواتها.	As for what results through research, it is like the knowledge of the true [nature] of the spirit, of the angel and of the demon, and like the conception of the things whose essences are concealed.
3 <i>Met. Pre-</i> <i>mise</i>	D134.9- 11, §92	ما ليس وجوده بأفعالنا، كالسما والأرض والنباتات والحيوان والمعادن وذوات الملائكة والجن والشياطين وغيرها	[...] that whose existence does not [depend] on our actions, like the sky, the earth, the plants, the animals, the minerals, the essences of the angels, of the demons, of the devils, and so forth.
4 <i>Met.</i> III.b.4	D230.15, §207	فعلمه هو المبدأ الخلاق لتفاصيل العلوم في ذوات الملائكة والإنس	His knowledge, indeed, is the creative principle for the articulations of the knowledges in the essences of the angels and of mankind.
5 <i>Met.</i> III.b.11	D242.16- 17, §227	وأن الملائكة المقربين، اللذين سيقام البرهان على وجودهم، من الابتهاج واللذة بمطالعة جمال الحضرة الربوبية، ما يزيد على ابتهاجهم بجمال أنفوسهم	[...] and that [also] the angels close [to Him], the demonstration of whose existence will be made subsist [afterwards], have, from the gladness and the pleasure by virtue of [their] acquaintance with the beauty of the sovereign presence, what adds up to their gladness by virtue of their own beauty.
6 <i>Met.</i> III.b.11	D248.25- 249.1, §236	وأما الملائكة فإنها تعرف أيضاً أنفسهم بالأول، وهم على النوام في مطالعة ذلك الجمال، على ما سيأتي بيانه	As for the angels, they also know themselves by virtue of the First, as they are in perpetual in acquaintance with that beauty, according to that whose clarification will follow.
7 <i>Met.</i> III.b.11	D249.9- 11, §237	فسرور الملائكة أيضاً أكثر من سرورنا، وإن لم يكن لهم شهوة البطن والفرج، وذلك لقربهم من رب العالمين	[...] the joy of the angels is also greater than our joy, despite they do not have the desire of the stomach and of the female sex, and that because of their closeness to the Lord of the worlds
8 <i>Met.</i> III.b.11	D249.15, §238	فيدرك الأول، والملائكة، وما بعدها من الموجودات	Thus, he perceives the First, the angels, and that which is under them among the existents.
9 <i>Met.</i> III.b.11	D249.20- 21, §238	ويلتحق بالمالا الأعلى، ويكون رفيق الملائكة في القرب من الأول الحق، قرباً بالصفة لا بالمكان	He will then reach the lofty congregation, and he will be the companion of the angels in the closeness to the First True, closeness of attribute, not of place.
10 <i>Met. III</i> , Epilogue	D251.18- 19, §241	وهذا أيضاً لا تتحققه الملائكة، فإنهم أيضاً جواهر، وجودها غير ماهيتها	This is not verified either in the angels, because they as well are substances whose existence is other than their quiddity.
11 <i>Met. IV</i>	D253.13- 14	والتالث: القول في النفوس والعقول التي يعبر عنها بالملائكة الروحية الساوية والكرويين.	The third is the discourse about souls and intellects, designated [also with the expression] «spiritual celestial angels» and «cherubim».

Introduction

	LOCUS	PP. / §§	ARABIC TEXT	TRANSLATION
12	Met. IV	D271.7-8	يسمى ذلك بلغة القوم عقلاً مجرداً ويلسان الشرع ملكاً مقرباً.	This is called 'separate intellect' in the language of the group [of the philosophers], while in the language of Revelation it is called 'angel close [to God]'.
13	Met. IV	D281.21-23	ويكون ذلك المشوق هو الأول الحق أو ما يقرب منه من الملائكة القرينين، أعنى العقول المجردة الأزلية المتزهة عن قبول التغير التي لا يعوزها شيء من الكالات الممكنة لها.	That beloved is the First True, or what is close to Him among the close angels, namely separate intellects, [which are] eternal, free from any change and furnished with all possible perfections.
14 15	Met. IV	D287.9-12	ويكون النفوس هي الملائكة السهوية لاخصاصها بأجسامها وتلك العقول هي الملائكة المقربة لبراءتها من علائق المواد وقربها في الصفات من رب العالمين.	The souls are the celestial angels (14) for their appropriateness to their bodies, and those intellects are the angels close [to God] (15) for their freedom from material bonds, and for their closeness, in the attributes, to the Lord of the worlds.
16 17	Met. V	D290.14-15	فيحصل منه ملك وفلك. فالملك العقل المجرد.	An angel (16) and a sphere [malak wa-falak] stem therefore from it. The angel (17) is the separate intellect.
18	Met. V	D296.8-9	فصل من هذا أن الخير فائض على الكل من المبدأ الأول بواسطة الملائكة حتى وجد كل ما كان في الإمكان وجوده على أحسن الوجوه وأكلها	It results from this, then, that the good spreads on everything from the First Principle, through the mediation of the angels, so that everything, whose existence is in the possibility, comes to exist according to the most beautiful and perfect way.
19	Met. V	D297.25-26	أما الأول فقد فاض من الأول، وهي الملائكة، فإنها أسباب للخيرات، لا يكون منها شر.	As for the first [division: i.e. pure good, emanating no evil], this has been emanated from the First: it concerns the angels, since they are causes of goods and from them no evil [comes].
20	Met. V	D299.10-12	ومعناه عدم ذات أو عدم صفة ذات هو كمال بالذات. وهذا يستحيل في حق الملك والفلك	[...] its concept is the annihilation of an essence, or the annihilation of an attribute of the essence which is a perfection for the essence. This is impossible in the true [nature] of the angel and the sphere.
21	Phys. I.1	D310.12, §322	وإن كانت الجهة متحدة، كحركة الفلك، يسمى نفساً ملكياً، أو فلكياً	If the direction is unified, like the movement of the sphere, it is called «angelic soul» or «[soul of] the sphere»
22	Phys. IV	D362	فإن كانت صورة المعلوم حاضرة في ذهنه، سميت تلك الصورة عقلاً مستفاداً، أي علماً مستفاداً، من سبب من الأسباب الإلهية، يسمى ذلك السبب ملكاً أو عقلاً فعالاً.	If, on the contrary, the form of the known thing is present to the mind, that form is called acquired intellect, i.e. acquired knowledge [coming] from a

LOCUS	PP. / §§	ARABIC TEXT	TRANSLATION
			cause among the divine causes, called angel ³⁷⁸ or agent intellect.
23	Phys. V D372.14- 15	والشرع أيضاً مصرح بأن هذه المعارف في الناس وفي الأنبياء بواسطة الملائكة.	And the revealed law too makes it clear that these pieces of knowledge are in the people and in the prophets by means of the angels .
24	Phys. V D374.8- 10	...المعرفة بالله وملائكته وكتبه ورسله وكيفية صدور الوجود منه الى غير ذلك من المعارف...	[...] the knowledge of God [(i)] and His angels [(ii)], of His books [(iii)] and His messengers [(iv)], and of the way of the emanation of existence from Him [(v)], and the other pieces of knowledge [...]
25	Phys. V D383.18- 19	فتكون الصورة المحاكية المتخيلة للجوهر الشريف صوة عجيبة في غاية الحسن وهو الملك الذي يراه النبي أو الولي	The imagined form, made similar to the noble substance, is then a wondrous form, extraordinarily beautiful – and it is the angel seen from the prophet or the man of God [...]
26	Phys. V D383.24- 25	ومن أجمعت له هذه الثلاث فهو النبي الأفضل وهو في الدرجة التصوي من درجات الإنسان وهي متصلة ب درجات الملائكة.	Whoever gathers in himself these three [kinds] is an excellent prophet, and he is in the last of human degrees, which is conjoint to the degrees of the angels .
27	Phys. V D384.6	وبه تتفاوت منازلهم في القرب من الله تعالى وملائكته.	On this basis their [<i>i.e.</i> the prophets'] positions differ with respect to [their] closeness to God and to His angels .
28	Phys. V D384.20-	فالملك واسطة بين الله تعالى والنبي.	The angel (28) is the medium between God Most High and the prophet; the prophet is the medium
29	27	والنبي واسطة بين الملك والعلماء.	between the angel (29) and the wise; the wise are the
30		والعلماء واسطة بين النبي والعوام.	medium between the prophets and the people.
31		والعالم قريب من النبي والنبي	The world is close to the prophet; the prophet is close
32		قريب من الملك والمملك قريب من الله سبحانه وتعالى. ثم تتفاوت درجات الملائكة والأنبياء والعلماء في مراتب القرب تفاوتاً لا يحصى.	to the angel (30), and the angel (31) is close to God Glorious and Most High. Then the degrees of angels (32), prophets and wise men differ in the levels of closeness in innumerable ways.

³⁷⁸ Cf. the Latin translation: «quae vocatur angelus» (ST. CLAIR 2005: 75.370), but the Arabic text printed by Dunyā (and Kurdī, as already noticed by ALONSO 1963: 276 n. 32) wrongly reads *malak^{am}* (ملك) instead of the correct text *malak^{am}* (ملك).

TABLE 14. Occurrences of the term «angel» [malak] in the TF

	LOCUS	PAGE	TEXT
1	Discussion 3	M64	Rather, what proceeds from Him is one existent which is the first of the created things. It is a pure intellect – that is, it is a substance that is self-subsisting; that has no position in space; that knows itself and knows its principle; and, in the language of the revealed law, is referred to as an “angel.”
2	Discussion 3	M67	(We have named it “the first intellect,” but there is no need for dispute about names – whether it is called “angel,” “intellect,” or whatever one wishes).
3	Discussion 3	M76	For the possibility of existence is a proposition that does not differ with the difference of that which is possible, be this a human, an angel , or a celestial sphere.
4	Discussion 4	M83	It makes no difference whether that which endures is the soul of a human, of a genie, of a devil, of an angel , or of whatever existent you wish.
5 6	Discussion 5	M94	What is intended, however, is that His state is nobler than the states of the angels (5) and [is] more worthy to be the object of exultation – and the state of the angels (6) is nobler than our states.
7 8 9 10	Discussion 5	M95	If there is no enjoyment other than the pleasure of eating and copulation, then the state of the donkey and the pig would be nobler than the state of the angels (7). These – that is [to say], the principles [in the realm] of the angels (8) that are devoid of matter – have no enjoyment other than joy in the awareness of that with which they have been specifically endowed by way of perfection and beauty, whose cessation is never feared. But that which belongs to the First is above that which belongs to the angels (9). For the existence of the angels (10) that are intelligences separate [from matter] is an existence that is possible in itself and necessary of existence through another.
11	Discussion 6	M107	For angel , man, and every one among the rational beings knows himself and his principle, and knows others, whereas the First knows only Himself.
12	Discussion 7	M115	[...] the First [nonetheless] is, according to you, an intellect denuded [of matter], just as the rest of the intellects that are principles for existence – named ‘ angels ,’ according to them – and that are the effects of the First are [also] intellects denuded of matter. This reality pervades the First and His first effect. For the first effect is also simple, having no composition in itself, except with respect to its necessary concomitants. Both share, in that each is of them is an intellect denuded of matter. But this is a generic reality.
13	Discussion 11	M126	For this reason, [Avicenna] adjudged it that all the angels know all the intelligibles, nothing escaping them, since they, too, are pure intellects, not existing in matter.

	LOCUS	PAGE	TEXT
14	Discussion 13	M135	For these came to exist through Him by the mediation of the angels , which, according to their idiom, they termed “pure intellects.”
15	Discussion 13	M135	The cause of [this] movement is the soul of the heavens, and the cause of the soul’s causing motion is the desire to imitate God and the angels close to Him [<i>malā’ika muqarrabūna</i>].
16 17 18 19	Discussion 15	M149	The angel (16) is closer to Him in terms of attributes, not of space. This is what is meant by ‘the angels drawn close to Him’ (17); that is, the intellectual substances that neither change, perish, nor undergo transformation and that know things as they [really] are. And as man becomes closer to the angels (18) in terms of attributes, he becomes closer to God. The ultimate that the class of men can reach is [to become] similar to the angels (19).”
20	Discussion 15	M150	All the perfection that is possible for the angels that are close to God is [ever] present to them in existence, since nothing [of this perfection] is in potency so as to change into actuality.
21	Discussion 15	M150	The “celestial angels ” is an expression denoting the souls that move the heavens.
22	Discussion 16	M153	They claim that the heavenly angels are the celestial souls and that the cherubim that are drawn close [to God] [<i>malā’ika karūbiyyūna muqarrabūna</i>] are the pure intelligences that are self-subsisting substances that do not occupy space and do not administer bodies.
23	Discussion 16	M157	With what [argument] would you deny someone who says that the prophet knows the hidden through God’s apprising him of it by way of [direct] initiation? The same applies to someone who has a vision in his sleep who only knows [the hidden] through his being apprised [of it] by God or one of the angels .
24	Discussion 17	M167	The one who enacts the burning by creating blackness in the cotton, [causing] separation in its parts, and making it cinder or ashes is God, either through the mediation of His angels or without mediation.
25	Discussion 17	M167	Rather, they exist from the direction of the First, either directly or through the mediation of the angels entrusted with temporal things.
26	Discussion 17	M168	It is because of this that the exacting among them have agreed that these accidents and events that occur when the contact between bodies takes place – and, in general, when the relationships between them change – emanate from the bestower of forms, who is one of the angels .
27	Discussion 17	M171	Thus, there would come about either from God or from the angels a quality in the fire which restricts its heat to its own body so as not to transcend it.
28	Discussion 17	M172	It is, however, more fitting for both you and us to relate this to God, either directly or through the mediation of the angels .

	LOCUS	PAGE	TEXT
29	Discussion 17	M173	[To proceed] in general, since only the sperm is receptive of the animal form, the animal powers emanating to it from the angels who, according [to the philosophers], are principles of being, [it follows that] from the human sperm only a human is created [...]
30	Discussion 17	M173	[...] forms do not emanate from the angels by whim or haphazardly.
31	Discussion 18	M178	On their inability to sustain a rational demonstration [proving] that the human soul [...] is neither connected with nor disconnected from the body, just as God is neither outside nor inside the world, the same being the case with the angels , according to them.
32 33	Discussion 18	M181	Hence, the soul has two faculties in relation to two sides: the theoretical faculty in relation to the side of the angels (32), since through it [the soul] takes from the angels (33) the true sciences.
34	Discussion 20	M210	One is that the state of angels is nobler than the state of such beasts as ferocious animals and pigs, since [these angels] have no sensual pleasures by way of copulation and eating.
35	Discussion 20	M211	This, then, is the manner in which knowledge is needed. The beneficial parts of it are those purely intellectual sciences – namely, knowledge of God, His attributes, His angels , His books, and the way in which things come to exist through Him.
36	Discussion 20	M211	One of them is that they [<i>i.e.</i> appetite and desire] prevent it from the pleasures peculiar to it – namely, contact with the angels and cognizance of the beautiful divine things [...]

Among the various mentions of *malak* (pl. *malā'ika*) in the *MF* listed in Table 13 above, it seems first of all noteworthy that all those occurring in the Third treatise of *Metaphysics* – on the divine attributes – are plain mentions of the angels themselves. Since the treatise at stake is arguably the most explicitly theological of the entire work, this circumstance might indicate once more that the angelic lexicon is consciously employed by al-Ġazālī with greater frequency in religiously inspired contexts, dealing with (philosophical) theology and more general issues of divinity. By contrast, in the Fourth treatise of *Metaphysics* the focus is on philosophical cosmology, with its characteristic noetic underpinning. It is then in such a context that al-Ġazālī can emphasise the equivalence between angels and souls/intellec[t]s of the orbs, since the very beginning of his discussion. Among the most notable occurrences of this characteristic attitude, compare for instance number [11] in Table 13, and its perfect and illuminating parallel in the Sixteenth Discussion of the *TF* (number [22] in Table 14)³⁷⁹.

³⁷⁹ Cf. also the further parallel text in *TF*, Discussion 15, numbers [16]-[17] in Table 14.

TEXT 25.a. [= Table 13, (11)]
al-Ġazālī, *MF*, *Metaphysics* IV.

The third is the discourse about souls and intellects, designated [also with the expression] «spiritual celestial angels» [*malā'ika ruḥāniyya samāwiyya*] and «cherubim» [*karūbiyyūna*].

TEXT 25.b. [= Table 14, (22)]
al-Ġazālī, *TF*, Discussion 16

They claim that the heavenly angels [*malā'ika samāwiyya*] are the celestial souls and that the cherubim that are drawn close [to God] [*malā'ika karūbiyyūna muqarrabūna*] are the pure intelligences that are self-subsisting substances that do not occupy space and do not administer bodies.

The comparison with the important parallel text of the *TF* also helps to solve a possible ambiguity of the formulation of the *MF*³⁸⁰, from which alone it would not be entirely clear whether «spiritual celestial angels» and «cherubim» are to be considered as alternative expressions to designate both the celestial souls and the moving intellects of the orbs, or rather as formulations separately devoted to the one and the other class of entities. The *TF* clarifies that the correct solution is the latter: the simple *malā'ika* would then be an alternative name for the «souls» [*nufūs*], while *karūbiyyūna* would specifically designate the celestial «intellects» [*uqūl*]. In the *DN* there is no trace of this distinction, which can however be found – although in a slightly alternative formulation – in a further text by Avicenna, the *Metaphysics* of the *K. al-Šifā'*³⁸¹. While this Avicennan source could be seen as a proof of the already genuinely Avicennan character of the identification, it is worth stressing that the specificity of al-Ġazālī's attitude in the *MF* is the emphasis he puts on the many, but sparse, occasional deviations from the vocabulary of pure *falsafa* that are to be found in Avicenna's works. The constant reiteration of specific tournures, which in Avicenna are the exception, makes them in the *MF* the actual rule of philosophical vocabulary, with a subtle but distinctive alteration of the *falsafī* basis, purely rationalistic also at the preliminary level of lexicon.

As for the case at stake, it is for instance very noteworthy that al-Ġazālī, in a subsequent passage, makes the provenance of the terms angel and intellect from different cultural discourses entirely explicit, in contrast to Avicenna's virtually complete silence on the issue. In particular, al-Ġazālī stresses – with characteristic emphasis on the linguistic level of philosophical analysis – that the word «angel» belongs to the Qur'ānic, or in any case monotheistic, tradition (what he calls the «language of Revelation»), while «soul» and «intellect» are terms pertaining to the philosophical tradition (the «language of the group», *i.e.* the group of the *falāsifa*)³⁸².

³⁸⁰ Cf. also the parallel formulations of the same notion in occurrences [14]-[15] in Table 13 of the *MF*.

³⁸¹ Cf. AVICENNA, *Ilāhiyyāt* X.1, ed. QANAWATĪ-ZĀYID 1960: 435, transl. MARMURA 2005: 358.10-13: «The first of these is the rank of the spiritual angels denuded [of matter] [*al-malā'ika al-ruḥāniyya al-muḡarrada*] that are called «intellects», then the ranks of the spiritual angels [*al-malā'ika al-ruḥāniyya*] called «souls» – namely, the active angels». In the *Šifā'*-text the angels corresponding to the intellects are said to be *muḡarrada*, while in the *MF/DN* the adjective is the much more heavily religious *muqarrabūna* ('close' or 'drawn close [to God]'). JANSSENS 2019: 112 and fn. 109 remarks on the presence of the identification between *malā'ika samāwiyya* ('celestial angels') and souls of the orbs also in Avicenna's *Išāra ilā fasād 'ilm aḥkām al-nuḡūm* (which Janssens quote however with an inversion of the terms *'ilm* and *fasād*); see in particular MICHOT 2006: 36.9.

³⁸² For the indefinite qualification of the «group» [*qawm*] of the philosophers contained in this important text

TEXT 26. *MF*, *Metaphysics* IV.b.2, Translation, §26g, D271.7-8 (= Table 13, [12])

[...] that [substance] is called «abstract intellect» in the language of the group [of the philosophers] [*bi-luġatⁱ al-qawmⁱ*], and «angel close [to God]» in the tongue of the Revelation [*bi-lisānⁱ al-šar^a*] [...]

This reference to the language of Revelation (or ‘of the revealed law’), which finds a striking parallel in the Third Discussion of the *TF*³⁸³, is both doctrinally and historically significant, because it suggests that al-Ġazālī was well aware – in both the *MF* and the refutation work – of the specific value of the terminological convergence he was bringing about. In other words, and at a more general level of analysis, al-Ġazālī appears to be consciously attempting the reunion of two different realms of thought – which can be broadly described as Qur’ānic revelation and Aristotelian-Avicennan philosophy, *šar‘* and *falsafa* – by way of a conflation of the very words with which these different discursive traditions usually describe some of their objects of study. This attitude, which expresses itself in the clearest way in the case of angelic cosmology, can be fruitfully framed as another way of assuring a great importance to the problem of language, by reducing to it the analysis of some philosophical problems, and by using it to conciliate – at least on paper – doctrinal divergences which would otherwise be (or be thought by respective members of the two communities to be) substantive³⁸⁴.

cf. also *supra*, §1.6.2, *Indefinite Descriptions*, Table 11, number [40].

³⁸³ Cf. *supra*, Table 14, number [1].

³⁸⁴ Of course, this does not imply at any rate that the usage of a specific kind of lexicon should immediately entail the endorsement of the broader cultural discourse that lies, or lurks, behind that terminology. A proof of the contrary is rather given by Avicenna’s diffused usage of a seemingly ṣūfī jargon in his *Išārāt*, which has been shown by a recent and accurate study to actually be a mere coating for the customary, and eminently philosophical, rationalistic attitude employed by Avicenna (cf. RAPOPORT 2019). The case of al-Ġazālī differs however significantly from Avicenna’s one, *in primis* because of the large number of explicitly non-philosophical works he wrote, and of the amount of information we have at our disposal concerning his commitment to some clearly anti-*falsafī* tenets. In the context of such a production, the hints we can gather from the terminology of the *MF* arguably assume a much more decisive value than it can happen in the case of Avicenna. This notwithstanding, a «camouflage» of a genuine adherence to philosophy under a more religious or mystical lexicon was attributed to al-Ġazālī by Alexander Treiger. Cf. TREIGER 2012: 6: «His debt to Avicenna is camouflaged by the fact that al-Ghazālī often devises his own terminology for philosophical terms, calling, for instance, the rational soul “heart,” the material intellect, “an intrinsic feature,” ethics, “the science of practice,” and theology, “the science of unveiling.” Knowing full well that any attempt to reform Islam using philosophical ideas as a basis would inevitably meet with opposition – as in fact it did when the *Revival* was published – al-Ghazālī never explicitly acknowledged his debt to the philosophical tradition, consciously devising his own terminology for originally philosophical concepts and disguising their philosophical origin, a process amply documented in this book». The one presented here by Treiger is however a perhaps correlated, but different and in a sense even opposite problem than the one posited by the *MF* and discussed in the present section §1.7. In the *MF*, as a matter of fact, there would be no perceivable need to disguise genuinely philosophical positions under a different, more theological lexicon, because the *Prologue* itself spells out the neutral and uncommitted nature of the following report of the philosophical doctrines. Rather, the interference of the revealed, religious, or even mystical vocabulary appears in the *MF* as a *prima facie* unexpected, and thus all the more interesting, deviation with respect to that supposedly uncommitted account. Treiger’s position, as well as the stance of the several further scholars who noticed a somewhat similar camouflage of ideas in al-Ġazālī (such as LAZARUS-YAFEH 1975: 249 ff.; FRANK 1994: 21 and 94; AL-AKITI 2004: 207-208), should then perhaps be revised by also taking into account the peculiar evidence represented by the *MF*.

Three further occurrences of *malak* in the *MF*, corresponding to numbers [16]-[17] and [21] in Table 13, deserve specific mention here. In the passage from the Fifth treatise of *Metaphysics* corresponding to [16]-[17], al-Ġazālī nonchalantly employs the couple «angel and sphere» [*malak wa-falak*] as a unitary designation of the celestial orb and the intellect moving it. The plain substitution of the *falsafī* term *aql* with the Qur’ānic *malak* can be also explained, in this specific case, by the tendency of Arabic prose – well-perceivable in particular in book titles – to use whenever possible rhyming (or assonant) couples of words. This same stylistic feature is repeated, in a very different context, in occurrence [21], taken from the First treatise of the *Physics*, in which the corresponding relative adjectives *malakī* («angelic») and *falakī* («of the sphere», ‘heavenly’) are attributed to the «soul» which naturally moves by will (as opposed to the vegetative and the animal *nufūs*)³⁸⁵. A finer net of correspondences could be drawn between the passages collected in the two Tables 13 and 14, and thus between *MF* and *TF*, apropos the issue of the terminology of angels and intellects, and I plan to do so in a future contribution.

Al-Ġazālī’s strong tendency to use the angelical lexicon as a replacement of the exquisitely noetic terminology preferred by the *falāsifa* can be appreciated not only from the preceding Tables, but also through the inspection of some further indirect sources. The aforementioned Albert the Great, for instance, is keen on attributing to Algazel himself – more than to Avicenna, who is however also mentioned in this regard on many occasions – the identification of angels and intellects, certainly due to the presence of many explicit acknowledgments of this convergence in the *MF* (also transmitted, of course, to its Latin translation)³⁸⁶. Moreover, Albert links this Ġazālīan attitude to the teachings of Jewish thinkers, such as Isaac Israeli (Ishāq ibn Sulaymān al-Isrā’īlī, d. 955)³⁸⁷ and Moses Maimonides (d. 1204)³⁸⁸.

This conceptual connection between philosophical angelology and Jewish philosophy might indeed be historically warranted. For example, a very interesting *locus parallelus* for the aforementioned Text 26 (= quote [12] in Table 13) can be found in Abraham Ibn Da’ūd’s encyclopaedic treatise *The Exalted Faith* [Hebrew *ha-Emūnah ha-Ramah*]³⁸⁹, a text which

³⁸⁵ Cf. *infra* the Commentary to §322.

³⁸⁶ I have remarked upon Albert’s attribution of angelological theses to Algazel in SIGNORI 2019: 507 fn. 149 and SIGNORI 2020^b: 195-196 fnn. 135-136.

³⁸⁷ Isaac Israeli’s work quoted in Albert is the *Book of Definitions and Descriptions* [Arabic *Kitāb al-ḥudūd wa-l-rusūm*, Latin *Liber diffinitionum*]; cf. SIGNORI 2019: 507.

³⁸⁸ Various explicit quotations of Algazel in Albert, either indefinite or nominal, also include mentions of Isaac Israeli and/or Moses Maimonides. I have listed them in SIGNORI 2020^b: 195 fn. 135, with reference to the list of quotations I had previously gathered in SIGNORI 2019: (i) *In II Sententiarum* dist. 14 art. 16 (SIGNORI 2019: 562-563, number [131]); (ii) *Physica* 8.2.8 (SIGNORI 2019: 570-571, number [155]); (iii) *Metaphysica* 11.2.10 (SIGNORI 2019: 598-599, number [246]); (iv) *De causis et processu universitatis a prima causa* 1.4.7 (SIGNORI 2019: 604-605, number [271]); (v) *De causis* 1.4.8 (SIGNORI 2019: 606-607, number [275]), (vi) *Problemata determinata*, Quaestio secunda (SIGNORI 2019: 618-619, number [320]). As far as Maimonides is concerned, the connection between him and Arabic authors like Algazel for the equivalence between angels and intellects is also noticed by RIGO 2001: 39-40; on the critical reception of Maimonides’ angelology in Albert see RIGO 2001: 51-53 (I have recalled these facts in SIGNORI 2020^b: 195-196 fn. 136).

³⁸⁹ ABRAHAM IBN DA’ŪD, *The Exalted Faith*, ed. SAMUELSON (WEISS) 1986: 348 (Hebrew), 103 (= 92^b7-10) (English): «Therefore, the human soul is as it were divided into two powers. [There is] a speculative power by which [the human soul] conceives of notable, simple substances that are called in the language of the Torah “angels” and in the language of the philosophers “spiritual beings” [*šeniyim*, lit. ‘secondary’, as in Zonta’s translation below] or “abstract conceptual beings”». Cf. also the Italian transl. of the same passage in ZONTA 2009^a: 324: «Per questo,

also provides a parallel for the important occurrence [23] in Table 13³⁹⁰. Al-Ġazālī's influence on Ibn Da'ūd's thought has already been recognised in scholarship³⁹¹. Moreover, Abraham Ibn Da'ūd appears to have now been conclusively identified with the *Avendauth Israelita* mentioned by the Latin sources, a crucial intellectual figure of 12th century Spain who collaborated to – and perhaps even sponsored in part – the Toledan movement of translations from Arabic into Latin³⁹².

As for the leading Jewish philosopher Moses Maimonides, his acquaintance with al-Ġazālī remains disputed in spite of many conceptual and doctrinal similarities between the two³⁹³. In his *Guide of the Perplexed* [*Dalāla al-Ġā'irīna*], Maimonides explicitly brings the interaction of philosophy and revelation to the fore as far as the understanding of the separate substances is concerned. After the explanation of the Peripatetic doctrine regarding the movers of the heavens in Chapter 4 of the Second part of his *Guide*, Maimonides adds indeed two supplementary chapters with the declared intent of showing the agreement of philosophy and revelation on this specific topic: «I now shall explain to you in the following chapters what in our Law corresponds to these opinions and what in it differs from them»³⁹⁴. The beginning of *Guide* II 5 is even clearer as for the expression of a concordistic aspect between the philosophical and the religious approach:

TEXT 27. Maimonides, *Guide of the Perplexed*, II 5, transl. PINES 1963 (II): 259

l'anima umana è come se fosse divisa in due potenze: una potenza speculativa, con la quale l'uomo concepisce le sostanze semplici ed eccellenti, che nella *lingua santa* si chiamano "angeli", e nella *lingua dei filosofi* si chiamano "[sostanze] seconde" e "[sostanze] intellettuali semplici» (emphasis added). The *Exalted Faith* was originally composed in Arabic as *al-'Aqīda al-rāfi'a*, but is only extant in the Hebrew translation known as *ha-Emūnah ha-Ramah*.

³⁹⁰ ABRAHAM IBN DA'ŪD, *The Exalted Faith*, ed. SAMUELSON (WEISS) 1986: 327-328 (Hebrew), 160 (= 142^a8-10) (English): «[...] it is called an "active intellect". So the people call it. When we probe their demonstration we find it [to be] true and firm, and we find [that] *the Torah and philosophy agree with this* [judgment]». Cf. also the Italian transl. in ZONTA 2009^a: 330: «Così [scil. intelletto agente] almeno lo chiamano i gentili, e quando noi esaminiamo la dimostrazione che essi ne danno, la troviamo veritiera e solida, e constatiamo che *la Legge e la filosofia concordano su di essa*». A further interesting text for Ibn Da'ūd's insistence on the equivalence angels-intellecets, and for his explicit link of the angelic terminology to Scripture, is to be found in SAMUELSON (WEISS) 1986: 179 (= 160^b7 and 12-13): «Concerning the order of these things that are called "intellects" and "angels" [...] the existence of the abstract intellects that are not moved that are called in the language of the Torah "angels" [...]».

³⁹¹ FONTAINE-ERAN 2020: §4.2, *Sources*. Cf. also FONTAINE 1990: 11, 19, 62, 65, 73, 82, 99-100, 122-124, 150, 192, 260 and ERAN 1998: 27, 76, 87, 129, 176, 217, 221, 302, 304-305, 310, 311. I owe the latter references to HARVEY 2015^b: 291 fn. 7.

³⁹² Avendauth worked with Dominicus Gundissalinus on many translations of philosophical and scientific texts, but not on the version of the *MF*, which is rather due to Magister Iohannes (Iohannes Hispanus): cf. *infra*, §2.2, on the Latin reception of al-Ġazālī's text. His active presence in the cultural circles of Toledo during the translation movement makes him however still a very suitable candidate for the reception of al-Ġazālī's views as expressed in the *MF*, making thus his reception of these angelological passages entirely credible. For an overview of the increasing certainty in scholarship about the identification of Avendauth with the first Jewish Aristotelian Abraham Ibn Da'ūd, see the first hypothesis presented in D'ALVERNY 1954; the subsequent clarifications provided by BERTOLACCI 2002^b, BURNETT 2011, FIDORA 2011^a, BERTOLACCI 2011^a, and finally the recent, and seemingly conclusive, study by FREUDENTHAL 2016, who puts together the previous material and adds new evidence for the demonstration of Avendauth's identity. A synthesis of the scholarly debate, and the affirmation that the identification strengthens the case for the influence of the *MF* on Ibn Da'ūd, is also in HARVEY 2015^b: 291 and fn. 9.

³⁹³ Cf. *infra*, §2.3, on the Hebrew reception of the *MF*.

³⁹⁴ MAIMONIDES, *Guide of the Perplexed*, II 4, transl. PINES 1963 (II): 259.

As for the assertion that the spheres are living and rational, I mean to say endowed with apprehension, it is true and certain also from the point of view of the Law.³⁹⁵

Moreover, a passage from *Guide* II 6 constitutes an even more precise parallel to the crucial affirmation of translatability contained in al-Ġazālī's Text 26:

TEXT 28. Maimonides, *Guide of the Perplexed*, II 6, transl. PINES 1963 (II): 262

This is also what Aristotle says. But there is a difference in the terms; for he speaks of separate intellects, and we speak of angels.

All this needs not of course derive directly from al-Ġazālī's specific attitude on the topic as displayed in the *MF*, since concordistic positions of this kind are strongly attested throughout the development of *falsafa*, and of Hebrew and Latin philosophy alike. However, the explicit emphasis Maimonides puts on the topic is well mirrored by the more subtle, but still striking accentuation conveyed by al-Ġazālī's numerous linguistic remarks. This might then be another respect according to which Maimonides' philosophy might depend on, or be inspired from, certain aspects of al-Ġazālī's thought³⁹⁶. On a definitely different, but possibly related note, the angelical lexicon is also ascribed to al-Ġazālī in further Hebrew sources, such as the Hebrew version of an interesting set of questions and answers [*Aḡwiba*] on various philosophical topics, especially of cosmology, which was studied in detail by Y. Tzvi Langermann³⁹⁷.

³⁹⁵ And cf. again MAIMONIDES, *Guide of the Perplexed*, II 5, transl. PINES 1963 (II): 260: «Thus it has become clear to you that what Aristotle said likewise with regard to the sphere being endowed with apprehension and mental representation *corresponds to the dicta of our prophets and of the bearers of our Law*, who are the Sages, may their memory be blessed. Know that there is a consensus of all the philosophers to the effect that the governance of this lower world is perfected by means of the forces overflowing to it from the sphere, as we have mentioned, and that the spheres apprehend and know that which they govern. This *also is expounded in the letter of the Torah*, which says [...]» (emphasis added).

³⁹⁶ There is an open scholarly debate on the possibility that Maimonides, who never mentions al-Ġazālī in the *Guide*, might actually have been very well acquainted with the leading Muslim theologian: cf. *e.g.*, for two different positions, respectively in favour and against a Ġazālīan influence on the Jewish philosophers, the two articles by GRIFFEL 2019 and LANGERMANN 2019.

³⁹⁷ Cf. LANGERMANN 2003: esp. 189-190, and now LANGERMANN 2011 (see also, for a synthesis, GRIFFEL 2020: §2 and HARVEY 2015^b: 298). The Hebrew text of the *Aḡwiba*, translated by Isaac ben Nathan of Cordoba («certainly one of the least felicitous of the medieval Hebrew translators», in the words of LANGERMANN 2011: 685), was edited, and partly translated into German, by MALTER 1896 (who was a student of Steinschneider; an early review of the edition is in SIMMONS 1897). Despite its difficulty, the text was very popular in Jewish milieu, as it is attested in no less than 11 manuscripts. This might also depend from its identification with the short treatise in which, according to Moses Narboni, al-Ġazālī would have expressed his true views on philosophy: cf. LANGERMANN 2011: 683-684, and see *infra*, §2.3.3. *Moses Narboni*, fn. 744 for further discussion. This identification connects the text of the Hebrew *Aḡwiba* to the *vexata quaestio* of al-Ġazālī's esoteric writings, for which see also the brief reassessment in §2.1.2. *The Maḡnūn corpus*. For the identification between intellects and angels, cf. the summary and partial translation of the relevant excerpt by LANGERMANN 2011: 689: «True, the intellects are immaterial, but they can be distinct (and hence more than one) if they differ in species, as they do. At the end of the reply, al-Ġazālī identifies the entities just described with corresponding Islamic types of angels. The Hebrew sentence is once again awkward, but it can be translated as follows: "The souls are the heavenly angels, as they are united with their bodies. Those intellects are the angels that maintain their limpidity without reliance upon materials, and their proximity in attributes to the Lord of Lords"». For the occurrence of the characteristic ṣūfī expression 'Lord of the Lords' in the *varia lectio* of the Arabic *MF*, in a passage quite close to this one, cf. *infra*, §1.9.1. *Qur'ānic*

Having thus ascertained the historically widespread diffusion of the attribution to al-Ġazālī of a particularly keen attention apropos the denominations of the separate substances of the two traditions, it is worth dwelling a little more on the conceptual point implied by his attitude as described so far. As a matter of fact, the theoretical issue lying behind the identification is conceptually relevant, inasmuch as it brings to the fore the possible tension between philosophy and revelation on the given topic. The nonchalant and interchangeable employment of technical terminology pertaining to different domains of thought has, indeed, the immediate effect of making these realms interact across their respective conceptual lines on the topic. This explicit interaction could thus in principle constitute the occasion of a similarly explicit conflict between the different discursive traditions. In the *MF*, by contrast, the nominalistic emphasis on the equivalence between angels and intellects appears as the distinctly Ġazālīan way to show, once again, that some philosophical problems, along with some alleged reasons of contrast between philosophy and religion, are in fact purely verbal³⁹⁸.

In the end, the lexical clarification appears thus to be tantamount to the affirmation of a substantive agreement between philosophy and revelation on certain topics, at a deeper level than the linguistic one: as a matter of fact, the angels of the Qurʾānic (and more generally monotheistic) tradition, and the intellects of the *falāsifa*, are not but distinct labels for the same separate substances³⁹⁹ – along the same doxographical lines so well traced, two centuries later and in an entirely different cultural milieu, by Albert the Great and his pupil Thomas Aquinas. While a certain convergence between rational-philosophical tenets and the domain proper of revelation is admittedly typical of Islamic philosophy at all levels, I am persuaded that al-Ġazālī shows a particularly high degree of consciousness with regard to this topic, which can thus be rightly emphasised as a specific feature of his personal, and by the way genuinely philosophical, thought.

Summing up, by way of conclusion, the global results achieved in section §1.7, it can be said that al-Ġazālī, not exclusively in the *MF*⁴⁰⁰, emerges as the advocate of a peculiar mix of philosophy and revelation. He expresses the rationale of this particular mix with an

Quotations.

³⁹⁸ The same conclusion was reached as for the usage of the terminology of *iṣṭilāḥ*, in specific reference to the philosophical usage of «substance», at the end of §1.7.1 *supra*; and cf. the parallel stark refusal of engaging in a «dispute about names» performed by al-Ġazālī in the Third Discussion of the *TF* as far as angels and intellects are concerned: *supra*, Table 14, number [2].

³⁹⁹ For an analysis of al-Ġazālī's overall conception of separate substances see HENNIG 2007.

⁴⁰⁰ A sort of middle way between a more mystical and a more rational attitude can also be detected in al-Ġazālī's *Niche of Lights* [*Miškāt al-anwār*] (edited in BUCHMAN 1998), which has a completely different starting point than the *MF*, but eventually attains a comparable cosmological description (FRANK 1992; GRIFFEL 2009^b). Notably for what concerns us here, the *Niche of Lights* also makes frequent usage of the angelical lexicon. The issues linked to this small treatise are however numerous and complex, dating back at least to Averroes' sharp criticism of al-Ġazālī's ambiguous attitude in it (in Averroes' *K. al-Kašfi*; cf. DAVIDSON 1992: 130 and GRIFFEL 2002), and far exceed the limited scope of this section. Among the many interventions on the theme by modern scholarship, the path-breaking essay by GAIRDNER 1914, with its explicit formulation of a so-called «Ġazālī problem», still remains an indispensable reading. For an important study on the *Miškāt* and its somewhat intermediate stance between revelation and philosophy cf. TREIGER 2007; for its ṣūfi aspects see EL-KAISY-FRIEMUTH 2015.

accordingly peculiar language, which is neither purely Avicennan, nor frankly Qur'anic. In many of his works, he shows indeed a distinct sensibility for language, which is also mirrored in the only apparently flat treatment of Avicennan philosophy entrusted to the *MF*. From a first point of view, the polysemy of the term 'substance' (§1.7.1.1), which can be understood in a broader or narrower sense, makes it difficult for him to accept that the typically Avicennan dispute on the substantiality of God is anything more than a dispute about names. By the same token, al-Ġazālī apparently feels that the angels of the Qur'anic tradition are just the same as the intellects of the philosophical enterprise, *i.e.* separate substances which act – in ways that can and should be further qualified – as intermediaries between God and His creation. Paraphrasing the famous lines of *Hamlet* cited at the beginning of this section, and overturning their meaning, one could then argue that, for al-Ġazālī, there are not at all «more things in heaven and earth» (or better, in between them) «than are dreamt of» in Avicenna's philosophy. Rather, there exist exactly the same entities – in rigorous terms, the supralunary movers of the heavens –, which are merely called with different names by the concurring groups of the *falāsifa* and the (Islamic) theologians. There is therefore no need to argue for or against the claims of the philosophers on this specific issue of philosophical cosmology: on these topics, the tension that appears at the surface is purely verbal, and just hides – or fails to hide – a deeper and more essential agreement.

Al-Ġazālī's dismissal of the lexical disputes, and his stretchy use of the philosophical and theological language, appear therefore coherently aimed at attenuating the tension between philosophy and revelation, at least on some specific points of contrast⁴⁰¹, in order to bring al-Ġazālī's own *via media* to the fore. This Ġazālīan «middle way» is for now describable in broad strokes as a theological approach heavily indebted to Aristotelian-Avicennan logic and cosmology⁴⁰², but is far from being wholly clarified. On the contrary, it constitutes a most fascinating field where further research can and should be done.

⁴⁰¹ Other contrasts, as the following section on exemplification will show, rather remain sharp, and do not seem to admit any mediation other than the sheer acknowledgment of the rational possibility of the concurring thesis. The issue of the eternity/origin in time of the world is a case in point of this kind of more irreducible conflict, and will be discussed at length in what follows (cf. in particular §1.8.2, on the anti-eternalist examples used by al-Ġazālī).

⁴⁰² See on this the brilliant, and still probably unsurpassed, essay by FRANK 1992.

1.8. Examples

Exemplification is one of the most important grounds for assessing al-Ġazālī's doctrinal stance with respect to his Avicennan model, and his independence and maturity of thought vis-à-vis the authority and the prestige of his source. The *MF* is indeed full of examples absent in the *DN*, and thus most likely added by al-Ġazālī himself in order to make the doctrines of the philosophers clearer, and their exposition neater and ultimately more compelling to his readers⁴⁰³. This rich explanatory and exemplifying material is however not reducible to a single label, because the examples are sometimes neutral – that is, they do not contradict in anything the doctrine of Avicenna's which they are meant to exemplify, nor any other main tenet of the master –, while sometimes, by contrast, they look surreptitiously, but explicitly, anti-Avicennan. The quality of this subtle anti-Avicennism is very peculiar, because while the form of the examples is always genuinely Avicennan – inasmuch as they are good examples of the (Avicennan) doctrine that al-Ġazālī is time by time derivatively expounding –, their matter (*i.e.* their actual doctrinal content) would not have been endorsed by Avicenna⁴⁰⁴. The following two paragraphs are devoted precisely to the description of these two interesting series of examples, starting from the more even-handed ones (§1.8.1), and then moving on to the central issue of the several anti-eternalist (and thus certainly in themselves anti-Avicennan) statements deployed throughout the text of the *MF* (§1.8.2).

The paramount importance of some of these examples was already noticed by Marie Bernard, in a remarkable, though not much cited, article she devoted in 1990 to al-Ġazālī's 'fusion' of different systems of thought⁴⁰⁵. While Bernard goes certainly too far when she states that close inspection of such examples reveals that the *DN* only served to al-Ġazālī as a philosophical framework for expressing notions of *fiqh* and *kalām*⁴⁰⁶, her groundbreaking acknowledgment of the presence of non-philosophical (or perhaps even anti-philosophical)

⁴⁰³ Cf. *supra*, §1.4.1. *Divisio textus*, for some remarks on al-Ġazālī's distinctive ability to rework writings by other thinkers in his own work, rearranging their material in elegant and compelling syntheses. Interestingly, HARVEY 2015^b: 291 remarks that Abraham Ibn Da'ūd «apparently turned to the *Maqāṣid*, not so much for its science and philosophy – which were essentially Avicennian – but for its formulation and examples» (emphasis added).

⁴⁰⁴ More on this *infra*, §1.8.2.

⁴⁰⁵ See BERNAND 1990: 232: «Les exemples choisis par Ghazālī pour illustrer ses définitions du concept (*taṣawwūr*) et du jugement (*taṣdīq*) sont d'un tout autre ordre que les exemples avancés par Ibn Sīnā», and again BERNAND 1990: 233: «Autrement dit, les exemples choisis par Ghazālī sont empruntés au système de représentation propre aux «*uṣūlayn*». Le choix des exemples significatifs quant à ce système de représentation est un premier aspect du réaménagement notionnel effectué par les *Maqāṣid*. Un autre mode de réutilisation du texte du *Dānesh Nāmeḥ* consistera à substituer aux notions utilisées en *falsafa* – mais non opérantes pour le *kalām* –, des concepts qui conviennent au système de pensée des «*uṣūlayn*» [...].».

⁴⁰⁶ BERNAND 1990: 232: «Cependant, à y regarder de près, le texte des *Maqāṣid* n'utilise le *Dānesh Nāmeḥ* (entre autres) d'Ibn Sīnā que comme cadre philosophique qu'il remanie pour y adapter des considérations intéressantes le *kalām* et le *fiqh*. Je crois qu'on peut dire, sans trop s'avancer, que les *Maqāṣid* sont non seulement la préparation au *Tahāfut* mais aussi l'élaboration d'une méthode qui aboutira au *Mustasfā*. Certains exemples pourront montrer ici l'orientation théologico-juridique de nombre de passages des *Maqāṣid*, ce qui n'est pas le cas du *Dānesh Nāmeḥ*».

material within the text of al-Ġazālī's (self-styled) uncommitted report of the tenets of *falsafa* was a pivotal step forward in the comprehension of the *MF*. The present section tries to follow up on that pathbreaking idea, by giving systematic ordering to both the more neutral and the more critical examples added to Avicenna's text by al-Ġazālī. While Bernard placed particular emphasis on the notions of *fiqh* which, in her reconstruction, appear in many places within the alleged philosophical framework of the *MF*, my attention will rather be focused, in section §1.8.2, on an issue that touches more on *kalām* and on theological (or in any case revelation-based) doctrines of creation, *i.e.* the problem of the eternity of the world. This shift of attention reflects my own understanding of the relative importance of the various extra-philosophical domains encroaching the allegedly *falsafī* fabric of the *MF*, but it does not aim to exclude at any rate the juridical underpinnings that might also be found in the text, if properly interrogated from a legal point of view⁴⁹⁷.

1.8.1. Neutral Examples: Augmenting Avicenna

Among the many neutral examples added by al-Ġazālī to Avicenna's text, I have selected for closer inspection two sets of unequal size, which are however both interesting in their own right. The first set, analysed in §1.8.1.1, is constituted by (i) a long comparison of logical matters, and especially of syllogisms, with golden coinage (and its counterfeiting), which takes place in a circumscribed section of the Fourth chapter of the *Logic* of the *MF*, and (ii) by the comparison of God with a rich and generous king, used to explain divine knowledge in the Third treatise of *Metaphysics*. The second set, analysed in section §1.8.1.2, is more diversified, as it is constituted by the many zoological examples interspersed within the text, of which I will provide altogether a brief general assessment, hopefully conducive in the future to further research.

1.8.1.1. All That Glitters is Not Gold

You can fall for chains of silver
And you can fall for chains of gold

DIRE STRAITS, *Romeo and Juliet*

The Fourth chapter of the section on *Logic* of the *MF* is entirely devoted to the Aristotelian syllogism, its figures, and its premises. The treatment is articulated into two main «pillars»

⁴⁹⁷ As for the presence of juridical technical notions in the *MF*, a case in point would be represented by *Metaphysics* III.b.10, §226, in which many technical terms of Islamic law referring to (commercial) transactions appear, as a means to explain by antiphrasis the divine attribute of generosity. Cf. *infra*, the Commentary *ad locum* for some further information.

[*arkān*]⁴⁰⁸, respectively devoted to the «form» [*ṣūra*] and the «matter» [*mādda*] of the syllogism, *i.e.* to its formal logical validity, and to the truth-value of its premises. At the centre of this treatise, and at the beginning of the second pillar concerning the syllogism's matter, al-Ġazālī allows himself for a diversion with respect to Avicenna's text. He compares the syllogism to a dinar [*dīnār*] – a golden coin widely used in Islamic lands throughout the Middle Ages –, and further relates the shape of the dinar to the form of the syllogism – namely, its figure [*ṣakl*], and the validity of it –, and the metal of which the dinar is made to the premises of the syllogism itself⁴⁰⁹. The example of the coin, which must be of both the right shape (round) and the right material (true gold) to keep its monetary value, is functional to the parallel assessment of the analogously twofold requirement for a valid syllogism, which must be both formally valid, and deduced from true premises, in order to produce new and true knowledge.

Consequently, the truth-value of the propositions which form the material of the syllogistic mechanism is effectively equalled to the degrees of purity of the gold composing a coin, with a long, complex, and literarily interesting simile. Further, the five degrees of decreasing truthfulness of the premises give rise, and correspond, to five decreasingly perfect kinds of syllogism, from the absolutely certain demonstrative one, down to the dialectic, the rhetoric, the sophistic, and the poetic ones. The example of the dinar as occurring in the *MF* is thus a particularly effective kind of what could be called 'philosophic simile', *i.e.* a rhetoric device which keeps working at different (ideally, all) levels of the philosophical analysis it aims to corroborate. More precisely, the example of the dinar works both at the most general level – there expressing the double equation 'roundness = formal validity' and 'gold = material validity' –, and at the more specific ones – with the identification of the five different 'levels' of logical reasonings (from the apodictic to the poetic syllogism) with five different kinds of purity (or conversely of adulteration) of the same golden coin⁴¹⁰.

TEXT 29. al-Ġazālī, *MF*, *Logic* IV.b.2 (= *infra*, Translation, §59)

And just like gold has five degrees: [(i)] the first one, which is pure gold [*ibrīz*], not adulterated [and] verified [*ḥālīṣ muḥaqqaq*]; [(ii)] the second, which is not at that level [of purity], but it has in itself some adulteration [*ḡaṣṣ*], which does not appear at all except to the perspicacious expert [*al-nāqid al-baṣīr*]; [(iii)] the third, which has in itself an adulteration apparent to any expert, [D101] which might be perceived by who is not expert, as well, provided that one's attention is called to it; [(iv)] the fourth, which is a copper counterfeit [*zayf min nuḥās^m*], and yet it plates itself in a plating [*mawwaha tamwīh^m*] that almost misleads the expert, albeit there is no gold in it at all; [(v)] and the fifth, which plates itself in such a plating that it is apparent to anyone that it is plated – thus in the same way the premises [*muqaddimāt*] have five states:

⁴⁰⁸ Cf. *supra*, §1.4.1, *Divisio textus*.

⁴⁰⁹ For a basic, but in itself rather accurate, presentation of this simile cf. ÇAPAK 2010: 133-135; for a parallel passage in al-Ġazālī's *Mi'yār al-'ilm* (ed. DUNYĀ 1969: 184) cf. AL-SAYYED AHMAD 1981: 65-68.

⁴¹⁰ While the simile is not present in the *DN*, JANSSENS 2019: 91-92 and fn. 45 quotes for it an Avicennan source, *i.e.* the abridgment of logic titled in Arabic *al-Muḥtaṣar al-awsaṭ fi l-mantiq*, ed. TĀNĪ 1976: 149.6-150.8. Disregarding whence exactly did al-Ġazālī draw this kind of imagery (and his careful reading of a minor Avicennan treatise on philosophy would in itself be an extremely interesting source) the personal relevance of it for al-Ġazālī will however become clear in what follows, since it appears – in an abridged but recognizable manner – also in his autobiography, the *Munqid*. Cf. *infra* in this paragraph, Text 30.

[(i)] the first one is that they are certain and true, without any doubt and speciousness, and then the syllogism set up from them is called «demonstrative» [*burhānī*]; [(ii)] the second one is that they are near the certainty, so that it is difficult to perceive in them the possibility of the error, but the possibility has access to them, if he who speculates about them is meticulous; and the syllogism composed by them is called «dialectic» [*ǧadālī*]; [(iii)] the third one is that the premises are opinable according to a persuasive opinion, and yet the soul perceives their contrary, and it can surmise the error in them; and the syllogism composed by them is called «rhetoric» [*hiṭābī*]; [(iv)] the fourth [one] is what is formed according to the forms of [things] certain as for the plating, but is neither opinable nor certain; what results from it is called «misleading» [*muǧālītī*] or «sophistic» [*sūfistāʿī*]; [(v)] the fifth is what we know that it is false, and yet the soul inclines to it for a sort of imagination; and the syllogism resulting from it is called «poetic» [*šīʿī*].

The lexical precision and the concreteness of the imagery would allow the reader to interpret the simile with hermeneutical tools usually employed for literary, rather than for philosophical, texts. However, the astonishing accurateness of the simile, at the different levels of its construction, clearly calls for a specifically philosophical function of the example, which might also have been used for mnemonic, and more generally didactic, purposes. Within (and thanks to) this startling intellectual precision, one might further notice that the line of demarcation between the presence and the absence of gold in the increasingly less pure coin lies between the third and the fourth degree. Since gold is metaphorically equalled to truth (or certainty) in the comparison, one could thus infer that al-Ġazālī regards the two inferior kinds of syllogisms – the sophistic and the poetic ones – to be plainly false, just like the coins corresponding to them are merely copper counterfeits, devoid of any real gold. Likewise, the very concrete image of the «plating» [*tamwīh*] in copper – or perhaps, more specifically, in tombac – of the inferior coinages is paralleled by the metaphorical ‘plating’ of false premises that only appear to be true (and sometimes not even so). By the same token, the «expert» [*nāqīd*] who can tell the pure gold – called in Arabic *ibrīz*, with a calque from Greek ὄβριζον also transmitted to Latin *obryzum* – and the less pure gold apart must also be «perspicacious» [*baṣīr*], just like the philosopher who can tell the apodictic and the dialectic syllogisms apart must be a «meticulous» speculator []. By contrast, any expert – and thus any trained philosopher – could discriminate between the third and the second levels (of both coins and syllogisms), and this elaborate series of correspondences could be carried on further for the entire construction of the example. In this way, the better understanding of the specificities of the simile really helps explaining the philosophical doctrine that is at stake, all the way down to very specific nuances of meaning.

The same double equivalence traced in the *MF* between a genuine golden coin and truth, on the one hand, and a counterfeited coin and falsehood, on the other hand, is also to be found in al-Ġazālī’s autobiography, the *Munqid min al-ḡalāl*, in two distinct passages which are one the reprise of the other. The example of the perspicacious money-changer, who is able to distinguish the good and the false coin even in the bag of the counterfeiter, is a distinguishably Ġazālīan *alter ego* of the intelligent man who is able to seek for the truth wherever he can find it – and thus even in the books of the philosophers. True gold, indeed, can always be distinguished by counterfeits, just as truth can be distinguished from falsehood even when the two are apparently inextricably intermingled.

TEXT 30. al-Ġazālī, *Munqid min al-ḍalāl*, transl. WATT 1964: 39 (Arabic text ed. SALĪBA-‘AYYĀD 1939³: 101-102) + WATT 1964: 43 (Arabic SALĪBA-‘AYYĀD 1939³: 106)

The intelligent man knows the truth; then he examines the particular assertion. If it is true, he accepts it, whether the speaker is a truthful person or not. Indeed he is often anxious to separate out the truth from the discourses of those who are in error, for he knows that gold is found mixed in gravel with dross. The money-changer suffers no harm if he puts his hand into the counterfeiter’s purse; relying on his skill he picks the true gold from among the spurious and counterfeit coins. It is only the simple villager, not the experienced money-changer, who is made to abstain from dealings with the counterfeiter. [...]

Likewise, a poor man in need of money, who shrinks from receiving the gold taken out of the bag of the counterfeiter, ought to have it brought to his notice that his shrinking is pure ignorance and is the cause of his missing the benefit he seeks; he ought to be informed that the proximity between the counterfeit and the good coin does not make the good coin counterfeit nor the counterfeit good. In the same way the proximity between truth and falsehood does not make truth falsehood nor falsehood truth.

Remarkably, another simile involving the golden dinars is used by al-Ġazālī in a very different section of the *MF*, the one concerning the divine attributes – and more specifically God’s knowledge – in the Third treatise of *Metaphysics*.

TEXT 31. al-Ġazālī, *MF, Metaphysics* III.b.4 (= *infra*, Translation, §208)

The example of it is that one presupposes a king who has got the keys of the treasuries of the riches of the earth and [yet] does without them, not availing himself of gold nor silver and not taking from them, but rather makes them flow on the people, so that everyone has some gold, having taken it from [the king], and having reached it by means of the keys [of the king]. Likewise, the First has got the keys of the unknown, and the principle of the knowledge of the unknown and of the creed flow from Him upon the universe. As it is impossible to not call «rich» the king who has in his hand the keys [of the riches], it is [also] impossible to [D231] not call «knower» He Who has got the keys of knowledge. The poor who has received from him numerous dinars is called «rich» in consideration of the fact that the dinars are in his hand. Then how would the king not be called «rich», in consideration of the fact that the dinars are from his hand and that it is by virtue of his beneficial help that the richness flows upon the all? Analogous [to this] is then the state of the knowledge. Indeed, the relation of the condition which is [proper] of the First to the articulated knowledges is the relation of the alchemy to the specified dinars. The alchemy is more precious [than the single dinars], since it makes infinite dinars result for us by virtue of the appraisal and of the multiplication of the exemplar.

In this case, as well, the simile is quite complex, as it involves a long series of correspondences between the First Principle and the magnanimous king, which can be summarised in the following diagram⁴¹¹.

⁴¹¹ Cf. also *infra* the Commentary *ad* §208 for further discussion of the simile of the king in its own right.

DIAGRAM 2. *The simile of the rich king*

STARTING POINT	INSTRUMENT	OBJECT	RECEIVER	SNGLE ITEMS	PROPERTY	CONCLUSION
King [<i>malik</i>]	keys of the treasuries	gold and silver	people (the poor)	dinars	wealth	rich [<i>ḡanī</i>]
First Principle [<i>al-mabda' al-awwal</i>]	keys of the unknown	(principle of the) knowledge of the unknown and of the creed	universe (angels and men, cf. §207)	articulated pieces of knowledge	knowledge	knowing [<i>'ālim</i>]

For what concerns us here, it will suffice to notice that the dinars (fifth column) are the correlative of the articulated pieces of knowledge transmitted by God, as king, to His subjects: and since true knowledge can be acquired by humankind precisely *via* the syllogistic concatenation of premises, one could argue that the simile of the dinar occurring in *Logic IV* can somehow be nested within the simile of the king occurring in *Metaphysics III*, without losing its validity. Gold is used in both cases as a loose correlative for truth and certainty, and its acquisition can thus be naturally interpreted as the acquisition of true knowledge. In this way, different rhetoric examples, occurring in very different portions of the text, can be brought together without any contradiction, despite their very different doctrinal functions in their respective sections. This allows the reader of the *MF* to build, in time, a sort of literarily effective – though still philosophically compelling – set of images, certainly relevant for the better understanding, and memorization, of the (Avicennan) doctrines expounded in the text.

1.8.1.2. A Philosophical Bestiary

The presence of animals in medieval thought has been richly and thoroughly investigated in scholarship from a wide variety of different, and sometimes interrelated, perspectives⁴¹². An aspect of the relation between philosophy and zoology which has been less explored, but which could offer fresh insights on the topic from a very different and slightly unusual point of view, is the usage of animals as philosophical examples, within sections of the system of the sciences not directly involved with zoology. The philosophers' tendency to use

⁴¹² For the more philosophical aspects concerning the reception of Aristotle's zoology, always however interwoven, within the Latin milieu, with the moral discourse of biblical derivation and other symbolical aspects, cf. the series of essays gathered in STEEL-GULDENTOPS-BEULLENS 1999 and in SASSI-CODA-FEOLA 2017, together with the thorough global presentation offered by VAN DEN ABEELE 1999. On the Arabic tradition, cf. the Arabic edition of Aristotle's *Historia animalium* by FILIUS 2018, and the important studies, between literature, philosophy and science, offered to the scientific community by Remke Kruk (*e.g.*, on Avicenna's Aristotelian zoology and its reception with medicine, KRUK 2002).

animal examples is definitely not only a medieval prerogative – suffice it to think to Aristotle’s bats, incapable of looking directly into the glistening sun of theoretical knowledge⁴⁴³, or to Kant’s metaphysical dove, wishing to fly without the resistance of the air⁴⁴⁴, or again to Hegel’s notoriously black cows, evoked in polemic with Schelling⁴⁴⁵, or to his ever-famous owl of Minerva, a widely popular image of philosophy⁴⁴⁶. This long and rather common tradition notwithstanding, the philosophical bestiary of a medieval *summa* such as the *MF* appears particularly rich in both size and scope, and thus deserves in my view some specific attention.

The interest of al-Ġazālī’s crowded philosophical zoo is indeed twofold. On the one hand, and as a general rule, the animal examples often stand out with respect to their immediate context in an extremely characteristic way, thus allowing to identify the reception of the work in which they appear with a fair amount of safeness, and to retrace in an easy and reliable way the lines of transmission of a certain set of doctrines, linked to the example, in all the subsequent tradition. This, as the following Table 15 will hopefully show, is particularly true for the well-chosen examples of the *MF*. On the other hand, and more specifically within the framework of the Peripatetic tradition, such examples could entail, and presuppose, implicit references to the actual books on animals by Aristotle (and their reworkings) also in writings – like the *MF* and the *DN* – which, despite their encyclopaedic allure, do not involve any section explicitly devoted to Aristotelian zoology⁴⁴⁷.

TABLE 15. *Zoological examples in the MF* ⁴⁴⁸

	LOCUS	§	ANIMAL			DOCTRINE	DN
			Engl.	Ar.	Lat.		
1	<i>Log.</i> II	11	crocodile	<i>timsāḥ</i>	<i>fenix</i>	Example of a substance	---

⁴⁴³ ARISTOTLE, *Metaph.* α [II] 1, 993^b9-11. For the long fortune of this example in the subsequent tradition, and its decisive importance for the conception of metaphysical reality of both Albert the Great and his pupil Thomas Aquinas, cf. the masterful *Lectio Albertina* by STEEL 2001.

⁴⁴⁴ Cf. *Critique of Pure Reason* [*Kritik der reinen Vernunft*] in KANT 1911: A5-B8-9.

⁴⁴⁵ In the *Phenomenology of Spirit* [*Phänomenologie des Geistes*]; cf. HEGEL 1970 (III): 22: «Dies eine Wissen, da im Absoluten alles gleich ist, der unterscheidenden und erfüllten oder Erfüllung suchenden und fordernden Erkenntnis entgegensetzen oder sein Absolutes für die Nacht auszugeben, worin, wie man zu sagen pflegt, alle Kühe schwarz sind, ist die Naivität der Leere an Erkenntnis».

⁴⁴⁶ In the *Elements of the Philosophy of Right* [*Grundlinien der Philosophie des Rechts*]; cf. HEGEL 1970 (VII): 28: «Wenn die Philosophie ihr Grau in Grau malt, dann ist eine Gestalt des Lebens alt geworden, und mit Grau in Grau läßt sie sich nicht verjüngen, sondern nur erkennen; die Eule der Minerva beginnt erst mit der einbrechenden Dämmerung ihren Flug».

⁴⁴⁷ As opposed, for instance, to all-encompassing philosophical *summae* such as Avicenna’s *K. al-Šifā’*, which features a very substantial section on animals (*K. al-Ḥayawān*).

⁴⁴⁸ In the table I have left aside the widespread usage of «horse» [Arabic *faras*, Latin *equus*] in logical examples, because the zoological aspects of the reference are in those cases reduced to the point of being imperceptible («horse» being merely the counterpart of «man» in those examples): cf. e.g. *Logic* I.2, §7 in my Translation. Likewise, I have omitted the case of «bull» [Arabic *tawr*, again rendered with *equus* ‘horse’ in Latin] in *Logic* I, §9, as I preferred to concentrate the attention on occurrences in which the biological nature of the animal quoted is in at least some ways relevant to the comprehension of the example itself, or else the cases in which a peculiar – and thus memorable for subsequent authors – species appears.

	LOCUS	§	ANIMAL			DOCTRINE	DN
			Engl.	Ar.	Lat.		
						whose actual existence is not immediately evident	
2	<i>Log. IV</i>	49	crocodile	<i>timsāḥ</i>	<i>temza</i>	Exceptional mastication of the crocodile as invalidation of induction	✓
3	<i>Log. IV</i>	51	crocodile	<i>timsāḥ</i>	<i>in animali quod dicitur temza</i>	Exceptional mastication of the crocodile as invalidation of induction	---
4	<i>Log. IV</i>	52	elephant	<i>fil</i>	<i>elephas</i>	'Elephant in the room' argument used by «most dialecticians» in defense of their inductive methods	✓
5	<i>Met. II.11</i>	188	crocodile	<i>timsāḥ</i>	<i>fenix</i>	Example of a substance whose actual existence is not immediately evident	---
6	<i>Met. III.b.7</i>	220	chick	<i>farḥ</i>	<i>pullus</i>	God's providence	---
7	<i>Met. IV.b.1.3</i>	258	elephant	<i>fil</i>	<i>cervus</i>	Nature of time (refutation of the definition of time as measure of the moving body)	---
8	<i>Met. IV.b.1.3</i>	258	chinch	<i>baqq</i>	<i>formica</i>		---
9	<i>Met. V</i>	306	flies	<i>dubāb</i>	<i>muscae</i>	Providence; best of the possible worlds	✓ mouche + ver
10	<i>Phys. IV.2</i>	382	wolf	<i>dī'b</i>	<i>lupus</i>	Intentions perceived by the estimative faculty (enmity)	✓
11	<i>Phys. IV.2</i>	382	sheep	<i>šāh</i>	<i>ovis</i>		✓
12	<i>Phys. IV.2</i>	384	vulture	<i>raḥama</i>	<i>quaedam avis</i>	Transmission of odours in the air	✓ oiseaux
13	<i>Phys. IV.2.2</i>	396	wolf	<i>dī'b</i>	<i>lupus</i>	Intentions perceived by the estimative faculty (enmity)	✓
14	<i>Phys. IV.2.2</i>	396	sheep	<i>šāh</i>	<i>ovis</i>		✓
15	<i>Phys. IV.3</i>	408	cat	<i>sinḥawr</i>	<i>gattus (!)</i>	Intentions perceived by the estimative faculty (enmity)	---
16	<i>Phys. IV.3</i>	408	mouse	<i>fa'ra</i>	<i>mus</i>		---
17	<i>Phys. IV.3</i>	408	sheep	<i>šāh</i>	<i>ovis</i>		✓
18	<i>Phys. IV.3</i>	408	wolf	<i>dī'b</i>	<i>lupus</i>		✓
19	<i>Phys. IV.3</i>	408	ewe / sheep	<i>šāha</i>	<i>ovis</i>	Intentions perceived by the estimative faculty (suitability)	---
20	<i>Phys. IV.3</i>	408	lamb	<i>saḥla</i>	<i>agnus</i>		---

	LOCUS	§	ANIMAL			DOCTRINE	DN
			Engl.	Ar.	Lat.		
21	<i>Phys.</i> V.9	446	camel	<i>ġamal</i>	<i>camelus</i>	Evil eye; possible action at a distance of the powerful soul	---

As can be seen from the preceding Table 15, a specific, and perhaps surprising, animal appears with the greatest frequency in the *MF*'s philosophical bestiary: it is the crocodile [Arabic *timsāḥ*], which returns under the pen of al-Ġazālī no less than four times in the course of the treatise. In two cases, the *timsāḥ* is evoked as an example of a substance, with the specific nuance of a substantial being whose actual existence is however not immediately evident to the mind of the philosopher (numbers [1] and [5] in the preceding Table 15); and in two further cases, it is rather called into question for a specific physiological feature, the (alleged) movement of the upper, rather than of the lower, jaw during mastication (numbers [2]-[3] in the Table)⁴¹⁹. Interestingly, in the first couple of cases the *timsāḥ* seems to indicate a rather mysterious animal, about the very existence of which doubts can arise. In the latter couple of occurrences, by contrast, the crocodile is quoted for a (by then well-known) Aristotelian zoological notion, taken from the *Historia animalium* and often used as a logical example against the method of induction⁴²⁰. This 'double standard' in the philosophical function of the Arabic *timsāḥ* is quite subtly mirrored by the Latin translation, which replaces the crocodile with the mythical «phoenix» when discussing the criteria of substantiality ([1] and [5] in Table 15) and uses by contrast a transliteration of the original Arabic («*temza*») in cases [2] and [3], focused on logical induction. This circumstance is noteworthy, and deserves a few words of comment.

The philosophical point concerning the notion of *ġawhar* seems indeed to be that, for something to be a substance, its quiddity (and therefore even its mere mental existence) should imply at least a potential "existence not in a subject"⁴²¹. In this line, the Latin translators' alteration of the original Ġazālīan text might appear as an intriguing and overall smart adjustment, which highlights the aspect according to which the criterion of substantiality includes the formulation of a condition of actualization into existence, but applies in

⁴¹⁹ This Aristotelian zoological 'fact', which formed part of common academic knowledge of animals throughout the Middle Ages, is not considered valid anymore: *pace* Aristotle and his Peripatetic followers, crocodiles apparently do move their lower jaw while chewing.

⁴²⁰ Cf. *infra*, Commentary ad §49 for the quotation of the relevant Aristotelian and Avicennan texts on the mastication of the crocodile, and for a wider discussion of the example in Latin philosophy up to Albert the Great's exceptional observations of wildlife, which apparently (and surprisingly) included also the inspection of crocodiles. In *De animalibus* I 2 9, Albert went so far as to say that the «tenchea», in itself a corruption of *temza* as the transliteration of Arabic *timsāḥ*, must designate a species of crocodile, because the unusual movement of the superior jaw declared by Aristotle (and by the Arabs) contrasts with his own alleged observations: «In homine enim movetur mandibula inferior et similiter in omni animali praeter tencheam [*tenchath* Scotus] solam, || quae est quaedam species cocodrilli, | quae movet mandibulam superiorem: || non tamen omnis species cocodrilli facit hoc: quia ego vidi duos cocodrillos, qui mandibulam inferiorem moverunt» (cf. STADLER 1916: 82.12-16, §227). For the recurrence of the example in al-Ġazālī, cf. *TF*, Discussion 18, MARMURA 2000: 191.16-23.

⁴²¹ Cf. also *supra*, §1.7.1.1. *Conventional Substances* for the specifics of al-Ġazālī's account of the Avicennan notion of *ġawhar*, also in relation with the thorny issue of the possible attribution of substantiality to God.

principle to any quiddity whose concrete existence, when actually instantiated, can do without a subject of inherence. Although the phoenix (as opposed to crocodiles) does not exist in the real world, we can still be sure that it falls under the genus of substance, because its quidditative concept itself makes us sure that, should it ever exist, it would certainly exist not in a subject⁴²². By contrast, the occurrences in which the *timsāḥ* serves for its genuine zoological characteristics are rendered into Latin with the transliteration of the Arabic word – a conservative move which is probably functional to highlighting the peculiarity of that specific animal, called in Arabic *timsāḥ/temza*, also for readers unaware of the specific physiology of the mastication of crocodiles. Assuming a mere ignorance on the part of the translators concerning the best rendition of *timsāḥ*, and justifying by this token the variations, would however not be enough to explain the diversified strategies with which the Latin writers apparently tackled the four different occurrences of the term. It appears, rather, that Gundisalvi and Iohannes Hispanus grouped those occurrences in couples having the same function and then chose – with a seemingly great degree of attention – a philosophically suitable rendition for each pair.

The substitution of Arabic animals with different species takes place again in the Latin translation, in particular at cases [7]-[8] of the preceding Table 15. There, al-Ġazālī had used as an example of very different movements, which can however last for the same amount of time, the case of the motion of the «elephant» [*fil*] as opposed to that of the «chinch» [*baqq*]. In the Latin translation of the passage, the elephant becomes a deer or stag [*cervus*], while the chinch is transformed in an ant [*formica*]. The gist of the example remains however unaltered, because in both cases a swift, and much bigger, animal is counterposed to a slower, and much smaller, one, thus preserving the general value of the reasoning (and its implications for the Aristotelian definition of time maintained by Avicenna and al-Ġazālī)⁴²³. As opposed to this modification, the elephant [*fil*] evoked at §52 of *Logic* IV (case [4] in Table 15) as a veritable example of the (nowadays idiomatic) ‘elephant in the room’ – in the sense of something that cannot be missed even by the most absent-minded of the observers – remains an imposing elephant [*elephas*] also in the Latin translation.

Another interesting philosophical animal – which makes its appearance in both Avicenna’s and al-Ġazālī’s texts – is the vulture [Arabic *raḥam(a)*], which is used as a lively

⁴²² Interestingly, the example of the phoenix was used by Greek commentators of Aristotle such as Porphyry and Simplicius as an example of a universal of which there is only one instantiation (a monadic species, like the Sun), with the important difference however that, while the Sun was considered to be in itself eternal, the single phoenix existing in the world at any given time dies and is born again, and thus differs from the previous and the following phoenix by (temporal) succession: cf. DRUART 1996: esp. 52-53 and 60-62 for the details, especially taken from Porphyry. Druart discusses the logical example of the phoenix in relation to Avicenna’s substitution of it with the «heptagonal house» in Chapter V.1 of the *Ilāhiyyāt* of his *K. al-Šifā’*. More precisely, the example of the heptagonal house is used according to Druart «as an example of a universal whose meaning could be said of a single instantiation or even of none at all» (DRUART 1996: 68, emphasis added), and thus it must be an artifact because natural kinds are always instantiated (since nature, to put it with a widespread Latin brocardo, *nihil facit frustra*). The overall point of the example, according to Druart, is to find a universal notion which is unlikely (but not impossible) to be actually instantiated in external reality. While the point raised by Avicenna’s example is thus probably more subtle than the one addressed by the Latin translators’ substitution of the crocodile with the phoenix, a possible memory of discussions on universals with one (or no) instantiations could have prompted their insertion here of the phoenix, which appears to fulfill a partly similar role as Avicenna’s more apt geometric example of the heptagonal building in the different context of his major *Metaphysics*.

⁴²³ Cf. *infra* the Commentary *ad* §258 for further discussion.

example for arguing in favour of the transmission of odours in air in the psychological section of the *MF*. The notion of the vulture's exceptionally developed sense of smell is already in Aristotle's *Historia animalium*, but it appears in its new 'psychological' function – *i.e.* as a witness of the way in which olfaction (one of the external senses of the animal soul) generally works – only in Avicenna's treatises on the soul, from the *K. al-Nafs* of the *K. al-Šifā'* up to the relevant section of our *DN*⁴²⁴. The example will also have a wide fortune in subsequent authors, from Averroes' *Long Commentary* on Aristotle's *De anima*⁴²⁵ up to Albert the Great⁴²⁶, from the anonymous 13th century 'Averroist' authors of Latin expositions *De anima*⁴²⁷ up to the biblical commentaries of Meister Eckhart⁴²⁸. Also the camel [*ǧamal*] which is evoked within a quoted *ḥadīṭ* in the section on prophecy of the *MF* had a documentable influence on later Latin thought⁴²⁹. Less fortunate in later philosophy are instead, as far as I can see, the flies [*dubāb*] and the chick [*farḥ*] employed in different passages of the *MF* to substantiate points of theodicy and providence (cf. *supra*, Table 15, numbers [6] and [9]), despite their occurrence in key-passages for the formulation of the theological metaphysics of al-Ġazālī's treatise. Finally, the *MF* presents numerous occurrences of the well-known Avicennan doctrine of animals' estimative faculty, usually instantiated by the example of the sheep perceiving enmity in the wolf, and conversely acknowledging the suitability to herself of her lamb. To these typically Avicennan examples, al-Ġazālī adds a further example of animal enmity, the one – once again proverbial, and even archetypal – of the cat [*sinnawr*]⁴³⁰ and mouse [*fa'ra*] (numbers [15]-[16] in the Table).

⁴²⁴ Cf. *infra* the Commentary *ad locum* for the indication of all the relevant passages. Cf. also ARISTOTLE, *De anima* II, 421^b8-13, transl. SHIELDS: «It is also the case that smelling takes place through a medium like air or water; for water animals, those with blood and those without alike, also seem to perceive smell, just as those in the air do. For some of these come upon food from far away, having been guided by smell». In the *De anima*, however, no mention of the vulture is made, and the example refers rather in the first place to water animals, mentioning airborne ones only as a touchstone (already taken for granted) for the transmission of odours in air. The introduction of the vulture in Avicenna (*Kitāb al-Nafs* II.4, ed. RAHMAN 1959: 78.16-79.8) responds then to the need of adding a concrete instantiation of an animal coming upon food based on odours, and is in itself an interesting example of the crosspollinations between different parts of the Peripatetic system of philosophy (in this case, zoology and psychology: for a discussion of their links in Aristotle cf. LLOYD 1992). The circumstance also shows how deeply connected Aristotle's system of thought was conceived to be by his best Arabic followers.

⁴²⁵ AVERROES, *De anima* II, c. 97, ed. CRAWFORD 1953: 277.39-43 and 278.49-50 (English transl. in TAYLOR-DRUART 2009: 215).

⁴²⁶ Cf. ALBERT THE GREAT, *De homine*, ed. ANZULEWICK-SÖDER 2008: 236.36-38; *De anima*, ed. STROICK 1968: 135.20-51; *De causis proprietatum elementorum*, ed. HOSSFELD 1980: 96.26-30.

⁴²⁷ Cf. the anonymous authors of the *Quaestiones de anima* edited by Giele and Van Steenberghe, respectively in GIELE 1971: 98.36-40 and VAN STEENBERGHE 1971: 291.28-32 [text of ms. O, f. 79^{vb}]; p. 291.24-26 [text of ms. M, f. 81^v]. For some of these references cf. already VAN RIET 1972: 150 *ad lineas* 76-83.

⁴²⁸ Cf. the Commentary on John's Gospel in ECKHART 1994: 613-614.

⁴²⁹ Cf. MINNEMA 2017 and *infra*, §1.9.2. *Ḥadīṭ Tradition*, and in particular Table 19, number [6].

⁴³⁰ On this denomination of the cat, one of the many available in Classical and Modern Standard Arabic, compare CANOVA 2014.

1.8.2. Anti-Eternalist Examples: Changing Avicenna from Within ⁴³¹

Avicenna, as a convinced Aristotelian, was undoubtedly a supporter of the doctrine of the eternity of the world. The eternalist thesis, moreover, follows in a sense from Avicenna's own understanding of the nature of God, whose emanation of the universe is immediate and, as it would seem, entirely necessary once given the absolutely necessary existence of its divine cause. Indeed, post-Avicennan philosophers often framed the problem of the adoption of the eternalist or rather of the anti-eternalist doctrine concerning the origin of the world in theological terms, by appealing to different conceptions of God and His will in order to respond to this foundational cosmogonic issue ⁴³². The question *de aeternitate mundi* was famously debated in ancient and late antique philosophy, and – more than other metaphysical problems – it ended up counterposing religiously inclined thinkers ⁴³³ to authors less prone to adopt the authority of revelation as a viable source in rational inquiry ⁴³⁴. Episodes of this long-lasting intellectual debate include the well-known anti-eternalist stance held by John Philoponus (the Arabic John the Grammarian [*Yahyà al-Nahwī*] ⁴³⁵) against the teachings of both Aristotle and Proclus ⁴³⁶; the ambiguously eternalist positions of famous *magistri* of the Faculty of Arts in 13th century Paris such as Siger of Brabant and Boethius of Dacia, in the framework of the often-called 'double truth' theory ⁴³⁷; and even the important first mathematical antinomy (on the finitude or infinity of space and time) famously presented in Immanuel Kant's *Critique of Pure Reason* ⁴³⁸.

On another note, more closely related to the texts we are addressing here, the Latin usage of both Arabic and Hebrew sources to try and settle the issue of the eternity of the world has been accurately documented for the 13th century Dominican milieu through the historical reconstruction of a specific cultural programme that saw, among its protagonists, the Master General of the Dominican order Raymond de Penyafort, as well as leading figures in their respective fields such as the linguistic expert and skilful Arabist Ramón Martí,

⁴³¹ The content of this paragraph, more particularly in the section that goes from Table 16 onwards, is based on the material already gathered in SIGNORI 2020^b: esp. 169-174, which I have however further elaborated and rearranged to fit into the project of this *Introduction*.

⁴³² Frank Griffel argued that this is most notably the case for Faḥr al-Dīn al-Rāzī: cf. GRIFFEL 2021: 12-13 and again 89-94 and 528-531.

⁴³³ For a list of arguments against the eternity of the world in the Greek Church Fathers cf. for instance WOLFSON 1966. A similar discussion for the Hebrew and Islamic milieu can be found in WOLFSON 1943^b; on the relation in Maimonides between proofs of God's existence and doctrine of the origin in time of the world see WIELAND G. 1975.

⁴³⁴ For two imposing syntheses of Arabic and Hebrew arguments on the issue, from both points of view but with a specific focus on eternalist aspects, cf. BEHLER 1965 and DAVIDSON 1987.

⁴³⁵ See D'ANCONA 2019.

⁴³⁶ Cf. the treatises *De aeternitate mundi contra Proclum* and the homonymous one directed *Contra Aristotelem*, for which see respectively RABE 1899 (translated in English in numerous volumes by Michael Share and James Wilberding), and WILDBERG 1987. For the Arabic tradition of Proclus' own arguments on the eternity of the world see the PhD dissertation by MUCCHI 2014.

⁴³⁷ For a comprehensive reconstruction of the Latin debate on the issue of the eternity of the world cf. BIANCHI 1984 and DALES 1990; on Albert the Great's position cf. HANSEN 1952, CORTABARRÍA 1961, BALDNER 2014; on Aquinas' one see e.g. SARANYANA 1973; WIPPEL 1981.

⁴³⁸ Cf. *Critique of Pure Reason* [*Kritik der reinen Vernunft*] in KANT 1911: A426-433/B454-461.

and the authoritative Dominican *magistri* Albert the Great and Thomas Aquinas⁴³⁹. In proper Arabic and Islamic milieu, moreover, the 12th century saw a particularly impressive surge of interest in the question on the origin in time of the world, precisely due to the interplay, clash and conflict of Avicennan and Ġazālīan perspectives on the issue. This trend can be paradigmatically described through the example of Ibn Ġaylān al-Balḥī's eponymous treatise *The Origin in Time of the World* [*Hudūt al-ʿālam*], which will be briefly presented in a following section of the second part of this Introduction⁴⁴⁰.

Avicenna and al-Ġazālī were in themselves the protagonists (though at a chronological distance) of a sharp and extremely sophisticated debate on the topic⁴⁴¹. Indeed, the critique and refutation of Avicenna's eternalist thesis concerning the origin of the world constitutes the bulk of the first two discussions of al-Ġazālī's *TF*, which form together the (by far) longest section of the entire work devoted to a single subject⁴⁴². What is more, the doctrine of the eternity of the world is famously one of the three tenets the supporters of which are accused of apostasy (or unbelief [*kufṛ*]) in the final *fatwā* of the *TF*⁴⁴³. As such, it is clearly fraught with religious, social, and even juridical consequences⁴⁴⁴, which alone would make it an extremely delicate topic to deal with, at least in a Ġazālīan perspective. If one is to add to these already serious circumstances the theoretical relevance of the purely philosophical debates on the issue (as also expressed in the *TF*), the doctrine of the origin in time of the world arguably becomes the single most important teaching capable of providing a sharp distinction between the Aristotelian-Neoplatonic *falāsifa*, on the one hand, and different, more religiously inclined thinkers active in Islam, on the other hand⁴⁴⁵.

In such a framework, the *MF* has the all-peculiar status of an explicitly philosophical work, written however by the combative theologian who penned the refutation of the apodictic character of *falsafa* contained in the *TF*. The determination of the stance adopted in

⁴³⁹ Cf. the interesting series of three studies devoted to the topic by Ann Giletti, in GILETTI 2004, GILETTI 2011, and GILETTI 2014; see also the synthesis of this thriving cultural experience I gave in SIGNORI 2020^b: esp. 181-184. The Maimonidean sources of Aquinas on creation had already been pointed at by DUNPHY 1983. For Albert's reflection on the eternity or origin in time of the world cf. HANSEN 1952, CORTABARRÍA 1961, RODOLFI 1999, BALDNER 2014, GRANGE 2019 (also in relation to Thomas Aquinas).

⁴⁴⁰ Cf. *infra*, §2.1.4. 'Ġazālīan' *Philosophers*, and in particular §2.1.4.1.

⁴⁴¹ A rather early appraisal of the issue is to be found in HOURANI 1958. It is worth noticing here that al-Ġazālī's master in theology, al-Ġuwaynī, was also interested in a properly philosophical debate concerning the eternity of the world. Cf. on this Griffel 2009: 29-30 and 296 fn. 81, where Griffel quotes to this effect al-Ġuwaynī's *al-Šāmil fi uṣūl al-dīn* (ed. AL-NAṢṢĀR-ʿAWN-MUḤTAR 1969: 123-342). The philosophical interests of al-Ġuwaynī, however, should probably not be overemphasized, especially when compared with those of his most important pupil.

⁴⁴² See MARMURA 2000: 12-54; Discussions 1 [*On refuting their doctrine of the world's past eternity*] and 2 [*On refuting their statement on the post-eternity of the world, time, and motion*] occupy alone about 20% (43 pages of English text in MARMURA 2000) of the *TF*. The other eighteen themes of discussion (including the two other doctrines whose rejection is accused of *kufṛ*) are confined in the remaining 80%. For a brief synthesis of the arguments devoted to the issue of the origin in time of the world and of its eternity in the *TF* cf. GRIFFEL 2016: 442-444.

⁴⁴³ See *TF*, *Ḥāṭima l-kitāb* [The Book's Conclusion], MARMURA 2000: 226-227.

⁴⁴⁴ For an ample discussion of this theoretically relevant judgment passed by al-Ġazālī, and of its possible (although historically limited) consequences in later Islamic thought, see GRIFFEL 2000: 282-291, GRIFFEL 2009: 101-110, and cf. now the wider assessment, also based on fresh historical evidence, given by GRIFFEL 2021: 108-161.

⁴⁴⁵ A heated debate on the eternity/origin in time of the world continued well beyond the life of al-Ġazālī: cf. RAHMAN F. 1975, and the general argument made in GRIFFEL 2021: *passim* as for the importance of the issue in Faḥr al-Dīn al-Rāzī's philosophy and theology.

al-Ġazālī's philosophical *summa* regarding the eternity (or the origin in time) of the world is thus accordingly crucial, since the *MF* appears located on a theoretical middle ground between Avicenna and his attempted refutation in the *TF*. Given this circumstance, it will perhaps not come as an utter surprise that the doctrinal stance taken by al-Ġazālī in the *MF* reveals itself, at close inspection, to be truly intermediary with respect to the two aforementioned extremes. Crucially, however, this factually 'middle' ground is not achieved by an active doctrinal mediation, but rather through the juxtaposition – at different textual and rhetorical levels of analysis – of both contrasting theses, *i.e.* the eternalist and the anti-eternalist one. Albeit somewhat implicitly, this fashion of framing the problem appears to me as genuinely antinomic, in the technical sense of antinomy as a rationally irreducible dilemma⁴⁴⁶. On the one hand, as a matter of fact, al-Ġazālī follows (or at least makes a show of following) the frankly eternalist positions expressed in Avicenna's *DN*, but, on the other hand, he also consciously disseminates in different passages of his text an imposing series of anti-eternalist examples, which appear altogether to contradict, in a subtle and implicit way, the explicitly endorsed (Avicennan) thesis of an eternal creation. As can be seen from the following Table 16, such an exemplifying strategy is instantiated in the *MF* by no less than 24 occurrences, mostly (20 cases)⁴⁴⁷ located in the first section of the work, the *Logic*, but also present in the *Metaphysics* (3 occurrences)⁴⁴⁸ and in the *Physics* (one occurrence)⁴⁴⁹, by all means extremely significant).

TABLE 16. *Statements on the origin in time of the world in the MF*⁴⁵⁰

	LOCUS	PAGE	§	CONTEXT	QUOTATION
1	<i>Logic</i> , Premise	D33.12-15 = L239.10-11	2	Examples of judgment [<i>taṣḍīq</i>]	As for judgment, it is like your knowledge that the world has an origin, that obedience will be repaid, and that disobedience will be punished.
2	<i>Logic</i> , Premise	D33.19 = L239.17- 240.20	2	Necessity of the knowledge of a conception [<i>taṣawwur</i>] before passing a judgment	The expression «having an origin» [<i>ḥādīt</i>], when its meaning is not [well] conceived, becomes like the expression, for in-stance, «having an oripin» [<i>mādīt</i>] [...]

⁴⁴⁶ The conclusions of GRIFFEL 2021: 570 mention the case of Kant's antinomies of pure reason as partly parallel to the Islamic production of concurrent *ḥikma* and *kalām* texts. Despite its brevity, the remark is very acute, and would call for further elaboration, also in relation to the *MF*. I briefly touch on this issue again in §1.10. *The First Text of ḥikma*.

⁴⁴⁷ Corresponding to numbers [1] to [20] in Table 16.

⁴⁴⁸ Corresponding to numbers [21] to [23] in Table 16.

⁴⁴⁹ Corresponding to number [24] in Table 16.

⁴⁵⁰ In the column «Page», siglum D corresponds to the Arabic edition by DUNYĀ 1961; as for the correspondence with the Latin text, L corresponds to LOHR 1965; M to MUCKLE 1933, SC to ST. CLAIR 2005.

	LOCUS	PAGE	§	CONTEXT	QUOTATION
3	<i>Logic</i> , Premise	D34.13-16 = L240.33-35	2	Examples of judgment passed after careful inquiry [<i>ta'ammul</i>]	As for what is perceived through careful inquiry, it is like the judgment concerning the temporal origin of the world, the resurrection of the bodies, the retribution of the acts of obedience and dis-obedience, and so on.
4	<i>Logic</i> , Premise	D35.3-9 = L240.45- 241.49	2	The syllogistic proof of a judgment must be preceded by some previous (already acquired) knowledge concerning the validity of the premises. > Cf. [15]	When we do not judge true that the world has an origin, and we are told: «The world is formed; but every formed has an origin; therefore the world has an origin», this is not useful as for the knowledge of what we ignored concerning the temporal origin of the world, except if the judgment about the fact that the world is formed, and that what is formed has an origin, had previously come to us.
5	<i>Logic</i> III	D53.7-12 = L252.9-10	22	Example of a proposition with a defined truth value [<i>qadiyya</i>]	If you say: «The world has an origin», it is possible to reply: «Indeed it is true»; and if you say: «The man is a stone», it is possible [to reply] that you lie.
6	<i>Logic</i> III	D53.18-20 = L252.12- 13	22	Example of a disjunctive <i>qadiyya</i>	If you say: «Either the world has an origin or it is eternal», you say the truth.
7	<i>Logic</i> III.1	D54.11 = L253.21-22	23	Example of a categorical clause	«The world has an origin».
8	<i>Logic</i> III.1	D54.15 = L253.23-24	23	Example of a hypothetical disjunctive clause	«Either the world is eternal, or it has an origin».
9	<i>Logic</i> III.1	D54.19 = L253.26	23	Example of the subject in a proposition	[...] like «the world» when you say: «The world has an origin».
10	<i>Logic</i> III.1	D54.21 = L253.27-28	23	Example of the predicate in a proposition	[...] like «having an origin» when you say: «The world has an origin».
11	<i>Logic</i> III.1	D56.6-8 = L254.60-62	25	Difference between hypothetical disjunctive and conjunctive clauses	[...] you say: «Either the world has an origin, or it is eternal», and if you inverted [the order] by saying: «Either the world is eternal, or it has an origin», the meaning would not change.

	LOCUS	PAGE	§	CONTEXT	QUOTATION
12	<i>Logic III.2</i>	D57.4 = L254.70	26	Example of an affirmative clause	«The world has an origin».
13	<i>Logic III.2</i>	D57.6 = L254.71	26	Example of a negative clause	«The world does not have an origin». [but cf. MS Cairo, Dār al-Kutub al-Azhariyya, 86/27143 <i>ad loc.</i> : <i>al-‘ālam# laysa bi-qadīm^m</i>]
14	<i>Logic III.2</i>	D57.13-15 = L254.77	26	Example of a negative disjunctive clause	«The world is not ‘either eternal or a body’, but rather it is either eternal, or it has an origin».
15	<i>Logic IV.1</i>	D67.3-15 = L259.19-25	35	Examples of various kinds of syllogism > Cf. [4]	Its example is: «The world is formed; but everything that is formed has an origin». Indeed, from admitting these two it necessarily follows a third statement, namely that the world has an origin. Analogously, if you said: «If the world is formed, then it has an origin; but it is formed», from admitting these it would follow that the world has an origin. Analogously, if you said: «The world either has an origin or it is eternal; but it is not eternal», from that it would follow that it has an origin.
16	<i>Logic IV.1</i>	D68.4-5 = L259.34-35	36	The two premises of a syllogism must have a term in common	For example if you say: «The world is formed» and «What is formed has an origin».
17	<i>Logic IV.1</i>	D68.16-17 = L259.43-44	36	Example of the major term in a syllogism	[...] like «having an origin» when we say: «The world has an origin», which is the conclusion following from the syllogism.
18	<i>Logic IV.1</i>	D84.8 = L266.267-268	46	Example of a conjunctive hypothetical syllogism	«If the world has an origin, then it has an originator».
19	<i>Logic IV.1</i>	D86.10-18 = L267.298-302	47	Example of a hypothetical disjunctive syllogism	«Either the world has an origin, or it is eternal». From this you get four hypothetical clauses. Indeed you [can] say: «But it has an origin; therefore it is not eternal», or: «but it does not have an origin; therefore it is eternal», or: «but it is eternal; therefore it does not have an origin», or: «but it is not eternal, therefore it has an origin».

	LOCUS	PAGE	§	CONTEXT	QUOTATION
20	<i>Logic</i> V.1	D118.19-21 = L282.14-15	77	Scientific question «if»	The second [kind] asks about the state of the thing, like your asking whether God is willing, and whether the world has an origin.
21	<i>Metaphysics</i> I.4	D187.19 = M36.4	154	Being is divided in anterior and posterior	One says that God Most High is before the world.
22	<i>Metaphysics</i> III.b.4	D229.15 = M67.27-31	205	Example of a kind of <i>a priori</i> knowledge, available to the knower before the unreeling of a proper reasoning	As if he had heard [his opponent] saying: «The world is eternal», by means of a <u>specious argument</u> [<i>šubha</i>] <u>such and such</u> , while he knows that it has an origin.
23	<i>Metaphysics</i> III.b.4	D231.22-23 = M70.7-9	209	Distinction between that kind of knowledge and other possible kinds	[...] [while] the possessor of the third condition is knowing of the absurdity of [his opponent's] allegation about the eternity of the world, and of the way of answering to his specious argument [...]
24	<i>Physics</i> IV.3	D359.12 = M172.12 = SC	403	Subdivision of human rational faculty and example of theoretical pieces of knowledge	[...] the speculative faculty, like the knowledge of the fact that God Most High is unique, and that the world has an origin in time [...]

The presence of these seemingly anti-philosophical (in Avicennan sense) examples in a *prima facie* utterly philosophical work is a very intriguing feature of the Arabic *MF*, since in most occasions the examples are not at all present in Avicenna's *DN*⁴⁵¹. To describe the nature of these statements in the most precise way, one could say that al-Ġazālī always maintains the *form* of the examples, since each one is actually a good instance of the philosophical doctrine that he (and Avicenna before him) are time by time arguing for. By contrast, however, the *matter*, or content, of the examples is – as we have seen – absolutely atypical, since it involves the firm belief, on al-Ġazālī's part, in frankly anti-philosophical, or more specifically anti-Avicennan, doctrines. In other words, al-Ġazālī often explains some given doctrines of Avicenna's – against which he has no perceivable quarrel – by means of examples taking into account other philosophical doctrines, with which Avicenna would instead not have agreed at all⁴⁵².

The most striking case of this double, ambiguous attitude towards Avicenna – which corresponds to case [3], with a significant parallel in case [1], in Table 16 above – is already

⁴⁵¹ Cf. SIGNORI 2018: 370-371 for a discussion of the partially parallel examples that could be found in Avicenna's Persian encyclopaedia, which however do not touch deeply on the issue of the origin in time of the world.

⁴⁵² For a further discussion of this peculiar Ġazālīan way of dealing with Avicenna's text see SIGNORI 2018: 374-375.

quite well known in scholarship⁴⁵³. In that passage of the Preface to *Logic*, al-Ġazālī is giving some examples of a *taṣḍīq* – a judgment of assent – passed after careful inquiry. Strikingly, the examples he chooses are precisely the three doctrines whose rejection is accused of *kufr* – unbelief, or apostasy – in the *TF*: the resurrection of the bodies, the retribution of obedience and disobedience (which implies God’s knowledge of the particulars), and the temporal origination of the world. Here, the fact that assent is given after careful inquiry [*ta’ammul*]⁴⁵⁴ is particularly important, since it attests al-Ġazālī’s own unquestionable assent to these doctrines in the *MF*, the very same for the rejection of which he accuses the philosophers of unbelief in the *TF*, thus implying the necessity of their estrangement from the community of the believers. Between the two works, then, there seems to be on this point a perfect continuity⁴⁵⁵.

Without dwelling on each occurrence of al-Ġazālī’s peculiar exemplifying tactics, it will be sufficient to say that some of the cases listed in Table 16 are admittedly weaker than others, since they are merely logical examples to the truth of which it is not always clear whether al-Ġazālī is indeed committed⁴⁵⁶. This holds true in particular for disjunctive statements like those occurring at numbers [6], [8], [11], [14], and [19] in Table 16, and for examples of individual logical terms (as opposed to articulated logical propositions), like those at numbers [2], [9], and [10]⁴⁵⁷. Case [13] deserves an autonomous analysis, since it presents

⁴⁵³ See BERNAND 1990: 232-233; SHIHADAH 2011: 88; SIGNORI 2018: 370-371 and relative footnotes.

⁴⁵⁴ As explicitly opposed to what might be called intuitive knowledge, but also implicitly – yet clearly – counterposed to false knowledge, which represents the failure of both inquiry and intuition. Cf. AL-ĠAZĀLĪ, *MF*, *Manṭiq [Logica]* ed. DUNYĀ 1961: 34.1-2 ff.

⁴⁵⁵ Compatible with a late-middle dating of the *MF*, but much less with an early, scholastic dating of the work: cf. *supra*, §1.2. *Chronological and Doctrinal Collocation*.

⁴⁵⁶ A by all means fascinating parallel for these curious anti-eternalist examples in logical matters is provided by Averroes’ *Middle Commentary* on Aristotle’s *Prior Analytics*, studied in HARVEY 1997. More specifically, Averroes’ text contains three such examples, which occur respectively at (i) *Prior Analytics* L.23 (example of a disjunctive conditional syllogism, partly similar to [19] in Table 16; Arabic text in BUTTERWORTH-HARIDI 1983: 195-196 sect. 10, English translation in HARVEY 1997: 101); (ii) *Prior Analytics* L.28 (similar to Table 16, [15]; Arabic text in BUTTERWORTH-HARIDI 1983: 216 sect. 199, English translation in HARVEY 1997: 101); (iii) *Prior Analytics* II.1 (again somewhat similar to Table 16, [15]; Arabic text in BUTTERWORTH-HARIDI 1983: 257 sect. 243, English translation in HARVEY 1997: 102). Despite citing the *MF* in at least one occasion (HARVEY 1997: 103 fn. 40), Harvey does not draw the connection between Averroes’ way of exemplification and al-Ġazālī’s on in our text. In the essay, Harvey notices that Averroes also makes use of similar creationist examples in his commentary on Aristotle’s *Topics* (HARVEY 1997: 110), and he comments on the criticism against the appropriateness of these examples advanced by Gersonides against Averroes (HARVEY 1997: 110-113). Without quoting Harvey, Janssens 2019: 89 and fn. 36 recalls the presence of an example of disjunctive clause of the kind ‘the world is either originated or eternal’ in al-Fārābī’s *Qiyās al-ṣaġīr*, ed. in AL-‘AĠAM 1985-1986 (II), pp. 65-93: 84.7-8, from which Janssens concludes: «This shows that the example was already present in the circles of the *falāsifa* and is perhaps not so typical of *kalām* as is often believed». While this could very well be true, as the examples in Averroes, ignored by Janssens, might indeed contribute to show, I insist that one must be aware of the more general context in which this kind of statements appear in al-Ġazālī’s *MF*, as well as of their increased relative frequency in the theologian’s philosophical text. Thus, while it might very well be possible that creationist examples were in use in philosophical logic also before and after al-Ġazālī, their prominent usage by the author of the *fatwā* against the eternalist position cannot have the same rhetorical weight as al-Fārābī’s own usage. Further, in analysing these examples in Averroes, Harvey is, for his part, not as quick as Janssens to dismiss their possible religious meaning, which seems to me a sensible and cautious stance.

⁴⁵⁷ Since, of course, merely choosing as an example of a subject or a predicate the words «world» [Arabic *‘ālam*, Latin *mundus*] or «having-an-origin» [Arabic *ḥādīṭ*, Latin *coepit*] does not form a proposition with a defined truth-value, to which al-Ġazālī may or may not have *stricto sensu* committed.

the sentence «The world does not have an origin» (Arabic *al-‘ālam^u laysa bi-ḥādīṭⁱⁿ*, Latin *mundus non coepit*) as an example of a negative clause, thus going to all appearances in the opposite direction to the other listed cases. However, the variant reading of MS Cairo, Dār al-Kutub al-Azhariyya, 86/27143 *Ḥikma wa-falsafa*, as given in Dunyā’s edition⁴⁵⁸, is – interestingly – the exact opposite: *al-‘ālam^u laysa bi-qadīmⁱⁿ* («The world is not eternal»). Here again, then, al-Ġazālī might actually have chosen an anti-eternalist statement for his original example, which, in this case, should be tightly paired with the unambiguous example of an affirmative clause – «The world has an origin» – given just before (case [12] in the table)⁴⁵⁹.

On their own, the preceding occurrences would still not allow to draw any definite conclusion about al-Ġazālī’s actual position on the issue of the world’s origin in the *MF*. However, other examples are in themselves striking confirmations of his underlying anti-eternalist stance, which is therefore also corroborated by the qualitatively weaker, but quantitatively not negligible, cases I listed before. In occurrence number [5], for instance, the truth of the temporal origin of the world is contrasted with the immediately apparent falsity of the identity of man and stone. At number [21], al-Ġazālī commits to a completely spontaneous addition to Avicenna’s original text, in order to further qualify the meaning of anteriority and posteriority, as he writes: «One says that God Most High is before the world». One might think of course that the anteriority here at stake is logical or ontological rather than chronological, but it is important to remark that this statement is not to be found in Avicenna’s Persian text⁴⁶⁰. Being al-Ġazālī’s own addition, it then forms a system with all the several other occurrences of this kind of ‘theological’ examples, all strongly directed towards a temporal – and not only ontological – interpretation of God’s priority over the world.

In a way, then, *repetita iuvant*: the reader of the *MF* is constantly subjected to the surreptitious reaffirmation of the world’s origin in time, while the reader of the *DN* does not receive at any rate the same treatment. This impression, built on both quantitative and qualitative considerations, is reinforced by the three last cases listed in Table 1, each of which is particularly interesting in its own right. Case [22], taken from the third treatise of the *Metaphysics*, deems the notion of the eternity of the world to be a specious argument [šubha]⁴⁶¹, while the good thinker, the intelligent man, positively knows that the world has

⁴⁵⁸ Cf. *MF*, *Mantiq*, ed. DUNYĀ 1961: 57.6; see the variant reading given *ad locum* between dashes.

⁴⁵⁹ The circumstance would be significant even if the reading *al-‘ālam^u laysa bi-qadīmⁱⁿ* were not originally Ġazālīan. Indeed, if such an anti-eternalist variant originated in the process of transmission of the text, it would be the proof of a subtly anti-eternalist way of reading the *MF*, as opposed to the purely Avicennan way of interpreting the text displayed by certain tokens of Arabic, Latin, and Hebrew reception. On these, cf. respectively §2.1.1. *Trimming al-Ġazālī: A Decurated Arabic Manuscript*, §2.1.3. *Ibn al-Malāḥimī*, §2.2. *Latin*, and §2.3. *Hebrew* below.

⁴⁶⁰ Cf. IBN SĪNĀ, *DN*, *Ilāhiyyāt*, ed. MO’ĪN 1952: 50.12-51, and the best available translation, in French, in ACHENA-MASSÉ (1) 1955: 125-127.

⁴⁶¹ This term, which shares the Arabic root with the far more common verb for «resemble, bear a resemblance, be similar» (šābiḥa, in the III stem), takes its meaning from the passive of the II stem (šubbiḥa, «to be doubtful, dubious, uncertain, obscure») and led to a misunderstanding in the Latin translation. Instead of the correct translation: «As if he had heard [his opponent] saying: “The world is eternal”, by means of a *specious argument* [šubha] *such and such*, while he knows that it has an origin», the Latin text reads: «Sicut si audierit dici quod mundus non cepit eo quod videtur *similis illi, et illi corpori*. Ipse vero novit, et quia cepit [...]» (emphasis added). Gundissalinus is namely forced to add the word ‘body’ in order to make sense of the relationship of resemblance

an origin. It is important to remark that this example of intuitive knowledge, which allows one to counteract the argument of his opponent before having unreel a proper discursive reasoning, is assimilated after a few pages with God's own kind of knowledge⁴⁶². The trustworthiness and value of the example seem thus strengthened by the epistemologically authoritative recourse to a comparison with divine knowledge. Analogously, case [23] concludes this line of argument by stating again *expressis verbis* the absurdity, or falsity [Arabic *buṭlān*, Latin *falsificare*] of the doctrine of the eternity of the world. Finally, case [24], from the *Physics*, adds the knowledge of the origin in time of the world to Avicenna's own example of a theoretical piece of knowledge, known thanks to the speculative faculty. The original Avicennan example was the affirmation itself of the Islamic *tawḥīd* («God Most High is unique [*wāḥid*]»⁴⁶³), on whose veracity we can be certain that al-Ġazālī, as an orthodox Muslim, was indeed committed. Thus, the origin in time of the world is invested, in the *MF*, of a similarly high degree of truthfulness⁴⁶⁴.

In my opinion, the complex of these examples would allow a reader to ascertain without a doubt al-Ġazālī's own underground opposition to the doctrine of the eternity of the world. However, I think it would need a very attentive and discerning reader to do so. The examples are indeed deployed throughout the text, but they are also very short statements, which could easily go unnoticed. Moreover, the picture is blurred by the not negligible fact that when al-Ġazālī discusses *apertis verbis* the issue of the origin of the world in the *MF*, he does so in mostly Avicennan terms, thus concluding for, and not against, the eternity of the world⁴⁶⁵. This clearly ambivalent attitude, which is to be considered a trademark of the *MF* in its continuous effort to achieve a philosophical 'middle way' with respect to the perceived extremes of *falsafa*, on the one hand, and of at least some strands of *kalam*, on the other hand⁴⁶⁶, might very well appear unbalanced, and leaning towards Avicenna's own eternalist position. This circumstance can then explain the general confidence of Latin readers about the followership and dependence on Avicenna of their «Algazel». However, even in Latin environment some extravagant comments by Albert the Great might indicate the actual recognisability of al-Ġazālī's genuinely anti-eternalist position, under the deceptive layers of the sheer and apparently neutral exposition of Avicennan doctrines performed by the theologian in the *MF*⁴⁶⁷.

of the world with some for him unspecified object. The Arabic text, on the contrary, read simply *kaḏā wa-kaḏā*, 'such and such', as an attribute to qualify the misinterpreted word *ṣubḥa*. For an interpretation of the word *ṣubḥa* in al-Ġazālī with the close sense of 'ambiguity' (French *ambiguïté*) cf. JABRE 1970: 124 (n. 5), *sub voce*.

⁴⁶² Cf. *MF, Metaphysics* III.b.4, DUNYĀ 1961: 231.19-232.1; see *infra*, Translation, §209.

⁴⁶³ See *MF, Physics*, IV.3, ed. DUNYĀ 1961: 359.12 [Arabic *Allāh^u ta'ālā wāḥid^{um}*] to be compared with IBN SĪNĀ, *DN, Ṭabī'yyāt*, ed. MEŠKĀT 1952: 101.6 [Persian *ḥōdā yekī ast*]; see also the French translation in ACHENA-MASSÉ (II) 1958: 65.

⁴⁶⁴ I have discussed this striking psychological example in SIGNORI, *Variations on a theme by Avicenna*, cit., together with another variation introduced by al-Ġazālī with respect to Avicenna's *Dānešnāme*, namely the omission of the notion of «holy intellect/soul» (*naḥs al-quḏsī*). See also JANSSENS, *Le Dāneš-Nāme d'Ibn Sīna: Un texte à revoir?*, cit., p. 167 fn. 6.

⁴⁶⁵ See *MF, Metaphysics* I.8, DUNYĀ 1961: 205.12-209 = Translation, §§171-175 (corresponding to the Latin text of the *Summa theoriae philosophiae* edited by MUCKLE 1933: 47.22-51); cf also *infra*, T4.

⁴⁶⁶ The peculiar approach to philosophical and religious terminology displayed by the author of the *MF* and discussed in the previous §1.7, *Lexicon*, is another case in point of this Ġazālīan attitude. For further reflection on this cf. also *infra*, §1.10. *The First Text of ḥikma*.

⁴⁶⁷ I have argued in this direction in SIGNORI 2020^b.

Be the actual purport of that medieval Latin reception as it may, the non-Avicennan character of some of al-Ġazālī's exemplifying materials in the *MF* certainly requires the modern interpreter to acknowledge a specific degree of autonomy of thought to the Arabic work with respect to Avicenna's source text. Far from being a purely even-handed «account» [*ḥikāya*] of what the philosophers meant, according to the self-styled description contained in the *Prologue*, al-Ġazālī's writing thus reveals itself as a stratified work, which expresses some of the mature views of its author in a personal way, at different rhetorical levels, and with different rhetorical devices⁴⁶⁸. Only a global analysis of these levels and these devices, including the apparently irreproachable, but actually theory-laden, strategies of exemplification employed in the text, can give back a faithful image of such a complex work as the *MF*, explicitly written at the perilous crossroads between Avicennan *falsafā* and its critical elaboration.

⁴⁶⁸ As noticed in §1.2 (on the dating of the *MF*) and §1.6.2 (on the indefinite descriptions used in the work), an actually 'detached' attitude with respect to the philosophers – often quoted in the plural of the third person – is however to be found throughout the text of the *MF*, in apparent keeping with the statements of the *Prologue*. The semi-critical nuance of this 'detachment', also argued in §1.6.2, also approaches it to the considerations advanced here.

1.9.

The Authority of Revelation

A strong relation and dialectic engagement with the sacred book of Islām, the Qurʾān, as well as with the tradition of the Prophet Muḥammad's deeds and sayings [*aḥādīṭ*, sg. *ḥadīṭ*], is not uncommon in the production of the Arabophone philosophers usually considered under the label of *falsafa*, much like the philosophical interplay with the Bible was often determinant for both Jewish and Christian thinkers, not only within the chronological boundaries of the 'religious' Middle Ages. A most notable and early example of this interplay in Muslim environment is al-Kindī's rationalistic and philosophical interpretation of the Qurʾānic verse on the prostration of heavens in his brief treatise *On the Prostration of the Outermost Body* [*R. fī l-ibāna 'an suḡūd al-ḡirm al-aqṣā*]⁴⁶⁹. Avicenna's own usage of the Qurʾān has been the object of some recent doctrinal analysis, focused in particular on the philosophical methods displayed by Avicenna when considering the sacred book and the tradition of the *aḥādīṭ*⁴⁷⁰, as well as on his interpretations of specific verses of the Qurʾān⁴⁷¹. The relationship displayed by the rationalist Aristotelian Averroes with the sacred book of Islam was also addressed, at least in part, in scholarly analysis⁴⁷².

However, it can be argued that in al-Ġazālī's *MF* the tendency to quote the Qurʾān or the tradition of the *aḥādīṭ*, and especially to integrate them in the flux itself of the philosophical prose, is somewhat more pronounced than in its direct Avicennan source⁴⁷³. Moreover, and as opposed to what is the rule for Avicenna, some of the religious expressions employed by al-Ġazālī in the *MF* appear to have a distinctive ṣūfī overtone to them⁴⁷⁴. While scholarship has rightly, but perhaps too fondly, underlined the presence in Avicenna himself of many of the religious references that will be listed in what follows⁴⁷⁵, I rather wish to

⁴⁶⁹ Ed. ABŪ RĪDA 1950 (1). Cf. the English translation of the treatise in ADAMSON-PORMANN 2012: §VI.4. On al-Kindī's exegesis of the Qurʾān see JANSSENS 2007.

⁴⁷⁰ Cf. e.g. DE SMET-SEBTLI 2009, as well as the recent communication by Amos BERTOLACCI, *Things That No Eye Has Ever Seen and No Ear Has Ever Heard: Avicenna and the Epistemic Limits of the Revealed Religion, Between Islam and Christianity*, International Conference on Philosophical Anthropology in Ibn Sīnā, Iranian Institute of Philosophy, Tehran 6-9 February 2022. A different aspect, concerned with the 'disobedience of matter' according to both philosophical and Qurʾānic perspectives, is treated in DE CILLIS 2011.

⁴⁷¹ Among these, the famous verse of the light in *Qurʾān* 24.35 represents a case in point: on Avicenna's, al-Ġazālī's, and Ibn 'Arabī's interpretation of it cf. ZINE 2009. For another important case of Qurʾānic interpretation in Avicenna see MICHOT 1980. For the important point that a mystical or religious lexicon does not entail in Avicenna any concession to a less rationalistic approach to philosophy, based on a thorough analysis of the terminology of the *Iṣārāt*, cf. RAPOPORT 2019.

⁴⁷² Cf. PUIG MONTADA 2013. See also WOHLMAN 2010, to be read together with the review essay on it by MAYER 2013, and TAYLOR 2012.

⁴⁷³ On al-Ġazālī's general relationship with the Qurʾān see the accessible synthesis by WHITTINGHAM 2007.

⁴⁷⁴ Cf. *infra* in this section the discussion of the case of *rabb al-arbāb*, «Lord of Lords». In the same semantic area of divine lordship, cf. also the occurrence of the notion of *ḥaḍra rubūbiyya* («sovereign presence») at *Metaphysics* III.b.11 (see §227 in the Translation), used as a highly mystical periphrasis to designate God. For the concept of 'lordly' or 'sovereign presence' (or even 'presence of the Lordship', with annexation [*ḥaḍrat^u l-rubūbiyyat^u*]) in ṣūfī traditions, cf. WAUGH 2016. Interestingly, the term *ḥaḍra*, 'presence', is also commonly used in ṣūfī fraternities to indicate the supererogatory rites performed by the confraternity of the believers.

⁴⁷⁵ Cf. JANSSENS 2019: 84; 88 and fn. 33; 93; 107; 109; etc.

highlight more generally the shift of emphasis in the direction of the authority of revelation that can be detected in the *MF* with respect to the *DN*. Although already present in Avicenna, some of the Qur'ānic quotations are not only reproduced in the *MF* in correspondence of the passage where they appeared in the source, but are also repeated by al-Ġazālī elsewhere in the text, with the result of stressing their theoretical, and in some cases even epistemological, importance. In some other cases, a reference to the Qur'ān similar to the one employed in the *MF* is indeed to be found in Avicenna, but in another text of his, different from the *DN*. The explanation of both circumstances requires the acknowledgment of al-Ġazālī's conscious will to select Avicennan passages particularly leaning on Islamic revelation, with the effect of increasing the relative importance of religious validation within the philosophical discourse, well beyond Avicenna's own concessions to Muslim theology (as impactful as these might be thought to be in their own right).

In what follows, I will first of all discuss the proper Qur'ānic quotations that are to be found in the *MF*, as well as the Qur'ānic expressions more implicitly embedded within the prose of the philosophical text (§1.9.1). Then, I will consider the traditionist quotations with which al-Ġazālī occasionally substantiates the philosophical doctrine he is time by time expounding (§1.9.2). Finally, I will complete the discussion by taking into account the occurrences of terms related to Islamic revealed law (*šar'*, *šarī'a*, and derivative words) in the text of the *MF* (§1.9.3). Overall, the analysis will show that a distinctive appreciation and valuing of the epistemic corroboration that revealed tenets can bring to philosophical arguments is well visible throughout the *MF*, and especially so in the final treatise of the *Physics*, which grapples with the typically Islamic issue of prophecy.

1.9.1. Qur'ānic Quotations

The differentiated usage of the Qur'ān in the *MF* can be rubricated under two different labels: (i) the one of proper quotations, which entail the reproduction (more often explicit, but in at least one case also implicit) of a recognisable Qur'ānic sentence; and (ii) the one of simpler expressions, *i.e.* the usage in the context of the philosophical argumentation of single words (or phrases) of Qur'ānic provenance, however not articulated in a proper sentence⁴⁷⁶. The two phenomena are of course very closely related, inasmuch as they both evidently depend on the Qur'ān as sacred book, and thus constitute a sympathetic concession to the usage of revealed premises, as it were, in the philosophical exposition. However, Qur'ānic quotations are tendentially more conscious and explicit – a circumstance which approaches them to the *hadīth* quotations studied in the next section⁴⁷⁷ –, while the

⁴⁷⁶ In the analysis of the latter, I have not taken into explicit account what can be considered as a semi-Qur'ānic expression like the *šūfī* phrase *sirr al-qadar*, which occurs in the *MF* in *Metaphysics* V, at §314 of my Translation. Indeed, the notion of 'destiny' as expressed by *qadar* or *qadr* is indeed present in the Qur'ān, but the entire, stylistic phrase «the secret of destiny» is not. The expression recurs instead in the title of the likely pseudo-Avicennan *Risāla fī sirr al-qadar*, for which cf. the English translation in HOURANI 1963. Cf. also the Commentary *ad* §314 for further information.

⁴⁷⁷ See *infra*, §1.9.2.

employment of independent Qur'ānic expressions appears, generally speaking, more implicit. Specifically, the Qur'ānic expressions result more deeply embedded within the text than the proper quotations, and thus less dispensable than them for the sake of the comprehension of the arguments time by time at stake.

This situation is confirmed by the analysis of the fate of both series of citations in the Latin translation of the *MF*: while the explicit quotations are not translated by Gundissalinus and Iohannes Hispanus in as many as four cases out of the total eight⁴⁷⁸, the Qur'ānic expressions always have a counterpart in the Latin text (though sometimes periphrastic or even misleading)⁴⁷⁹. As for the explicit quotations, the tendency of the Latin translators to omit them altogether is probably part of a more general strategy of cultural acclimation, which I briefly explore in a devoted section below⁴⁸⁰. Looking more closely at the quotes of which some sort of translation is nonetheless given, the trend towards omission (or else towards misrepresentation) of the recognisably Qur'ānic citations is magnified. Apart from the aforementioned four cases of plain omission, in one more case the Latin text has a unified periphrastic rendition of two separate Qur'ānic quotations of the original Arabic⁴⁸¹. Moreover, the Qur'ānic expression «Man is in loss», which poetically expresses the condition of ontological deprivation in which mankind lies, is grossly mistranslated into Latin as a geographical statement (*Homo est Toleti*, i.e. «[A] man is in Toledo» – the very town in which the Latin version of the *MF* was drafted). Finally, it may be significant that the only case in which the thrice repeated quotation of *Qur'ān* 20.50⁴⁸² is actually translated into Latin is precisely the sole occurrence in which the citation is not presented explicitly by al-Ġazālī as a *verbatim* quote of the sacred book, but rather inserted silently within the prose of the text⁴⁸³. This circumstance appears to confirm what was noticed above for the Qur'ānic expressions, as opposed to the proper citations, i.e. the fact that they were likely translated into Latin because they were not explicitly acknowledged as belonging to the sacred book of Islam, and thus were not subjected to the process of acclimation performed by the Toleman translators on conspicuously non-Christian material.

A further important feature of the Qur'ānic quotations, partly shared also by the Qur'ānic expressions but even more prominent in the case of the proper quotes, is the fact that they are often repeated in the text, so that only four different verses of the Qur'ān are actually quoted in the course of the eight total citations of the sacred book. In particular, as mentioned, *Qur'ān* 20.50 is reiterated no less than three times in the text of the *MF*, twice in *Metaphysics* and once in *Physics*; *Qur'ān* 103.2 is quoted two times in *Logic*; and *Qur'ān* 87.3 appears again twice, once in *Metaphysics* and once in *Physics*. From the point of view

⁴⁷⁸ Cf. *infra*, Table 17, numbers [2] to [5].

⁴⁷⁹ Cf. *infra* in this section for further discussion.

⁴⁸⁰ Cf. *infra*, §2.2.1, *Cultural Acclimations in the Latin Translation*. A parallel case of alteration and omission of Qur'ānic and *aḥādīṭ* quotations in the process of translation of an Arabic treatise is explored, with a wealth of examples, by DI DONATO 2006 as far as Averroes' *Kitāb al-kašf 'an manāhiġ al-adilla fi 'aqā'id al-milla* [*Book of the Unveiling of the Methods of the Proofs about the Principles of Religion*] is concerned. The *Kitāb al-kašf* (completed in 1180) underwent a double process of translation, first from Arabic into Hebrew (before 1347), and then from Hebrew into Latin (by Abraham de Balme, at the beginning of the 16th century), thus constituting a very interesting case for the transmission to different cultural milieus of the numerous Qur'ānic quotes it contains.

⁴⁸¹ See *infra*, Table 17, cases [7]-[8].

⁴⁸² Cf. *infra*, Table 17, numbers [3], [6], and [8].

⁴⁸³ See *infra*, Table 17, number [6].

of both function and style, all these quotations bear a not negligible importance, since it can be argued that they betray a peculiar Ġazālīan stance, which emerges beside, and beyond, the purely Avicennan tenets quite faithfully taught by the *MF*.

It is first of all important to notice, with previous scholarship⁴⁸⁴, that the set of three Qurʾānic quotations⁴⁸⁵ occurring in the *Metaphysics* of the *MF* at §220 of my Translation – a section of the text which focuses on the First Principle’s providence – reproduces Avicenna’s citation of the same group of Qurʾānic verses in a parallel, but not identical, passage of the *DN*, specifically devoted to God’s wisdom⁴⁸⁶. From the point of view of al-Ġazālī’s doctrinal stance, and as opposed to Avicenna’s usage, it is remarkable that the terminology employed in §220 up to the point in which the quotations occur precisely mirrors the lexicon of those Qurʾānic lines, with the frequent use, in particular, of the two verbs *ḥalaqa* (‘to create’) and *hadà* (‘to lead on the right way’, ‘to guide’). This coherent lexical choice (not mirrored in Avicenna’s *Urtext*) has the effect – also on a rhetorical level of the argumentation – of immediately conjoining the philosophical reasoning to the quotations of the *Qurʾān* brought about to corroborate it, thus showcasing the perfect concurrence of philosophy and revelation on the point of God’s active providence [*ʾināya*].

Moreover, al-Ġazālī chooses to reproduce the same Qurʾānic quotes – with the exception of 26.78, not repeated – also at the very end of the *MF*, in *Physics* V.10⁴⁸⁷. While Jules Janssens⁴⁸⁸, despite rightly noticing this circumstance, has been eager to downplay the originality of this addition by recalling the presence of the same quotations in the aforementioned metaphysical passage, the relevance of the conclusive collocation given by al-Ġazālī to those Qurʾānic quotes cannot be overlooked. Rather, one should acknowledge al-Ġazālī’s conscious choice of citing the *Qurʾān* at the very end of his philosophical work, in a highly theoretical *explicit* and, what is more, without a properly analogous model on Avicenna’s part. While the same quotes do appear elsewhere in Avicenna’s wide-ranging work, as we have seen, the attention of the interpreter should indeed be focused, in my view, on their conspicuous absence in the conclusion of the *DN*, as opposed to the *explicit* of the *MF*, which proudly and prominently displays them with all the relief granted by their conclusive, and thus by all means apical, position in the text.

The following Table 17 reproduces the eight proper Qurʾānic citations occurring in the *MF*, providing the indication of the *locus* in which they appear; of the Arabic formulation chosen by al-Ġazālī, followed by my English and by the medieval Latin (when extant) translations; of the Qurʾānic verses quoted (in bold the number of the actual line cited within the broader passage); and finally of the Arabic text of the *Qurʾān* which is time by time quoted.

⁴⁸⁴ See JANSSENS 2019: 107.

⁴⁸⁵ *I.e.* 20.50, 26.78, and 87.3; see *infra*, Table 17, [3], [4] and [5].

⁴⁸⁶ Cf. *DN*, ed. MOʿĪN 1952: 100.3-9; see also the French translation in ACHENA-MASSÉ (1): 165.29-166.2.

⁴⁸⁷ Cf. *infra*, Table 17, [7] and [8].

⁴⁸⁸ JANSSENS 2019: 121.

TABLE 17. Qur'ānic quotations in the MF

	LOCUS IN THE MF	QUOTATION IN THE MF			QUR'AN	QUR'ANIC VERSE(S)
		Arabic	English	Latin		
1	Log. III.2, §28	<i>al-insān^u fī ḥusrⁱⁿ</i>	«Man is in loss»	<i>Homo est Toleti</i> [!]	103:2	إِنَّ الْإِنْسَانَ لِفِي خُسْرٍ Cf. [2]
2	Log. IV, §75	= [1]	= [1]	---	= [1]	Cf. [1]
3	Met. III.b.7, §220	<i>allāḍī a'ṭa kull^a šayⁱⁿ ḥalq^a-hu tumm^a hadà</i>	«[He] Who gave each thing its creation and then guided [it]»	---	20:50	قَالَ رَبُّنَا الَّذِي أَعْطَى كُلَّ شَيْءٍ خَلْقَهُ ثُمَّ هَدَى Cf. [6] and [8]
4	Met. III.b.7, §220	<i>allāḍī ḥalaqa-nī fa-huwa yahdī-ni</i>	«[He] Who created me, He [also] guides me»	---	26:77-78	فَأَيُّهُمْ عَدُوٌّ لِي إِلَّا رَبُّ ﴿٧٧﴾ الَّذِي خَلَقَ الْعَالَمِينَ خَلَقَنِي فَهُوَ يَهْدِينِ
5	Met. III.b.7, §220	<i>wa-llāḍī qaddara fa-hadà</i>	«[He] Who destined and guided»	---	87:1-3	سَبِّحْ اسْمَ رَبِّكَ ﴿١﴾ الَّذِي خَلَقَ الْأَعْلَى ﴿٢﴾ وَالَّذِي قَدَّرَ فَسْوَى فَهْدَى Cf. [7]
6	Met. III.b.9, §225	<i>a'ṭa kull^a šayⁱⁿ ḥalq^a-hu tumm^a hadà</i>	He gave each thing its creation and then He guided [it] Not introduced as a <i>verbatim</i> quote	<i>quoniam attributa est unicuique eorum creacio sua, et deinde recognicio</i>	20:50	Cf. [3] and [8]
7	Phys. V.10, §453	<i>qaddara fa-hadà</i>	«[He] destined and guided»	<i>Et propter hoc dicitur quod deus indidit rebus animadvertendi naturam, quia sicut dedit omni rei creacionem suam, sic et sensum animadvertendi</i>	87:1-3	Cf. [5]
8	Phys. V.10, §453	<i>a'ṭa kull^a šayⁱⁿ ḥalq^a-hu tumm^a hadà</i>	«He gave each thing its creation and then guided [it]»	<i>Et propter hoc dicitur quod deus indidit rebus animadvertendi naturam, quia sicut dedit omni rei creacionem suam, sic et sensum animadvertendi</i>	20:50	Cf. [3] and [6]

While the Qur'ānic quotations almost always produce some sort of disrapture in the flux of the text, because of their perceivable alterity with respect to the philosophical prose, the Qur'ānic expressions – despite being very characteristic in their own right – are more plainly inserted within the body of writing. Mostly located in *Metaphysics*, with few though important exceptions in the psychological and eschatological treatises of the *Physics*, and no occurrence at all in *Logic*, the Qur'ānic expressions of which al-Ġazālī makes use in the *MF* heavily connote his text in the direction of religious revelation. As already in the case of the proper quotations, this is once again emphatically not meant to say that Avicenna could not have used the same expressions in his own works – in fact, he demonstrably did. Rather, my aim is to remark on the increased relative frequency with which al-Ġazālī employs expressions and patterns belonging to Islamic revelation, with respect to Avicenna's own usage. While recourse to the Qur'ān, and to some of its most characteristic formulations, is relatively common in Avicenna himself, al-Ġazālī's style is more heavily informed by it, just like he is more prone than Avicenna to the employment of the angelical religious jargon, as opposed to the technical lexicon of the separate intellects preferred by the *falāsifa*⁴⁸⁹.

In cases [1]-[2] of the following Table 18, for instance, two occurrences of the Qur'ānic phrase *mitqāl darrat*ⁱⁿ – the 'weight of an atom' or of a 'speck of dust' –, used by al-Ġazālī in the context of his discussion on God's knowledge of particulars, are considered. The same expression also occurs in Avicenna, not however in the *DN*, but in chapter VIII.6 of the *Metaphysics* [*Ilāhiyyāt*] of the *K. al-Šifā*⁴⁹⁰. Nonetheless, the fact that the Qur'ānic expression is not present in the corresponding passage of the *DN* makes the addition extremely significant, because it suggests that al-Ġazālī consciously selected, for the treatment of this rather crucial topic of his philosophical *summa*, precisely those Avicennan passages that showed the most noticeable Islamic, and more generally religious, influences. Not by chance, the Qur'ānic appeal to God's knowledge of even the weight of an atom also opens the Thirteenth discussion of al-Ġazālī's *TF*, where Avicenna's philosophical doctrine will be sophisticatedly criticized⁴⁹¹. Analogously, the Qur'ānic *al-lawḥ al-maḥfūz* – the «well-preserved Table», which stands in the *MF* for the «spiritual, noble, intellectual substances» of *falsafa*⁴⁹² – does not appear in the *DN*, while it is prominently present in the *TF*⁴⁹³. Interestingly, the same notion also appears in the *Revival of the Religious Sciences*, where its role has been described as functionally equivalent to that of the agent intellect for the *falāsifa*⁴⁹⁴.

At numbers [4] to [6] and [7] to [9], two highly stylistic Qur'ānic expressions appear: «Lord of the worlds» [*rabb al-'ālamīna*], and «lofty congregation» [*al-mala' al-a'lā*]. Both repeated three times in the course of the *MF*, they respectively designate God as the First

⁴⁸⁹ Cf. *supra*, §1.7.2, *Angels and Intellects*.

⁴⁹⁰ *Ilāhiyyāt* VIII.6, ed. QANAWATĪ-ZĀYID 1960: 359 (§6.2 in BERTOLACCI 2007: 668). Cf. also JANSSENS 2019: 106 and fn. 96.

⁴⁹¹ See *TF*, MARMURA 2000: 134.

⁴⁹² See *MF, Physics* V.4, Translation §435. Cf. *supra*, §1.7.2, *Angels and Intellects*, for an analysis of the important bearings of this equivalence within the the lexicon of revelation employed in the *MF*, and see also *infra*, §1.9.3, for the mention in this same passage of the «revealed law» [*šar'*].

⁴⁹³ Cf. *TF*, Discussion 16, MARMURA 2000: 153. See *infra*, Commentary *ad* §435 for further discussion of this important quotation, and cf. also SIGNORI 2020³: 93.

⁴⁹⁴ Cf. GRIFFEL 2009: 194.

Principle, Lord of heaven and earth alike⁴⁹⁵, and the angelic ranks that populate the intermediate domain between God and mankind. Interestingly, the three metaphysical occurrences of *rabb al-‘ālamīna* all have to do with the relationship between the angels (or celestial intellects) and the First Principle: angelic happiness is greater than human happiness due to the angels’ greater vicinity to the Lord of the worlds ([4]); the celestial bodies’ circular movement is an act of worship of their movers toward the Lord of the worlds ([5]); and the heavenly intellects are angels «close» [*muqarrabūna*] to God because they are closer in attributes to Him than the celestial souls ([6]). This latter occurrence of *rabb al-‘ālamīna* is particularly interesting, because Dunyā, in his germinal interlinear *apparatus*, provides here the variant reading *rabb al-‘arbāb* («Lord of the lords»). This characteristic phrase, of unmistakable ṣūfī connotations⁴⁹⁶, was in all likelihood also the reading of the Arabic anti-graph of the Latin translation of the *MF*, which has in this point the rendition *dominus dominorum* (as opposed to *dominus [deus] seculorum* employed for *rabb al-‘ālamīna*). Moreover, the reading *rabb al-‘arbāb* is witnessed in Ibn al-Malāḥimī’s *verbatim* quotation of the same passage of the *MF* in his *Tuḥfa al-mutakallimīna*⁴⁹⁷. While *rabb al-‘ālamīna* occurs again, as mentioned, in further texts of the *MF* expressing very similar doctrines to this one, the extreme frequency of the expression in the Qur’ān⁴⁹⁸ probably makes it the *lectio facilior* with respect to the *difficilior* ‘ṣūfī’ reading *rabb al-‘arbāb*, which for its part seems to have a quite solid attestation in both the direct (ms. A) and the indirect (Ibn al-Malāḥimī, Latin text) tradition⁴⁹⁹.

As for the expression «lofty congregation» [*al-mala’ al-a’lā*], its occurrences in the Qur’ān are far more circumscribed (only two cases) than those of ‘Lord of the worlds’, but its presence in the *MF* (three occurrences) makes it still very significant in the economy of al-Ġazālī’s work. Further possible translations of the phrase include ‘celestial rank’, ‘heavenly host’, ‘chiefs on high’ or ‘Sublime’, ‘Exalted Assembly’, which are all meant to describe altogether the angelical hierarchies, ministers and intermediaries of God’s power over His creation. God’s power, in its link with His will, is also the topic of Qur’ānic expression number [3], which expresses the possibility for the Creator of acting and not acting voluntarily, without any constraint other than His own essence, in Itself free and willing.

Finally, number [10] consists in the mention of a Qur’ānic episode, in turn reminiscent of the already Christian tale of the Seven Sleepers of Ephesus. The seven youths of that preceding tradition, called in the Qur’ān «Companions of the Cave» [*aṣḥāb al-kaḥf*], are told to have slept in a cave for three-hundred years⁵⁰⁰, and to have then emerged from it unaware

⁴⁹⁵ For a lexical and doctrinal analysis of this difficult, and somewhat ambiguous, Qur’ānic expression, cf. CALDERINI 1994.

⁴⁹⁶ Cf. for instance its prominent usage in DĀWŪD AL-QAYṢARĪ’S (d. 1350) *Premise* to his commentary on IBN AL-‘ARABĪ’S *Fuṣūṣ al-ḥikam*, the so-called *Muqaddīma al-Qayṣarī*, now available in English translation in ALI 2020 (cf. e.g. Ch. 9: 188).

⁴⁹⁷ Cf. *infra*, §2.1.3, *Ibn al-Malāḥimī*, Table 22, n. [26].

⁴⁹⁸ Cf. *infra*, Table 18, [4]-[6], where I listed 43 occurrences of the phrase in the Qur’ān.

⁴⁹⁹ A possible further indirect witness of the soundness of the reading *rabb al-‘arbāb* ‘Lord of the Lords’ is given by a passage of the so-called Hebrew *Aḡwiba* attributed to al-Ġazālī and studied in LANGERMANN 2011: cf. esp. the translation of an excerpt given *ivi*, 689: «The souls are the heavenly angels, as they are united with their bodies. Those intellects are the angels that maintain their limpidity without reliance upon materials, and their proximity in attributes to the Lord of Lords» (cf. also *supra*, §1.7.2. *Angels and Intellects*, for this reference). Moreover, the expression also occurs in *TF*, Discussion 6, MARMURA 2000: 107.

⁵⁰⁰ *Qur’ān* 18.25.

of the elapsed time. Their mention in the *MF*, which has no parallel in the *DN*⁵⁰¹, is functional to the discussion of the subjective perception of time. While not particularly challenging from a theoretical point of view, such a mention is important, once again, for realising al-Ġazālī's willingness to provide a religious validation – broadly taken – for the philosophical tenets he is teaching, far more often than Avicenna does. Even if we are to posit an almost entirely Avicennan derivation of the *MF*, the conscious selection of Avicennan passages which provide such a religious validation, but which are dislocated in very different works of Avicenna's, must be seen in itself as a remarkable feature of al-Ġazālī's approach to the work of the Šayḥ al-ra'īs⁵⁰².

The following Table summarises the presence of Qur'ānic expressions in the *MF*, providing time by time the corresponding verses of the Qur'ān and the – often paraphrastic, and often misleading – Latin rendition given of them by the medieval translators of the text. I refer the reader interested in more discussion on these accidents of translation to the Commentary *ad locum* of each of the passages of the *MF* in which the expressions occur.

TABLE 18. *Qur'ānic expressions in the MF*

	EXPRESSION IN THE <i>MF</i>			LOCI IN THE <i>MF</i>	QUR'ĀNIC VERSE(S)
	Arabic	English	Latin		
1 2	<i>mitqāl darrat</i> ⁱⁿ	the weight of an atom	(1) <i>nullum... particulare...</i> <i>adeo minimum;</i> (2) <i>nihil... adeo minimum</i>	<i>Met.</i> III.b.6, §214 (2x)	10.61; 34.3; 35.11
3	<i>man fa'ala in šā'a, wa-lam yaf'al in šā'a</i> * [<i>man in šā'a fa'ala, wa-in lam yašā' lam yaf'al A</i>]	he who acts if he wants [so], and does not act if he wants [so]	* <i>ut faciat cum voluerit, et non faciat cum noluerit</i>	<i>Met.</i> III.b.8, §222	18.23-24; 37.102
4 5 6	<i>rabb al-'alamīna</i> (6) * [<i>rabb al-arbāb A</i>]	Lord of the worlds (6) * [Lord of the lords]	(4) <i>ad dominum deum seculorum;</i> (5) <i>domino seculorum;</i> (6) * <i>dominum dominorum</i>	(4) <i>Met.</i> III.b.11, §237; (5) <i>Met.</i> IV.b.3.1, §288; (6) <i>Met.</i> IV.b.3.4, §293	1.2; 2.131; 5.28; 6.45; 6.71; 6.162; 7.54; 7.61; 7.67; 7.104; 7.121; 10.10; 10.37; 26.16; 26.23; 26.47; 26.77; 26.98; 26.109; 26.127; 26.145; 26.164; 26.180; 26.192; 27.8; 27.44; 28.30; 29.10; 32.2;

⁵⁰¹ JANSSENS 2019: 110 aptly remarks that the example of the 'People of the Cave' is added by al-Ġazālī, although he references Avicenna's *al-Samā' al-ṭabī'ī* 152.8 for comparison.

⁵⁰² Cf. *supra* the sections on *Lexicon* and *Examples*, and see *infra* in the conclusive remarks (§1.11) for a reprise of this – in my view crucial – aspect.

	EXPRESSION IN THE <i>MF</i>			LOCI IN THE <i>MF</i>	QUR'ĀNIC VERSE(S)
	Arabic	English	Latin		
					37.87; 37.182; 39.75; 40.64-66 (3x); 41.9; 43.46; 45.36; 56.80; 59.16; 69.43; 81.29; 83.6
7 8 9	<i>al-mala' al-a'la'</i>	the lofty congregation	(7) <i>vastitatem</i> [!] <i>altissimam</i> ; (8) <i>vastitas</i> [!] <i>superior</i> ; (9) <i>ad plenitudinem</i> [sic pro <i>plenitudinem</i>] [!] <i>superiorem</i>	(7) <i>Met.</i> III.b.11, §238; (8) <i>Phys.</i> IV.3, §405; (9) <i>Phys.</i> V.4, §431	37.8; 38.69
10	<i>aṣḥāb al-kahf</i>	the Companions of the cave	<i>qui dicuntur dormisse multo tempore in spelunca</i>	<i>Met.</i> IV.b.1.3, §256	18.9-26
11	<i>al-lawḥ al-mahfūz</i>	well-preserved Table	<i>liberi</i> [sic pro <i>libri?</i>] <i>servati</i>	<i>Phys.</i> V.5, §435	85.22

1.9.2. *Ḥadīṭ* Tradition

Al-Ġazālī was bluntly recognised by scholarship as a «weak *muḥaddīṭ*»⁵⁰³. Indeed, the seven *aḥādīṭ* quoted within the text of the *MF* – one in *Logic*, two in *Metaphysics*, and as many as four in the sole Fifth treatise of the *Physics* – are not always deemed as sound by traditionalists. In one case (number [1] in the following Table 19), a sound *ḥadīṭ* of the Prophet – «Help your brother, whether he is an oppressor or an oppressed one» – is even quoted as a «seemingly famous» [*al-mashūra fi l-zāhir*] proposition, whose truth-value is absolutely opinable, and which is conclusively deemed to be plainly false. In this particular case, then, the recourse to the tradition of Muḥammad's deeds and sayings seems to be gainsaid in the light of the philosophical analysis of the different kinds of propositions which can form the premises of a syllogism.

As opposed to this rather atypical case, which could perhaps be explained in part by its logical collocation within the work, the further quotations of *aḥādīṭ* in the text of the *MF* are clearly meant to corroborate the philosophical doctrine that is time by time at stake, and even to validate it. This is most notably the case with the two couples of *aḥādīṭ* quoted in *Physics* V.4 (numbers [4]-[5] in Table 19) and *Physics* V.9 ([6]-[7]), respectively. In *Physics*

⁵⁰³ LEITES 2012: 133.

V.4, al-Ġazālī teaches, following Avicenna, that those who have tasted the pleasures of theoretical knowledge during life, and have yet chosen to abandon the way of intellectual perfecting, will suffer all the more after death, since to their pain will be added the mournful regret for what they have lost. This intellectualistic, Avicennan explanation is sealed and validated by al-Ġazālī with the recourse to prophetic material, as can be readily seen from the two *aḥādīṭ* there quoted, whose implicit assumption is in both cases that the knowledge attainable through human means alone is not the proper knowledge of God obtained through revelation: without the help of God, then, man is damned to misery even if he is as knowledgeable and learned as he can be⁵⁰⁴.

Even more paradigmatic is the case of the two *aḥādīṭ* quoted in *Physics* V.9, within the discussion on the first kind of prophecy – the one depending on the soul *qua* soul –, in order to secure the possibility of the soul’s action at a distance⁵⁰⁵. The rather gloomy example of the killing of the camel through the evil eye, in itself an example of the potential psychic activity outside the boundaries of the body, finds indeed a further possible support in a Qur’ānic source. As a matter of fact, the evil and fateful influence caused by envy is stigmatised in the Qur’ān in the brief poetic *sūra* of the Daybreak, where the pious man is said to «seek refuge in the Lord of daybreak [...] from the evil of an envier when he envies [*min šarrī ḥāsidiⁱⁿ idā ḥasada*]»⁵⁰⁶. The two *aḥādīṭ* selected by al-Ġazālī are thus able to weld the highly sophisticated concept of a *Fernwirkung* of the human soul, supported by a comparison with the purely philosophical notion of the influence on matter of the heavenly souls, and the revealed Qur’ānic background, which already warned the faithful against the perils of envy⁵⁰⁷.

As for the couple of *aḥādīṭ* appearing at the end of the Third treatise of *Metaphysics*, they serve the purpose of corroborating the apophatic theological position expressed in the preceding sections of the text. The quotation attributed to the Prophet Muḥammad ([2]) declares the human impossibility of praising God, since God alone is able to praise Himself. The *dictum* attributed to the companion of the Prophet Abū Bakr al-Šiddīq ([3]) is a clear statement of the motive of *docta ignorantia*, as it deems the notion of the impossibility to know as a kind of knowledge⁵⁰⁸. The two sayings, taken together, reinforce the philosophical argument on negative theology just expounded, thus confirming – by means of religious tools – the prior declaration of the impossibility of attaining a complete knowledge of God. Interestingly, the same couple of traditionist sources also appears in the *Kitāb al-tawḥīd wa-l-tawakkul* [*Book of Divine Unity and Trust in God*], the XXXV book of al-Ġazālī’s theological

⁵⁰⁴ For the contents of this paragraph, cf. SIGNORI 2020^a: 90-91.

⁵⁰⁵ On this important Avicennan-Ġazālīan doctrine and its Latin reception cf. DELAURENTI 2016^a; DELAURENTI 2016^b; HASSE 2016^b. Specifically on the Latin reception of al-Ġazālī’s camel example, cf. also MINNEMA 2017.

⁵⁰⁶ Cf. Qur’ān 113.1, 113.5.

⁵⁰⁷ Cf. SIGNORI 2018: 375-6 and relative footnotes; I reproduce in this paragraph also the materials of SIGNORI 2020^a: 95.

⁵⁰⁸ It might be worth noticing that the fortune of the saying expressing the idea of *docta ignorantia* in the Islamic milieu does not end with al-Ġazālī, but has an important aftermath in šūfī thought. As a matter of fact, it is quoted by Ibn al-‘Arabī in his *Fuṣūs al-Ḥikam* (*Bezels of Wisdom*, as ELMORE 1999: 145 translates the title), ed. ‘AFIFĪ 1946, vol. 1: 62; see ELMORE 1999: 146 fn. 86, and the English translation of the relevant passage in ELMORE 1999: 605 (see also *ivi* fn. 110, on the depreciation of this kind of *docta ignorantia* in the *Fuṣūs al-Ḥikam*, in contrast with al-Ġazālī’s highly appreciative understanding of it). The *dictum* also occurs, once more in close connection with the *ḥadīṭ* on the praise of God (and this time with approval) in IBN AL-‘ARABĪ, *Kitāb ‘Anqā’ muḡrib*, transl. ELMORE 1999: 336 (and see *ivi* fnn. 77 and 81 for commentary).

masterpiece *Ihyā' 'ulūm al-dīn*⁵⁰⁹. This is a relevant point against the reduction of the *MF* to the rank of a purely philosophical, and maybe juvenile, work of al-Ġazālī's, and calls for a more nuanced understanding of its cultural and doctrinal stance within al-Ġazālī's literary production.

The following Table 19 gathers the seven *aḥādīṭ* quoted in the *MF*, reporting the *locus* in which they appear, the formulation chosen by al-Ġazālī (in my English translation, with transliteration of the Arabic text), as well as other formulations I was able to locate for the same saying in the indicated sources.

TABLE 19. Ḥadīṭ quotations in the *MF*

LOCUS IN THE <i>MF</i>	QUOTED <i>HADĪṬ</i>	OTHER FORMULATION(S)	SOURCE(S)
1 <i>Logic</i> IV, §68	«Help your brother, whether he is an oppressor or an oppressed one»	«Narrated Anas: Allah's Messenger (ﷺ) said, "Help your brother, whether he is an oppressor or he is an oppressed one". People asked, "O Allah's Messenger (ﷺ)! It is all right to help him if he is oppressed, but how should we help him if he is an oppressor?" The Prophet (ﷺ) said, "By preventing him from oppressing others"».	SAḤĪḤ AL-BUḤĀRĪ 2444, book 46, <i>ḥadīṭ</i> 5
2 <i>Metaphysics</i> III, §244	«You are as You have praised Yourself, I do not enumerate a praise of You» <i>anta ka-mā aṭṭayta 'alā naḥsī-ka, lā uḥṣī tanā^{am} 'alay-ka</i>	«I do not enumerate a praise [or: praises] of You, You are as You have praised Yourself»	ABŪ MUSLIM, <i>al-Ṣaḥīḥ, Kitāb al-ṣalāh</i> , n. 222 (end); <i>Sunan al-Nasā'i</i> , e.g. <i>K. al-Ṭahāra</i> [«Book of Purification»], vol. 1, book 1, <i>ḥadīṭ</i> 169 (English); book 1, <i>ḥadīṭ</i> 170 (Arabic); <i>K. al-Taṭbīq</i> [«Book of the Clapping of Hands»], n. 1100, vol. 2, book 12, <i>ḥadīṭ</i> 1101 (English); book 12, <i>ḥadīṭ</i> 72 (Arabic) = n. 1130, vol. 2, book 12, <i>ḥadīṭ</i> 1131 (English); book 12, <i>ḥadīṭ</i> 102 (Arabic); <i>Sunan Abī Dawūd</i> , <i>K. al-ṣalāh</i> , n. 879, book 2, <i>ḥadīṭ</i> 878 (English); book 2, <i>ḥadīṭ</i> 489 (Arabic) (cf. ABŪ DA'ŪD 1998); <i>Ġāmi' al-Tirmidī</i> n. 3493, vol. 6, book 45, <i>ḥadīṭ</i> 3493

⁵⁰⁹ English transl. in BURRELL 2001; French one in BOUTALEB 2002; cf. *Ihyā'*, ed. LAĠNA, vol. IV: 2498.7 (for the *ḥadīṭ* of the praise); 2498.10-11 (for the *dictum* attributed to Abū Bakr). Cf. also *infra*, §1.10, for the section devoted to the textual parallels between the *MF* and other works of al-Ġazālī's.

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LOCUS IN THE <i>MF</i>	QUOTED <i>HADĪT</i>	OTHER FORMULATION(S)	SOURCE(S)
			(English); book 48, <i>ḥadīṭ</i> 124 (Arabic) (cf. AL-TIRMIDĪ 1992)
3 <i>Metaphysics</i> III, §244	«The weakness in the attainment of the perception is a perception» <i>al-‘aǧz ‘an darakⁱ l-idrākⁱ idrāk^m</i>		Cf. HECK 2014: 111, 119. Its soundness was rejected for instance by Ibn Taymiyya (cf. <i>Maǧmū‘āt al-Rasā’il wa-l-Masā’il</i>)
4 <i>Physics</i> V.4, §432	«He who will be tormented the most in the day of judgment will be the knowing man whom God has not helped with His knowledge»		AL-BAYHAQĪ (d. 1066), <i>Šu‘ab al-īmān</i> [<i>The Branches of Faith</i>], 1642 and AL-ṬABARĀNĪ (d. 971), <i>Al-Mu‘ǧam al-šaǧīr</i> [<i>The Small Lexicon</i>], 1/183
5 <i>Physics</i> V.4, §432	«He who is increased in knowledge, but is not increased in true religion, will not be increased from God unless in the distance [from Him]»		AL-DĀRIMĪ (d. 869), <i>Sunan, Introduction</i> , 34.25
6 <i>Physics</i> V.9, §446	«The eye is [meant] to the entrance of the man in the grave, and of the camel in the cooking pot»		AL-ALBĀNĪ, <i>Silsila al-ḥadīṭ al-šaḥīḥa</i> , n. 1249; ABU-RABIA 2005: 241 considers it an «Arab-Bedouin saying»
7 <i>Physics</i> V.9, §446	«The eye is true» <i>al-‘ayn^a ḥaqq^m</i>	(a) «Ibn ‘Abbās reported Allah’s Messenger as saying: The influence of an evil eye is a fact; if anything would precede the destiny it would be the influence of an evil eye, and when you are asked to take bath (as a cure) from the influence of an evil eye, you should take bath» (b) «Narrated Abu Hurayra: The Prophet said, “The effect of an evil eye is a fact.”	(a) SAḤĪḤ MUSLIM 2188; book 39, <i>ḥadīṭ</i> 56; (b) SAḤĪḤ AL-BUḤĀRĪ 5740, b. 76, <i>ḥadīṭ</i> 55

LOCUS IN THE <i>MF</i>	QUOTED <i>HADĪT</i>	OTHER FORMULATION(S)	SOURCE(S)
		And he prohibited tattooing».	

1.9.3. Revealed law and philosophy

In four occasions within the *MF*, al-Ġazālī explicitly mentions the revealed law (trilateral root š-r-ʿ) in connection with the philosophical teachings he is time by time reporting and arguing for. Apart from one case located in the First Premise of *Metaphysics*, three occurrences of *šarʿ* and *šarīʿa* out of the total four are to be found in the sole Fifth treatise of the *Physics* of the *MF*, the conclusive section of the entire work. As I have noticed elsewhere, this allegiance on revelation-based arguments for upholding and corroborating philosophical doctrines is a remarkable feature in particular of the last treatise of the *MF*, which provides a prophetological and ethico-political capping for the entire work⁵¹⁰.

The following Table 20 gathers the four relevant passages of the *MF*, indicating their *locus*, reporting the English translation of the fuller context, and adding also the indication of the Arabic expression referring to the «revealed law», as well as its Latin equivalent (when available). Interestingly, and in keeping with the trend already noticed above as regards the Qurʾānic quotations, the Latin version omits any rendition of *šarʿ* and *šarīʿa* in the half of cases ([3] and [4] in Table 20), while it generically renders the relative adjective *šarʿiyya* occurring in *Metaphysics* with the genitive *fidei* («of faith»; see *infra* number [1]). Only in the case of occurrence number [2] in the Table, the Arabic *šarʿ* is rather faithfully rendered with *lex*, although of course the fact that this religious law is the Islamic one is kept silent. The Latin reader is thus pushed towards interpreting it as a generic term for the three monotheism, or even as a term referring to the Christian revelation, with an effective cultural acclimation⁵¹¹.

TABLE 20. Occurrences of *šarʿ* and its cognates in the *MF*

	LOCUS IN THE <i>MF</i>	QUOTATION	ARABIC	LATIN
1	<i>Metaphysics</i> , First Premise, §94	The first one of them is the science of the government of the cooperation of man with people, [taken] collectively. Man, as a matter of fact, is a creature in need of the company of mankind. That is not ordained in such a way that it leads to obtain what is required in this world, and salvation in the hereafter, unless according to a	<i>al-ʿulūm al-šarʿiyya</i> (D135.6)	<i>sciencia fidei</i> (MUCKLE 1933: 2.19)

⁵¹⁰ SIGNORI 2020³: esp. 80.

⁵¹¹ On this point cf. *infra*, §2.2.1. *Cultural Acclimations in the Latin Translation*.

	LOCUS IN THE <i>MF</i>	QUOTATION	ARABIC	LATIN
		specific way. This is a science whose principle are the sciences of the revealed law , but whose perfection are the political sciences referred to the government of cities and to the hierarchical ordering of their inhabitants.		
2	<i>Physics</i> V.1, §426	The revealed law too makes it clear that these knowledges are in the people and in the prophets by means of the angels. Cf. <i>supra</i> , §1.7.2, Table 13, [23]	<i>al-šarʿ</i> (D372.14)	<i>lex</i> (MUCKLE 1933: 184.10)
3	<i>Physics</i> V.4, §431	From this, the revealed law apprised you that the sinful believer will not abide forever in the fire.	<i>al-šarīʿa</i> (D375.16)	omitted
4	<i>Physics</i> V.5, §435	When [the soul] finds an occasion to empty herself out and sets away from herself what hinders her, she is then predisposed to the conjunction with the spiritual, noble, intellectual substances, in which all existent things are depicted, and which are designated in the revealed law with [the name of] «well-preserved Table». Cf. <i>supra</i> , §1.9.1, Table 18, [11]	<i>fi l-šarʿ</i> (D376.23)	omitted

As for occurrence number [1], the reference to the «sciences of the revealed law» [*al-ʿulūm al-šarʿiyya*] takes place within a twofold division of the science of government between a «principle» [*aṣl*] – the religious knowledge – and a subsequent «perfection» [*takmila*] – its political application. The parallel passage in Avicenna’s *DN* has exactly the same structure, and it also features the root š-r-ʿ of the revealed law⁵¹². The doctrinal context, represented by the classification and subdivision of the practical sciences, as well as the terminology employed in this passage of the *MF* and the *DN* make it a perfect *locus parallelus* for a famous passage occurring at the beginning of Avicenna’s *Madḥal* in his *K. al-Šifā*⁵¹³. Here, Avicenna maintains that the correctness of the ‘complex’ or the ‘whole’ [*ǧumla*] of the practical sciences is established through theoretical demonstration [*burhān naẓarī*] and also *via*

⁵¹² Cf. *DN*, ACHENA-MASSÉ 1955 (1): 89.24-90.2: «celle de l’organisation générale des humains: grâce à elle, l’association dont ils ne peuvent se passer se trouve en ordre; elle comporte deux parties – d’une part, la connaissance de la nature des religions (lit. ‘laws’ [Persian *šarāʿi*]); d’autre part, celle de la nature des sciences politiques – la première étant le principe, la seconde étant ses conséquences et ses dérivés».

⁵¹³ See AVICENNA, *K. al-Šifā, Madḥal*, I.2, ed. DI VINCENZO 2021: 26.39-40 (Arabic) and 27.1-4 (English): «The validity of this whole domain [of inquiry] is certified only by means of theoretical demonstration and by the testimony of the law, whereas its division and assessment [as particular subdomains] are certified by the divine law». Cf. also the commentary to the passage provided by DI VINCENZO 2021: 275. On this fundamental chapter see also the important MARMURA 1980, with an English translation and commentary.

the testimony of law [*al-šahada al-šarʿiyya*], whereas their determinations are provided, in each and every particular case, by the divine law [*šarīʿa ilāhiyya*]⁵¹⁴. This is Fārābīan in principle: as noticed by Marmura while commenting on this text of the *Madḥal*, the thesis is that «revelation expresses the same truth as that of demonstrative philosophy», but with a metaphorical lexicon, full of imagery and thus understandable also by non-philosophers.

Occurrence number [2] is probably the most conspicuous case of validation of a philosophical doctrine by means of revelation, since the *šarʿ* is explicitly evoked as a further confirmation of what philosophy had just demonstrated with rational arguments. Since I have already discussed it in a previous section of this Introduction⁵¹⁵, as well as in previous contributions⁵¹⁶, I will not dwell more on it here. It is however worthwhile to state again that a partial *locus parallelus* for this Ġazālīan attitude can be found in the Ninth treatise of Avicenna's *Ilāhiyyāt* in the *K. al-Šifā'*⁵¹⁷, where Ibn Sīnā distinguishes two kinds of «return» [*maʿād*]: the first one is only known through the divine law and the prophetic revelation; the second one, on the contrary, can be apprehended through the intellect and its syllogisms. The difference, however, is that in Avicenna the revealed *maʿād* refers to the bodies, while the philosophical kind of return is linked to the souls' happiness. In al-Ġazālī's passage, on the contrary, there is no such distinction, and the *šarʿ* actually confirms what has already been established by the *ʿaql*⁵¹⁸.

An analogous case of validation of philosophy through revelation is represented by number [3] in the Table, in which the reference to the *šarīʿa* is used to validate a philosophical explanation of the afterlife, in keeping with the Sunnī understanding of the temporariness of hell⁵¹⁹. Finally, occurrence number [4] represents a case of terminological validation, in the sense that the revealed law is invoked in order to affirm that a certain set of entities discussed in philosophy – in this case, the noble, spiritual and intellectual substances – are also acknowledged by religion, albeit under another name. In this sense, passage [4] is

⁵¹⁴ See the translation of the passage provided by MARMURA 1980: 247: «The general truth of all this is established by theoretical demonstration and the testimony of the revealed law, its details and measure [of application] being ascertained by the divine law». Marmura finds these Avicennan statements «of particular interest», and proceeds to explain that «[t]his philosophy is essentially Fārābīan, its basic tenet being that revelation expresses the same truth as that of demonstrative philosophy, but in the language of image and symbol which the non-philosopher can understand. Moreover, revealed scripture gives particular legislative details which conform with universal principles arrived at philosophically» (*ibidem*). This kind of complementarity is certainly fascinating, in particular when compared with al-Ġazālī's intellectual work, and with the attitude towards the *falsafa-kalām* relationship which he displays in the passages quoted above.

⁵¹⁵ Cf. *supra*, §1.7.2. *Angels and Intellectuals*.

⁵¹⁶ See SIGNORI 2018: 377-378, from which I also take the references to the discussion of the *maʿād* in Avicenna, and SIGNORI 2020^a: 88.

⁵¹⁷ See AVICENNA, *K. al-Šifā', Ilāhiyyāt* IX.7.1, ed. QANAWATĪ-ZĀYID 1960: 423. The only two occurrences of the term *šarʿ* in the *Ilāhiyyāt* are to be found in this chapter, as well as the only mention by name of the Prophet Muḥammad. On the chapter, cf. ŁANCZYK 2013 and the communication by Amos BERTOLACCI, *Things That No Eye Has Ever Seen and No Ear Has Ever Heard: Avicenna and the Epistemic Limits of the Revealed Religion, Between Islam and Christianity*, International Conference on Philosophical Anthropology in Ibn Sīnā, Iranian Institute of Philosophy, Tehran 6-9 February 2022.

⁵¹⁸ It is interesting to notice, in this regard, that the destiny itself of the human soul depends somehow on the language with which every soul is able to reach the First Principle: if the language is imaginative, there will only be a bodily *maʿād*, but if it's rational, the intellectual 'return' becomes available to man. See on this LIZZINI 2009^b: 1852.

⁵¹⁹ Cf. on this theological notion ROBSON 1938; SMITH-HADDAD 1981: 93-95; 142-143; GWYNNE 2002; THOMASSEN 2009. See also the discussion in SIGNORI 2020^a: 90-91 (T4) and *infra*, in the Commentary ad §431.

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conceptually linked with number [2] in the Table, and will be best understood in the light of the considerations on the *Lexicon* of the *MF* I have gathered in a previous chapter of this Introduction⁵²⁰.

⁵²⁰ Due to the occurrence of the Qur'ānic expression «well-preserved Table», this passage is also discussed *supra*, §1.9.1.

1.10

The First Text of *ḥikma*

The close reading of the *MF* performed in the previous sections of this Introduction yielded as its probably foremost result the attribution of a distinctive religious nuance to the formulation of the doctrines of the philosophers expounded in the text. A proper comprehension of the *MF* in its genuine historical value is only possible if both parts of this apparently trivial assessment – that is, both the (1) philosophical and (2) the religious underpinnings of the work – are taken into due consideration. (1) The first point of view is probably the most obvious of the two, as it complies with the way the *MF* was mostly read in the entire history of its long reception, from the medieval Latin and Hebrew translations up to the most recent scholarship on the work⁵²¹. As a matter of fact, the *MF* successfully lives up to its self-presentation as a philosophical text – it does expound the theses of the Peripatetic Arabic philosophers, and it is able to do so in a concise, thorough, and effective manner. As it appears from the sections of this Introduction devoted to *Structure* (§1.4) and *Contents* (§1.5) of the writing, al-Ġazālī did indeed realize with the *MF* a sensible, elegant elaboration of the materials of Avicenna's *DN*. He followed the latter work closely in many matters of detail, but also consciously elaborated on it by altering its structure and by superimposing on its nude list of chapters an orderly scheme of three main parts and fifteen treatises (§1.4.1). With the exception of the section on mathematics (§1.4.2.1), the contents of the *MF* cover moreover the entirety of the system of philosophy expounded by Avicenna in the Persian *summa*, as it appears from the analytical summary given above in §1.5. The *MF* is thus immediately a good candidate to the role of a handbook of Avicennan philosophy, much more manageable in size with respect to colossal *summae* such as the *K. al-Šifā'*, and at the same time clear in structure, written in a readable Arabic, and well-arranged from the point of view of its *falsafī* subject-matter. The addition of many vivid examples – of which I have given an only partial specimen in §1.8.1 – contributes to the readability and the compellingness of the work, in which Avicennan and more broadly Aristotelian theses are usually expressed in a terse, engaging, and easily understandable way. The theoretical value of these formal features received an outstanding confirmation in the concrete development of history, since al-Ġazālī's *MF* demonstrably performed its function as a primer to the Avicennan, and more generally Arabic Peripatetic, thought throughout the Middle Ages and up to the Renaissance, in an extremely diverse array of cultural and linguistic contexts⁵²². Especially in the *MF*, then, one could easily subscribe to Robert Brunschvig's lapidary claim concerning al-Ġazālī: «Cet anti-philosophe philosophait»⁵²³ – and he did philosophize quite well.

(2) However, this genuinely philosophical function does not exhaust the role played by the *MF* in the conception of its author. As a matter of fact, the second part of the analysis

⁵²¹ On the articulated reception history of the *MF* cf. *infra* the second main section of this Introduction.

⁵²² Which include not only Latin and Hebrew, but also Syriac and vernaculars such as Catalan, Italian, and Ruthenian (Middle Church Slavonic): cf. *infra*, §2.1, §2.2, §2.3, and §2.4 for the details.

⁵²³ BRUNSCHVIG 1971: 314. Of course, the acknowledgment of the genuinely philosophical character of al-Ġazālī's production has since become rightly widespread in scholarship.

conducted in the previous sections of this Introduction revealed the strong presence of religiously inspired tensions underneath the seemingly calm surface of the philosophical exposition. Despite declaring his willingness to provide an uncommitted *ḥikāya* of the main tenets of the *falāsifa*, without delving into the subtleties required for distinguishing within them the true from the false and the abundant from the scanty⁵²⁴, al-Ġazālī fails *in concreto* to live up to this part of his programme. Far from being genuinely *désengagé* as he tries to portray himself to be, indeed, the theologian appears even in the *MF* – the most purely philosophical endpoint of his production – to progressively gain the upper hand over the neutral reporter of the philosophers’ teachings; and the presentation of the opinions of the *falāsifa* gets increasingly interspersed with traits and nuances more proper to religion and *kalām* than to *falsafa* in itself⁵²⁵. These deviations from the methodical faithfulness to Avicenna’s model (as expressed in the Persian *DN*) are of many different kinds, and are conversely susceptible of different possible evaluations when put on a scale of religiously inspired divergence from Peripatetic philosophy in its purer form. The variations include both a lexical and terminological level (a), and a more content-related one (b).

(a) As far as the former is concerned, we have seen that al-Ġazālī in the *MF* is keen on describing the characteristic terminology of Peripatetic *falsafa* as a mere technical convention, thus effectively downgrading issues certainly linguistic in nature, but fraught with more substantive theoretical consequences, to a mere choice of vocabulary (§1.7.1). This is most visible in the case of the various notions possibly described by the *falsafī*, but also *kalāmī*, technical term of *ġawhar* (usually rendered in philosophical contexts with ‘substance’). Due to its amphibious technical status, the discussion on the semantics of *ġawhar* is able to capture in a nutshell the tensions and the recompositions that can be built on the level of language between philosophers and theologians, and is thus the object of a specific attention on the part of al-Ġazālī (§1.7.1.1). Moreover, a prominent linguistic issue also emerges when considering the case of the terminology employed in the *MF* as a description of the celestial intellects (and souls) which move and rule the heavenly spheres. In the context of a post-Aristotelian and characteristically Avicennan emanationist cosmology of the supralunary world⁵²⁶, al-Ġazālī does not hesitate to substitute almost systematically the vocabulary of intellects and souls with the religious one of angels. While hints in this direction are already well present in Avicenna, the systematic character of al-Ġazālī’s effort, and his frequent programmatic statements to the effect that a veritable translation of the philosophical lexicon into the language of Revelation does not alter the gist of the philosophical teachings, are as many signs of a conscious stance on the topic on the part of al-Ġazālī (§1.7.2). According to my analysis, this stance can be unpacked as the deliberate selection of a middle way – as narrow as it might be – between the positions of the *falāsifa* and those of the *mutakallimūna*, in order to show to the former that their manner of formulating (and sometimes even of solving) theoretical problems is not their absolute and exclusive prerogative, and to the latter that the differences of lexicon, which immediately separate them and the philosophers, are sometimes not but a superficial concealment of a more

⁵²⁴ The formulations are in the *Prologue* (§1) and the *Epilogue* (§454); see *infra* Translation and Commentary.

⁵²⁵ This trend of religious addition finds indeed its apex and culmination in the Fifth treatise of the *Physics*, the last one of the work, with the treatment of the afterlife, of divinatory dreams, of prophecy, and of the government of the world by the Prophet.

⁵²⁶ As documented more generally for al-Ġazālī’s production by the landmarking FRANK 1992.

fundamental doctrinal agreement, whose specifics are well worth exploring.

(b) From the point of view of content, al-Ġazālī's variations on Avicenna's theme⁵²⁷ express themselves most clearly in the addition of examples which entail the formulation of ostensibly anti-Avicennan doctrines (§1.8.2). Among these, the most conspicuous case is the one of anti-eternalist statements, which are used throughout the *MF* as examples of genuinely philosophical doctrines, such as the logic of propositions and syllogisms, the concept of anteriority in time, the way humans know as opposed to God's knowledge, or the notions intellectually known by the speculative faculty of the rational soul. The piecemeal, but consistent addition to the text of statements to the effect that the world has an origin in time contrasts with the explicit adherence to the Avicennan thesis of the eternity of creation performed in the main exposition of the *MF*, and generates a tension that requires explanation. Once again, this peculiar textual situation can perhaps be justified with the recourse to a specifically Ġazālīan *via media*, which paves with subtlety (and a certain dose of ambiguity) a narrow path away from strict Avicennism and towards a more nuanced – but still philosophical – understanding of Islamic theology and revelation. While on many minor points the adherence of a *mutakallim* to Avicenna's philosophy seems indeed entirely unproblematic to al-Ġazālī, and especially so in the field of logic, it is virtually certain that the issue of the eternity of the world would not prove just as easily manageable for a theologian. On the contrary, cosmological eternalism arguably constitutes a vital dividing line between *falsafa* and *šarʿ*, and as such it becomes the object of a specific treatment on the part of al-Ġazālī, not only in the major refutation of the *TF*, but also in the *MF*, wrongly hitherto considered as insensible to this issue. In the *MF*, the treatment of the incompatibility of the eternalist doctrine with true Muslim faith is admittedly reduced to the very bone, but is nonetheless able to stress the pivotal conceptual point of the irreducibility of one thesis to the other through purely rational arguments. This non-trivial result is achieved thanks to the surreptitious insertion of creationist statements in subtle opposition to the apparent acceptance of the eternalist thesis endorsed in the main text. While the reason for this twofold attitude is not entirely clear, its effect – also on a rhetorical level, too often left aside when analysing philosophical texts – is strident and arresting, as it makes it immediately clear that the issue of the origin of the world is to be treated as a veritable rational antinomy, about which philosophy and revelation (each one rational in its own way) inevitably come to a clash.

The complex of the religiously inspired additions innervating the philosophical prose of the *MF* receives then a further validation thanks to the presence of many quotations of revealed authorities throughout the text (§1.9). Citing the Qurʾān, at least some traditionist sources [*aḥādīth*], and the key Islamic concepts of *šarʿ* and *šarīʿa* within philosophical texts is once again not a *unicum* of al-Ġazālī's production. Nonetheless, the quantity, quality, and position in the text of these religious references – especially when compared with the direct main source of the *MF*, the *DN* – are salient and unusual, and they contribute to corroborate the impression gathered from the other formal and material aspects treated above. All in all, the *MF* is indeed not shy to validate philosophy through the recourse to revelation, in such a way as to make the former less autonomous and independent than Avicenna, for one, arguably wanted it to be. As a matter of fact, if a philosophical thesis is presented as

⁵²⁷ As I first called them in SIGNORI 2018.

needing a Qur'ānic underpinning to stand, the compelling force of its alleged 'aqlī foundation is inevitably demoted, and the demonstrative value of revealed tenets is by contrast effectively reaffirmed. Thus, the underhanded assertion of the preeminence of the level of *šar'* over the one of *falsafa* gains traction, once again without any explicit or programmatic affirmation by al-Ġazālī in this direction. The author of the *MF* is rather able to convey his specific «middle way» without taking too harsh a stance against any one of the two extremes he aims to bridge and connect: thus, he illustrates philosophy with the greatest clarity without explicitly criticizing it (as opposed to the *TF*, and in keeping with the programmatic statements of the *Prologue* of the *MF*), but he also implicitly corrects its pretensions to absolute truth without directly contrasting it with revelation. Rather, he subtly shows the claims of philosophy to be ultimately concordant with those of religion, so that the *šar'* ends up validating the 'aql without any form of dialectical violence. Paraphrasing the title of an important book on the thought of 20th century philosopher of science Paul Feyerabend⁵²⁸, one could even argue that al-Ġazālī in the *MF* avails himself of a form of «tightrope-walking rationality», which corrects step by step its always precarious equilibrium between faith and reason thanks to measured inclinations towards one or the other side of the gnoseological abyss⁵²⁹.

All the above, verified *in vivo* in the text of the *MF*, seems moreover perfectly in keeping with the characteristics of the genre of *ḥikma* as recently delineated, with special reference to Faḥr al-Dīn al-Rāzī's mature production, in Frank Griffel's latest monograph, *The Formation of Post-Classical Philosophy in Islam*⁵³⁰. The third and arguably main part of Griffel's book is a vast and doctrinally dense argumentation to the effect that the enterprise of philosophy in the Islamic East in the 6th/12th century is precisely characterised by the development of *ḥikma*, seen in the book as a new literary genre which distinguishes itself from both *falsafa* and *kalām*, while tracing the path of a sort of middle way between the two⁵³¹. According to Griffel, the term *falsafa* began to designate more and more specifically the sole philosophy of Avicenna and his followers, while a different system of philosophical thought, which tried to accommodate an Avicennan worldview with the irrenounceable tenets of Islamic revelation, started to be developed⁵³². The analysis takes the cue precisely from the observation that al-Rāzī wrote both *kutub ḥikmiyya* and *kutub kalāmiyya* (roughly 'books of philosophy' and 'books of theology'), and, what is more, that he did so simultaneously and with comparable levels of intellectual commitment. It is extremely noteworthy to our purposes that Griffel traces back the evolution leading to al-Rāzī's peculiar epistemological stance precisely to al-Ġazālī, and that he describes the *MF* itself as the starting-point of the meaningful later developments which ended up in the formation of the full-fledged genre of *ḥikma*⁵³³.

One of the key features of al-Rāzī's epistemology in Griffel's account, for instance, is the method of «probing and dividing» [*al-sabr wa-l-taqṣīm*], which he describes in the book

⁵²⁸ FARRELL 2010.

⁵²⁹ Another book which makes usage of an identical metaphor for illustrating the problems connected to the powers and limits of human reasoning, between dogma and skepticism, is FOGELIN 2005.

⁵³⁰ GRIFFEL 2021. Cf. also the review article on it in SIGNORI FORTHCOMING, some of whose analyses are repeated in what follows.

⁵³¹ GRIFFEL 2021: 304-550 (*The Formation of ḥikma as a New Philosophical Genre*).

⁵³² See in particular GRIFFEL 2021: 96-107.

⁵³³ GRIFFEL 2021: 428-441.

with great finesse, showing that it receives one of its best early discussions (although critical) precisely in the *MF*⁵³⁴. Further, the intromission of *kalāmī* and more broadly religious concerns in the philosophical agenda is a noteworthy asset in Griffel's analysis of the genre of *ḥikma* vis-à-vis proper *kalām*⁵³⁵. Among these religious concerns, the issue of the eternity of the world – which Griffel rephrases in terms of the question on the nature of God as a choosing or necessary creator⁵³⁶ – is arguably the most important point of discussion, and held absolute importance in the debates of the 12th century. It is barely the case to underline that these are also precisely the most prominent aspects emerging from the treatment of philosophy that al-Ġazālī entrusts to his *MF*. To reformulate in the language of 12th century Islamic thought the problem of al-Ġazālī's programmatic neutrality vis-à-vis his actual position in the *MF*, one could thus say that the *MF* presents itself *prima facie* to be an evenhanded report of *falsafa* (the Avicennan version of philosophy), but actually ends up being the first masterpiece of the developing genre of *ḥikma* (with its theological nuances and more broadly religious underpinnings).

In the framework of these striking similarities between the *MF* and the nascent experience of *ḥikma*, which corroborate the idea that the *MF* represents indeed a fundamental step in the direction of the further development of the genre up to al-Rāzī, it might be useful to explicitly adopt here one of the key-concepts of Griffel's overall analysis, and to apply it more precisely to the case of al-Ġazālī's *summa*. This is the notion of «tolerance of ambiguity» (*Ambiguitätstoleranz* in German)⁵³⁷, which Griffel mutuates – with its cognate concepts of 'crisis of ambiguity' and 'taming of ambiguity' – from the work of German cultural historian Thomas Bauer⁵³⁸. In his *Die Kultur der Ambiguität*, Bauer had applied these concepts to Islamic cultural history by adapting a notion originally developed in contemporary psychology⁵³⁹. The ability to tolerate the parallel existence of concurrent claims for truth, in a situation of unresolved (yet productive) contiguity, seems indeed a crucial exegetical tool for evaluating the experience of post-classical philosophy in Islam in its own right, without reducing it to the normative framework of a more rigid understanding of (absolute) truth. What Griffel's monograph ultimately suggests is indeed the somewhat radical notion that, according to the authors of the 12th century Islamic East, some deep philosophical problems simply do not have a univocal, clear-cut solution. Rather, the correct application of human

⁵³⁴ Cf. *Logic* IV, §§52-54 in the Translation, and cf. also the Commentary *ad loc.* for further information. The long-winded Ġazālīan discussion of this concept is also remarked upon by JANSSENS 2019: 91.

⁵³⁵ Griffel distinguishes *ḥikma* and *kalām* also on the basis of the fact that the former, as opposed to the latter, systematically admits evidence from revelation (GRIFFEL 2021: esp. 524-542). While I argue that the *MF* belongs *in nuce* to the developing genre of *ḥikma*, my analysis seems to show that it also shares with the 12th century genre of *kalām* in admitting religious evidence in the philosophical discourse (cf. especially *supra*, §1.9). One could however argue that the presence of this evidence, although imposing for a philosophical text of the 11th century, is nonetheless not «systematic» in the sense Griffel gives to the term in the fully developed phase of the 12th century.

⁵³⁶ According to GRIFFEL 2021: 88, for example, the *falāsifa* are identified through their denial of a free-choosing God as creator of the universe; but cf. also *ivi*: 332-333.

⁵³⁷ GRIFFEL 2021: 475.

⁵³⁸ See in particular BAUER 2011. The relevance of Bauer's model for Griffel's overall analysis is also witnessed by the extensive critical attention he devoted to Bauer's book in an important review article of 2017, in which his views are compared with Shahab Ahmed's ones in *What is Islam? The Importance of Being Islamic* (see GRIFFEL 2017).

⁵³⁹ GRIFFEL 2021: 471-478.

rationality can lead in those cases to several equally admissible solutions, which are genuinely equivalent in terms of explanatory and demonstrative value. It is in this framework that Griffel's final allusion to Kant's antinomies of pure reason, which I have adopted and reformulated as far as the issue of the origin of the world in the *MF* is concerned, finds its *raison d'être* and its unmistakable historical interest⁵⁴⁰.

This specific way of emphasizing the possibility of an actual tolerance of ambiguity in a philosophical text appears to me as a particularly vital instrument of analysis, not only for the more nuanced and developed phase of the 12th century, but also for the *MF* in itself. In this historical perspective, indeed, al-Ġazālī's philosophical *summa* reveals itself as a veritable laboratory of the ongoing transformations of Islamic thought in the crucial decades that separate Avicenna from al-Rāzī⁵⁴¹. What is more, the *MF* seems to already contain in itself, albeit *in nuce*, some of the most eloquent transformations which recent scholarship detected in al-Rāzī's vast oeuvre. This is the case, in particular, of the implicit, antinomic admission of multiple solutions to a given philosophical problem such as the one of the origin (in time) of the world, whose treatment in the *MF* appears ambiguously perched between an immediate observance of Avicenna's thought, and the underhanded reconstruction of a more plainly theological anti-eternalist position. What is more, the nuanced Ġazālīan 'middle way' which emerges from the terminological analysis of the *MF* is also in keeping with the flexible interpretative tool of tolerance of ambiguity, in the sense that the fashion in which *falāsifa* and *šārī'ūna* (or more specifically *mutakallimūna*) express themselves appears entirely unimportant to al-Ġazālī, provided that an agreement can be reached on the underlying ontology of the two groups. Apparently concurring and incompatible systems of metaphysics can thus be put in dialogue through the dissolution of the superficial, terminological points of incompatibility separating them, so that the key problems on which substantial agreement cannot, by contrast, be immediately reached are reduced to the least possible number. These irreducible problems, or 'antinomies', of which the eternity vs. origin in time dispute possibly constitutes the best example, are then left aporetically open, in the spirit of an ongoing rational research which remains, at each step, fully conscious of its limits⁵⁴².

Interestingly, a comparable position on a theologically nuanced, and constitutively ambiguous, philosophical cosmology is reached by al-Ġazālī not only in the *MF*, but also in different works of his, which have a *prima facie* completely incompatible starting point. This is most notably the case with the seemingly mystical treatise *The Niche of Lights* [*Miškāt al-anwār*], which formally takes the cue from the desire to comment on the Light Verse in the Qur'ān, but ends up presenting a system of the world not dissimilar, in its substantive lines, from that of Avicenna⁵⁴³. By contrast, the *MF* presents itself as an explicitly

⁵⁴⁰ GRIFFEL 2021: 570. Cf. *supra*, §1.8.2. *Anti-Eternalist Examples: Changing Avicenna from Within*.

⁵⁴¹ Al-Ġazālī and al-Rāzī have rightly be taken as the two meaningful extremes of a possible periodization of Islamic theology by SHIHADDEH 2005.

⁵⁴² Interestingly, one of the most important post-Ġazālīan steps in this direction is precisely an aporetic commentary on Avicenna's *Išārāt*, the *Doubts* [*Šukūk*] penned by Šaraf al-Dīn al-Mas'ūdī and masterfully studied in SHIHADDEH 2016. For more information on the work and author cf. *infra*, §2.1.4.2. For the features of the aporetic genre of commentary, as opposed to the exegetical one, see in particular SHIHADDEH 2016: 44-49.

⁵⁴³ It is remarkable that Herbert Davidson speaks explicitly of «ambiguity» about the *Miškāt*, thus noticing implicitly the same feature under discussion here: «The *Miškāt*, *in fine*, incorporates the main lines of Avicenna's system, although on several sensitive particulars Ghazali still cloaks himself so tightly in ambiguity that what

falsafī work, but immediately nuances this starting point *via* the usage of lexicon and examples largely at odds with Avicenna's own way of conceiving *falsafa*. In the fascinating and challenging, though not impenetrable, ambiguity of his formulations, the author of the *MF* thus confirms himself to be one of the finest Arabic-speaking thinkers of the Middle Ages, whose sophisticated theoretical stance with respect to philosophy and religion is still far from being fully disclosed. Whether he was (or saw himself as) a convinced Muslim theologian in Avicennan disguise, or conversely a deep-down Avicennan philosopher talking *kalāmī*, al-Ġazālī was certainly able to produce in his own name one of the most compelling encyclopaedias of Aristotelian philosophy ever written in Arabic, whose excellent theoretical quality is testified by its outstanding reception history. It is precisely the history of this fortune that will form the topic for the second main part of this Introduction.

he believed can only be conjectured» (DAVIDSON 1992: 143). In recognizing in the *Miškāt* a philosophical cosmology, Davidson follows a critical judgment by Averroes, who repeats it in both his *Kitāb al-Kašf 'an manāhiġ al-adilla* (German transl. MÜLLER 1875²: 67-68, Arabic 71) and in the *Tahāfut al-Tahāfut* (see VAN DEN BERGH 1978³: 69 (Arabic 117.5-8): «It appears from the books ascribed to him that in metaphysics he recurs to the philosophers. And of all his books this is most clearly shown and most truly proved in his book called *The Niche for Lights*»). Cf. also DAVIDSON 1992: 130: «Averroes' reading of the *Miškāt* has not been taken seriously by recent scholars. It is, nonetheless, correct».

Introduction

2
 BRIEF HISTORY OF A
 MULTI-LINGUAL, MULTI-FACETED
 RECEPTION

[...] c'est en allant vers la mer que
 le fleuve est fidèle à sa source.

Jean JAURÈS, *Pour la laïque*

One of the most fascinating features of the study of the *MF* is the recognition of the extremely long-lasting and far-reaching reception history of the work. The brief *summa* of philosophy penned by one of the self-styled starkest adversaries of *falsafa* enjoyed, indeed, a rich and complex fortune throughout the Middle Ages, and even beyond that period. What is even more interesting, this differentiated *Wirkungsgeschichte* reveals to closer inspection to have been genuinely trans-cultural and trans-linguistic, since it involved at least as many different languages as Arabic, Latin, Hebrew, Syriac, Catalan, Italian, and West Russian (and the related communities of thought). As an accessible primer to Avicenna's philosophy, the *MF* was read by thinkers of many different religions and of many different doctrinal inclinations, who however found in al-Ġazālī's text a handy companion to their own philosophical inquiries, sometimes far removed from the scope and the boundaries of the Arabic *summa* in itself.

The general aim of this second section of the *Introduction* is precisely to address this outstanding legacy, by pointing out the common features and the differences of reception among the first Arabic readers of al-Ġazālī (§2.1. *Arabic*), and then among Latin theologians (§2.2. *Latin*) and Hebrew scientists and savants (§2.3. *Hebrew*), all the way down to Syriac bishops, Italian poets, Spanish philosophers, and even late medieval Lithuanian logicians (§2.4. *Other Languages*). All the thinkers active in these extremely variegated contexts share a common attention to al-Ġazālī's text, through the direct or indirect translation, appropriation, usage and elaboration of it. The little encyclopaedia of Avicennan thought adapted by al-Ġazālī from the original Persian to a clear and readable philosophical Arabic, and then translated multiple times at thousands of miles from the place of its composition, to serve multiple goals and to address multiple audiences, will hopefully stand out, through the following analysis, in all its undeniable historical interest. If philosophy can speak many languages, the *MF* certainly represents a case in point for our better understanding of the dynamics of cultural and linguistic crosspollination that build, destroy and rebuild the enterprise of philosophy through and across the borders of civilizations, religions, and political institutions. As such, the study of the multi-lingual reception of al-Ġazālī's philosophical masterpiece can help to shed more light on wider and deeper phenomena of cultural exchanges throughout the long Middle Ages.

Introduction

2.1. Arabic

The long story of the reception of the *MF* cannot but begin in the same linguistic context in which al-Ġazālī's work was written. The direct fortune of the *MF* in Arabic is not as wide as its enormous parallel reception in Latin (§2.2) and Hebrew (§2.3) might lead one to assume, since the text is transmitted by only seven known manuscripts, to which one should add the Judaeo-Arabic transcription contained in 15th-century MS Oxford, Bodleian Library, Huntigton 592⁵⁴⁴. The specifics of this Arabophone aftermath are nonetheless historically significant, and certainly worthy of serious scholarly attention. Moreover, as we have seen⁵⁴⁵, a somewhat indirect reception of the work lies probably at the foundation of the development of the philosophical enterprise of *ḥikma* in 12th century Islamic culture (see *supra*, §1.10), a circumstance which cannot but increase the interest and historical value of the first known examples of direct reprise of the work in Arabic-speaking authors.

In what follows, I will present in a syncretical way a series of somewhat sparse remarks on various contexts of reception of al-Ġazālī's work in different Arabic-speaking cultural environments. I will take into account examples of both 'positive' (*i.e.* consensual and direct) and 'negative' (*i.e.* indirect, twisted, or non-consensual) reception. These brief annotations do not aspire at any rate to be exhaustive, but rather aim more modestly at gathering materials – already available in scholarship but only in a piecemeal way – concerning the fortune (and misfortunes) of al-Ġazālī's *MF* in Arabic in times close to the death of its author. I have thus not taken into consideration any witnesses of this Arabophone reception past the end of the 12th century, the moment in history around which Averroes, in the Islamic West, as well as the two prominent 'Ġazālīan' philosophers of Transoxania in the East – Ibn Ġaylān al-Balḥī and Šaraf al-Dīn al-Mas'ūdī – all died.

2.1.1. Trimming al-Ġazālī: A Decurated Arabic Manuscript

MS Dublin, Chester Beatty Library, Ar. 5328, studied in 2011 by Ayman Shihadeh⁵⁴⁶, was written in *nash* calligraphy in either Syria or 'Irāq, and can be dated conjecturally to the 12th century CE. It transmits a peculiar copy of al-Ġazālī's *MF*, which starts at the beginning of the First chapter of the *Logic* of the work (§5 in my Translation) – thus omitting both the *Prologue* and the *Preface to Logic* – and ends (around the half of my §454)⁵⁴⁷ before the reference to the *TF*. The omissions cannot be accidental, both because the points of beginning and conclusion are sharply selected, and because they carefully leave out precisely the

⁵⁴⁴ For further information on the Arabic manuscripts of the *MF* cf. *infra*, Appendix 3.

⁵⁴⁵ Cf. *supra*, §1.10. *The First Text of ḥikma*.

⁵⁴⁶ SHIHADAH 2011. For a brief description of the manuscript, vitiated however by the erroneous identification of the text it transmits with Naḡm al-Dīn al-Kātibī al-Qazwīnī's *Ḥikma al-'ayn*, cf. ARBERRY 1964 (VII): 101-102.

⁵⁴⁷ See *infra*, Diagram 3, for the details.

references to the *TF* that al-Ġazālī makes at the *incipit* and the *explicit* of his work. These features are incompatible with a material lacuna due to the accidents of transmission. Shihadeh convincingly argues, moreover, that the state of the text witnessed by the CBL manuscript is very unlikely to have been the original one of the *MF* in its authorial configuration. Indeed, since echoes of the uncommitted account announced in the *Prologue* are present in other sections of the *MF*⁵⁴⁸, it would seem awkward for al-Ġazālī to have taken such uncommitted positions in the core of the text, without repeating the point – not at all secondary or trivial – in a section explicitly devoted to programmatic and introductory statements such as a general preface of any kind⁵⁴⁹.

Moreover, the state of the text transmitted by the CBL copy is not either equivalent to the situation witnessed by the medieval Latin translation of the *MF*, although this might look deceptively similar, due to the conspicuous absence of the *Prologue* of the *MF* in the *versio vulgata* of the translation⁵⁵⁰. Despite this similarity, as made clear by Shihadeh, the Latin text⁵⁵¹ and the CBL copy start and end at different points, and thus cannot be directly related⁵⁵². In particular, the Preface to *Logic* is absent in the CBL manuscript, while it is preserved in Latin⁵⁵³. Moreover, the short *Epilogue* corresponding to §454 in the following Translation is treated differently in the Arabic manuscript and in the Latin version: while both sources omit the last statement, which contains the reference to the *TF*, the Latin text also omits the conclusive iteration of the declaration of uncommitment made at the beginning by al-Ġazālī, while the CBL copy has it. The subdivision of the *Epilogue* according to what is present and what is absent in the CBL and Latin texts can thus be summarized as follows.

TEXT 32. Al-Ġazālī, *MF, Epilogue*, [= Translation, §454], compared with the Latin text in MUCKLE 1933: 197.12-end of page

[a] This, then, is what we wanted to account for of their sciences – the *Logic*, the *Metaphysics*, and the *Physics* – || end of the Latin version || [b] without occupying [ourselves] with the distinction of the meager from the fat and of the true from the false. || end of the CBL copy ||

[c] Let us begin then, after this [one], with the book *The Incoherence of the Philosophers*, in order for the falsity of what is false among these opinions to be made clear.

[a] [H]oc igitur est quod nos volumus inducere de scienciis philosophorum logicis, divinis, et naturalibus.

The following diagram summarises more generally the similar and different aspects between the two texts.

⁵⁴⁸ Cf. *supra*, Introduction, §1.6.2. *Indefinite Descriptions*, Table 11, numbers [15] and [16], located respectively at the end of *Logic* (*Log. V.4*, Translation, §90) and at the very beginning of *Metaphysics* (*Preface*, §91). Cf. *supra*, §1.2. *Dating*, for a discussion of these passages.

⁵⁴⁹ SHIHADDEH 2011: 85-86.

⁵⁵⁰ Cf. *infra*, §2.2. *Latin*.

⁵⁵¹ At least as it is available in current editions.

⁵⁵² SHIHADDEH 2011: 87.

⁵⁵³ Cf. LOHR 1965: 239-243 (*Prooemium*).

DIAGRAM 3. *Decurated Arabic and Latin texts of the MF in comparison*

	§§	CBL manuscript	Latin version
Prologue	1	absent	absent
Preface to Logic	2-4	absent	present
Epilogue [a]	454	present	present
Epilogue [b]	454	present	absent
Epilogue [c]	454	absent	absent

All in all, the CBL manuscript presents itself as a precious witness of a specific kind of reception of the *MF* in Arabic, one voluntarily devoided of any reference to the *TF*, and thus also largely decurated of the indications concerning the alleged uncommitted character of al-Ġazālī's exposition of philosophy. The result of this sort of conscious editorial operation is the corroboration of the possibility of reading the *MF* unproblematically as a sheer text of (Avicennan) philosophy⁵⁵⁴. Despite being different in many details, as we have seen, the Latin tradition is also a witness of this peculiar, entirely philosophical way of approaching al-Ġazālī's text⁵⁵⁵: a certainly simplifying, but not entirely unfaithful (and certainly not unfruitful) understanding of a text as complex and conceptually layered as the *MF*⁵⁵⁶.

2.1.2. The *Maḍnūn* Corpus

The notion of the possible existence of an esoteric *corpus* of writings authored by al-Ġazālī, despite being in many senses conjectural and already disputed by 13th and 14th century scholars such as Ibn Ṣalāḥ Ṣahrazūrī (d. 1254) and Taqī al-Dīn al-Subkī (d. 1355)⁵⁵⁷, is nonetheless quite widespread in scholarship⁵⁵⁸. Basis for it are some authorial references to a «restricted» [*maḍnūn*] group of texts that are to be found in certainly authentic works of al-

⁵⁵⁴ This notwithstanding, al-Ġazālī's numerous surreptitious alterations of Avicenna's own formulations in the direction of religious revelation (as described in the previous §§1.7-1.9) are not modified by the editor of the CBL copy, who limited himself to the trimming of the most explicitly non-philosophical parts.

⁵⁵⁵ Cf. *infra*, §2.2. *Latin*, for more information on the Latin reception. For a possible trace of this kind of reception also in the Arabic tradition, cf. *infra*, §2.1.3. *Ibn al-Malāḥimī*. Another possible example, which awaits however yet to be explored in some detail, is the usage of the *MF* (or a similar text) which Afī al-Akīti tentatively recognised in al-Ṣahrastānī's exposition of Avicenna's philosophy in his *K. al-mīlal wa-l-niḥal* II.2.4, ed. BADRĀN 1951-1955 (II): 1053.1-1216.16. Cf. AL-AKĪTI 2009: 57-58 fn. 16 for some information on the issue, and the preliminary exclusion that the material – which is arranged in the characteristic order Logic-Metaphysics-Physics – might come directly from the *DN*.

⁵⁵⁶ While discussing the *Maḍnūn* text which I will consider in the next paragraph (see *infra*, §2.1.2), AL-AKĪTI 2009: 57 fn. 15 writes: «Al-Ghazali's role as a transmitter of the Greek philosophical sciences is easily observed in the Latin world, but the part he played in this regard in the Islamic world, despite its importance, is far less visible». Despite originating in a different context, and serving a different purpose in al-Akīti's discussion, this observation appears to me fairly significant also for a more general reassessment of the reception of the *MF* in Arabic.

⁵⁵⁷ POURJAVADY 2002^a: v.

⁵⁵⁸ A recent, critical examination of the of al-Ġazālī as «clandestine *ḥaylasūf*» is to be found in GRIFFEL 2021: 442-458. I have kept this excellent assessment of in mind when discussing what follows.

Ġazālī's, such as the *Jewels of the Qur'ān* [*Ġawāhīr al-Qur'ān*]⁵⁵⁹ and the *Book of the Forty* [*Kitāb al-Arba'īna*]⁵⁶⁰. These esoteric texts, which would allegedly form a set of writings whose publication was dangerous, and which would then have been kept secret by al-Ġazālī, came to be referred to collectively as *Al-Maḍnūn bi-hi 'alā ḡayr ahl'-hi* («that which is to be restricted from those not fit for it»)⁵⁶¹, or – in the plural – as *al-kutub al-maḍnūn bi-hā 'alā ḡayr ahl'-hā* («books that should be kept hidden from those unworthy of them»)⁵⁶². Some texts with this title circulated for a long time in printed editions, and were considered to be authentic by some modern scholars⁵⁶³. In 2002, Nasrollah Pourjavady published a facsimile edition of an Iranian manuscript from Marāḡa⁵⁶⁴ which contains, *inter alia*, a previously unknown work attributed to al-Ġazālī, and presented in the manuscript as belonging to the *Maḍnūn* corpus (precisely with the title *Al-Maḍnūn bi-hi 'alā ḡayr ahl'-hi*)⁵⁶⁵. The pertinence of the writing in question to the esoteric works of al-Ġazālī's has been defended by Pourjavady in two further Persian contributions, published at close distance from one another in the wake of the edition of the Marāḡa manuscript⁵⁶⁶. Another work with a similar title pertaining to the anthology edited by Pourjavady is the *Masā'il al-maḍnūn bi-hā 'alā ḡayr ahl'-hā*, which Pourjavady identifies as the *Urtext* from which the shorter set of questions and answers on physics and cosmology – attributed to al-Ġazālī, later translated into Hebrew, and normally cited as the «Hebrew *Aḡwiba*» – ultimately derives⁵⁶⁷.

Concerning the first of the two *Maḍnūn* texts edited by Pourjavady, Frank Griffel linked it closely to the *MF*, writing that the Marāḡa text is «a version of al-Ghazālī's *Kitāb al-Maḍnūn bi-hi 'alā ḡayr ahl'-hi* in which the teachings of *Maqāṣid al-falāsifa* are presented as being those of al-Ghazālī himself»⁵⁶⁸. The same assessment is repeated in fuller, although also more nuanced, form in the latest version of the entry on al-Ġazālī prepared by Griffel for the Stanford Encyclopedia of Philosophy, originally published online in 2007⁵⁶⁹. *Contra*,

⁵⁵⁹ Cf. *Ġawāhīr al-Qur'ān* I.4.2, ed. KURDĪ 1911: 30.8-12.

⁵⁶⁰ Cf. *Kitāb al-Arba'īna fī uṣūl al-dīn* I, Epilogue, ed. 'IRWĀNĪ-AL-SHAQAFA 2003: 39.14-15. I owe this and the preceding reference to AL-AKITI 2009: 52 fn. 3. As noticed *ibi*: 52 fn. 4, some (however ambiguous) references are also to be found in the *Ihyā' 'ulūm al-dīn*.

⁵⁶¹ AL-AKITI 2009: 52.

⁵⁶² SHIHADĒH 2011: 86 fn. 22.

⁵⁶³ See BOUYGES 1954: 52 fn. 4. Cf. MICHOT 1976.

⁵⁶⁴ Ms. Tehrān, Kitābḡānah-yi Aṣḡar Mahdāvī 587 (1).

⁵⁶⁵ POURJAVADY 2002^a: 2-62.

⁵⁶⁶ POURJAVADY 2002^b and POURJAVADY 2002^c. However, POURJAVADY 2002^a: v refers to the first of these articles as having appeared in 2001.

⁵⁶⁷ See POURJAVADY 2002^a: vi. The *Aḡwiba* was edited by MALTER 1896, and its Hebrew translation was recently studied anew by LANGERMANN 2011. Cf. *infra*, §2.3.3. *Moses Narboni*, fn. 744, for this Jewish commentator's statements concerning the existence of an esoteric writing penned by al-Ġazālī and containing a validation and vindication of philosophy against the theses expressed in the *TF*. See also GRIFFEL 2021: 454.

⁵⁶⁸ GRIFFEL 2006: 10 fn. 34. This would somehow approach the Marāḡa text to an editorial operation such as the one described by Shihadeh as for the CBL manuscript of the *MF* (cf. *supra*, §2.1.1. *Trimming al-Ġazālī*), but cf. *infra* for Shihadeh's justified care to keep the two texts well distinct.

⁵⁶⁹ GRIFFEL 2020: §2: «There are Arabic manuscripts that attribute a text that is quite similar to the *Doctrines of the Philosophers* to al-Ghazālī without mentioning that the teachings therein are an uncommitted report. The oldest of these manuscripts was produced at the beginning of the 13th century at Maraghah, an important center of scholarship in NW Iran and is available in facsimile (Pourjavady 2002, 2–62). It shows that also in the Arabic tradition, the positions reported in the *Doctrines of the Philosophy* were closely associated with al-Ghazālī. The «mis-identification» of al-Ghazālī as a follower of Avicenna may have its roots in an attitude among some Arabic readers of al-Ghazālī who saw in him a closer follower of the *falāsifa* than the mainstream Arabic tradition

Shihadeh argued that «although drawing heavily and selectively on the *Maqāṣid*, this shorter text is evidently a very different work. It contains major omissions [...] and additions in both structure and content. Furthermore, the title, preface and objectives of the text are all at variance with those of the *Maqāṣid*. It is, therefore, a completely other and, in all likelihood, later work, which on no account could be treated as a version of *The Doctrines of the Philosophers*»⁵⁷⁰.

The fullest study to date of the *Maḍnūn* texts in their ‘novel’ form (subsequent to Pourjavady’s edition), and in their relationship with the *MF*, was however conducted by Muḥammad Afifi al-Akiti in his large, though still unpublished, doctoral thesis⁵⁷¹. In a preview contribution of his dissertation, al-Akiti described the *Maḍnūn* corpus as a very wide and encompassing set of writings. With respect to previous scholarship, he ascribed to it many more texts, which he subdivided in writings directly (properly esoteric works), or indirectly (works bordering on the public side of al-Ġazālī’s production, but for al-Akiti nevertheless related to the *Maḍnūn*, such as the *Miškāt al-anwār*) belonging to the corpus⁵⁷². According to al-Akiti, the *Maḍnūn* globally represents the highest, apodictic and philosophical level of the theological curriculum envisaged by al-Ġazālī⁵⁷³. This programme of philosophical theology would involve according to him four *arkān* (‘pillars’), concerning respectively (i) God’s essence [*dāt*], (ii) His attributes [*ṣifāt*], (iii) His actions [*af‘āl*], and (iv) the soul’s return [*ma‘ād*] to God⁵⁷⁴. In this framework, al-Akiti calls *Major Maḍnūn* the text of the Marāġa manuscript printed by Pourjavady, identifying it with one of the manuals, or textbooks, of the aforementioned advanced curriculum in demonstrative theology. What is interesting to us now is that al-Akiti recognizes in this newly-found *Major Maḍnūn* «a long-unknown daughter»⁵⁷⁵ of the *MF*. In particular, the four *arkān* of the *Major Maḍnūn* would correspond respectively to *MF*, *Metaphysics II (rukn I)*, *Metaphysics III (rukn II)*, *Metaphysics IV (rukn III)*, and *Physics IV.3⁵⁷⁶-V (rukn IV)*⁵⁷⁷. A more detailed table of contents, based on the one given by al-Akiti, is provided in the following Table 21, with the addition of the detailed correspondences with the text of the *MF*.

wished to acknowledge».

⁵⁷⁰ SHIHADÉH 2011: 86 fn. 22.

⁵⁷¹ Muḥammad Afifi AL-AKITI, *The Maḍnūn of al-Ghazali: A Critical Edition of the Unpublished Major Maḍnūn with Discussion of his Restricted, Philosophical Corpus*, University of Oxford, 2008. The thesis, announced as a three-volume work on al-Ġazālī’s *Maḍnūn*, includes a critical edition of the work edited by POURJAVADY 2002^a: 2-62. To the best of my knowledge, however, it never appeared in print. I thus base the following exposition on the preview article, available in AL-AKITI 2009.

⁵⁷² Another text of al-Ġazālī’s usually not related to the *Maḍnūn*, but inserted by al-Akiti in the corpus, is the *Ma‘arīġ al-quds* (studied as well, on other assumptions, in JANSSENS 1993). Cf. AL-AKITI 2004, and AL-AKITI 2009: 55-56 fn. 13.

⁵⁷³ AL-AKITI 2009: 54-55.

⁵⁷⁴ AL-AKITI 2009: 54 fn. 8.

⁵⁷⁵ AL-AKITI 2009: 58.

⁵⁷⁶ That is to say, from the section of the Fourth treatise of the *Physics* of the *MF* devoted to the rational soul proper of human beings onwards. Cf. *supra*, §1.5.3 for a more detailed table of contents of *Physics IV*, with its internal divisions, and cf. also *infra* the Translation and the Commentary.

⁵⁷⁷ AL-AKITI 2009: 58.

TABLE 21. *Textual comparison between the contents of the MF and the so-called Major Maḍnūn*

TOPIC		MAJOR MAḌNŪN		MF	
A	God's essence [<i>dāt</i>] and His necessary concomitants [<i>lawāzim</i>]	I	<i>First Pillar</i> <i>Rukn I</i>	<i>Metaphysics II</i>	
1	God is not an accident	I.1	<i>Rukn I, amr 1</i>	<i>Met. II.1</i>	§176
2	God is not a body	I.2	<i>Rukn I, amr 2</i>	<i>Met. II.2</i>	§177
3	God is not a form ['nor matter' in the MF]	I.3	<i>Rukn I, amr 3</i>	<i>Met. II.3</i>	§178
4	His existence is nothing other than His quiddity	I.4	<i>Rukn I, amr 4</i>	<i>Met. II.4</i>	§179
5	God does not causally depend upon anything	I.5	<i>Rukn I, amr 5</i>	<i>Met. II.5</i>	§180
6	He does not relationally depend upon anything	I.6	<i>Rukn I, amr 6</i>	<i>Met. II.6</i>	§181
7	The Necessary Existent is only one	I.7	<i>Rukn I, amr 7</i>	<i>Met. II.7</i>	§182
8	He has no attribute supervening with respect to His essence	I.8	<i>Rukn I, amr 8</i>	<i>Met. II.8</i>	§§183-185
9	He does not change	I.9	<i>Rukn I, amr 9</i>	<i>Met. II.9</i>	§186
10	From the Necessary Existent only one thing immediately proceeds	I.10	<i>Rukn I, amr 10</i>	<i>Met. II.10</i>	§187
11	The Necessary Existent is not ['does not have' in the <i>Maḍnūn</i>] a substance	I.11	<i>Rukn I, amr 11</i>	<i>Met. II.11</i>	§§188-189
12	All contingent beings must proceed from a Necessary Existent according to a hierarchical order	I.12	<i>Rukn I, amr 12</i>	<i>Met. II.12</i>	§§190-195
B	Attributes [<i>ṣifāt</i>] of the First	II	<i>Second Pillar</i> <i>Rukn II</i>	<i>Metaphysics III</i>	
13	Life of the First Principle	II.1	<i>Rukn II, da'wà 1</i>	<i>Met. III.b.1</i>	§§199-200
14	The First's knowledge is identical to His essence and does not cause in it any multiplicity	II.2	<i>Rukn II, da'wà 2</i>	<i>Met. III.b.2</i>	§§201-202
15	Knowledge of universals (genera and species)	II.3	<i>Rukn II, da'wà 3</i>	<i>Met. III.b.3</i>	§203
16	The First's knowledge is one despite being relative to manifold things	II.4	<i>Rukn II, da'wà 4</i>	<i>Met. III.b.4</i>	§§204-209
17	The First knows the future contingents	II.5	<i>Rukn II, da'wà 5</i>	<i>Met. III.b.5</i>	§§210-211
18	The First knows the particulars a-temporally and universally	II.6	<i>Rukn II, da'wà 6</i>	<i>Met. III.b.6</i>	§§212-213

TOPIC		MAJOR MAḌNŪN		MF	
19	The First has will and providence	II.7	<i>Rukn II, da'wà 7</i>	<i>Met. III.b.7</i>	§§214-221
20	The First is powerful (omnipotent)	II.8	<i>Rukn II, da'wà 8</i>	<i>Met. III.b.8</i>	§§222-223
21	The First is wise	II.9	<i>Rukn II, da'wà 9</i>	<i>Met. III.b.9</i>	§§224-225
22	The First is generous [«all-good» in al-Akiti]	II.10	<i>Rukn II, da'wà 10</i>	<i>Met. III.b.10</i>	§226
23	Joy of the First (divine intellectual pleasure)	II.11	<i>Rukn II, da'wà 11</i>	<i>Met. III.b.11</i>	§§227-238
24	Epilogue of the speech on the attributes		<i>Hātima</i>	<i>Met. III.c</i>	§§239-244
C	Acts [<i>af'āl</i>] of the First Principle	III	<i>Third Pillar</i> <i>Rukn III</i>	<i>Metaphysics IV</i>	
25	Premise (<i>divisiones entis</i>)		<i>Muqaddima</i>	<i>Met. IV.a</i>	§§245-248
26	Rectilinear motion as first concomitant of composition in the sublunary world	III.1.1	<i>Rukn III, rukn 1, da'wà 1</i>	<i>Met. IV.b.1.1</i>	§§250-251
27	Differentiation of the directions	III.1.2	<i>Rukn III, rukn 1, da'wà 2</i>	<i>Met. IV.b.1.2</i>	§§252-255
28	Rectilinear motion is proper of the sublunary composite bodies	III.1.3	<i>Rukn III, rukn 1, da'wà 3</i>	<i>Met. IV.b.1.5</i>	§264
29	The origin of the rectilinear sublunary motions	III.1.4	<i>Rukn III, rukn 1, da'wà 4</i>	<i>Met. IV.b.1.6</i>	§§265-267
30	Voluntary movement of the heavens	III.2.1	<i>Rukn III, rukn 2, da'wà 1</i>	<i>Met. IV.b.2.1</i>	§§270-271
31	The mover of the heavens is neither an intellect, nor pure nature	III.2.2	<i>Rukn III, rukn 2, da'wà 2</i>	<i>Met. IV.b.2.2</i>	§§272-274
32	The heavens move for an intellectual goal, having no solicitude for the sublunary world	III.2.3	<i>Rukn III, rukn 2, da'wà 3</i>	<i>Met. IV.b.2.3</i>	§§275-281
33	Establishment of the existence of the abstract intellects	III.3.1	<i>Rukn III, rukn 3, da'wà 1</i>	<i>Met. IV.b.2.4</i> = <i>Met. IV.b.3.1</i>	§§282-288
34	Multiplicity of the heavens	III.3.2	<i>Rukn III, rukn 3, da'wà 2</i>	<i>Met. IV.b.2.5</i> = <i>Met. IV.b.3.2</i>	§289
35	Mutual causation between heavenly bodies is impossible	III.3.3	<i>Rukn III, rukn 3, da'wà 3</i>	<i>Met. IV.b.2.6</i> = <i>Met. IV.b.3.3</i>	§§290-292
36	Each one of the manifold heavens has a body, a soul, and an intellect	III.3.4	<i>Rukn III, rukn 3, da'wà 4</i>	<i>Met. IV.b.2.7</i> = <i>Met. IV.b.3.4</i>	§293
D	Soul [<i>nafs</i>] and return [<i>ma'ād</i>] of the soul	IV	<i>Fourth Pillar</i> <i>Rukn IV</i>	<i>Physics IV.3 and Physics V</i>	

TOPIC		MAJOR MAḌNŪN		MF	
37	Human soul	IV.1	<i>Rukn IV, qawl</i> [1]	<i>Phys. IV.3</i>	§§402-424
38	The soul is a sign for the existence of the agent intellect	IV.2.1	<i>Rukn IV, qawl</i> [2], <i>amr</i> 1	<i>Phys. V.1</i>	§426
39	How knowledge can flow from the agent intellect down to the human soul	IV.2.2	<i>Rukn IV, qawl</i> [2], <i>amr</i> 2	<i>Phys. V.2</i>	§427
40	Happiness of the rational soul	IV.2.3	<i>Rukn IV, qawl</i> [2], <i>amr</i> 3	<i>Phys. V.3</i>	§§428-429
41	Misery of the rational soul	IV.2.4	<i>Rukn IV, qawl</i> [2], <i>amr</i> 4	<i>Phys. V.4</i>	§§430-432
42	Veridical dreams	IV.2.5	<i>Rukn IV, qawl</i> [2], <i>amr</i> 5	<i>Phys. V.5</i>	§§433-436
43	Confused, false dreams	IV.2.6	<i>Rukn IV, qawl</i> [2], <i>amr</i> 6	<i>Phys. V.6</i>	§437
44	Veridical wakeful visions	IV.2.7	<i>Rukn IV, qawl</i> [2], <i>amr</i> 7	<i>Phys. V.7</i>	§§438-440
45	False wakeful visions	IV.2.8	<i>Rukn IV, qawl</i> [2], <i>amr</i> 8	<i>Phys. V.8</i>	§§441-442
46	Kinds of prophecy and prophetic miracles	IV.2.9	<i>Rukn IV, qawl</i> [2], <i>amr</i> 9	<i>Phys. V.9</i>	§§443-451
47	Establishment of the existence of the Prophet as (political) guide	IV.2.10	<i>Rukn IV, qawl</i> [2], <i>amr</i> 10	<i>Phys. V.10</i>	§§452-453

From the comparison detailed in the preceding Table 21, there emerges first of all an absolute homogeneity of ordering and structure between the four ‘pillars’ of the *Major MaḌnūn* and the treatises of the *MF* which they reproduce. The correspondence between the two texts, in the relevant parts, goes as far as the reproduction in the *MaḌnūn* of the very same terminology with which the textual subdivisions are labelled: each of the ‘necessary concomitants’ [*lawāzim*] of the essence of the Necessary Existent is for instance called a «thing» [*amr*] in both the *MaḌnūn* (*rukṅ* I) and the *MF* (*Metaphysics* II); likewise, each statement concerning the attributes [*ṣifāt*] of the First Principle is called in both works «allegation» [*daʿwā*] (*MaḌnūn*, *rukṅ* II = *MF*, *Metaphysics* III). An even more striking case is the one of *rukṅ* III of the *MaḌnūn*, which corresponds to *Metaphysics* IV in the *MF*. In the latter text, as a matter of fact, the material is in turn subdivided into three «pillars» [*arkān*], and this subdivision is kept in the *MaḌnūn*, despite the reduplication of the word *rukṅ*, which is used there – with a kind of structural synecdoche susceptible of creating some confusion – both for the whole (the macro-section) and the parts (its internal subdivisions). This circumstance might be taken to suggest that it is the *MaḌnūn* text to derive from the *MF*, and not vice versa.

Even in the framework of such an apparently faithful reproduction, some important differences in structure and content are however to be found. For instance, the Premise on the kinds of attributes that can be assigned to the First (corresponding to *MF*, *Metaphysics* III.a, §§196-198 in my Translation) does not seem to be reproduced in the *Maḍnūn* text, which rather begins its second pillar directly with the treatment of the first *ṣifa*, the one which attributes to God the predicate of life. More conspicuously, the *Major Maḍnūn* omits two of the six allegations that in the *MF* form the first pillar of the Fourth treatise of *Metaphysics*, and precisely those corresponding to *Metaphysics* IV.b.1.3, §§256-259 (on time) and IV.b.1.4, §§260-263 (on movement, nature, and inclination). The ground for this omission might be the partly physical character of these doctrines, which might have been seen by the author of the *Maḍnūn* as unfitting in an all-metaphysical, and by the way heavily theological, treatise like the *Major Maḍnūn* turned out to be. An indication in this direction was indeed already contained within al-Ġazālī's treatment of time in the *MF*, in the form of an (Aristotelizing) statement to the effect that time would be more suitable to natural philosophy than to metaphysics (*wa-in kāna dālika bi-l-ṭabī'yyāt alyaq*, §257)⁵⁷⁸. However, the entire section corresponding to the first pillar in *Metaphysics* IV touches upon physical topics, dealing as it does with the sublunary composite bodies and their motion. Thus, the explanation of the omission based on the unsuitability of natural philosophy to the topics of the *Maḍnūn* cannot be entirely satisfying. Moreover, while the treatment of time in metaphysics can be seen as a vestige of the *DN* in the *MF*, the material treated in IV.b.1.4 – a rather technical detour mainly focused on the notion of «inclination» [*mayl*] – was added to the text by al-Ġazālī⁵⁷⁹. It may thus seem odd that the same author who had deemed it necessary to add something in this point to Avicenna's exposition, should have then found it better to remove that very material from a further text of his, and to return instead to a text closer to Avicenna's original one in the *DN*. This back-and-forth textual movement is all the more puzzling when seen as culminating in a work like the *Major Maḍnūn*, which is portrayed by al-Akīti – perhaps too emphatically – as the highest level of al-Ġazālī's critical reflection in philosophical theology, full of minor but significant variations with respect to Avicenna's thought⁵⁸⁰.

The greatest difference in structure between the *Maḍnūn* and the *MF* is however probably the fusion, in the *Maḍnūn*, of materials belonging in the *MF* to the Fourth and the Fifth treatises of the *Physics*. In particular, all the discussion on the inferior kinds of soul – the vegetative and the animal one – is omitted, while the treatment of the human soul is directly connected with the analysis of the soul's relation with the intellectual realm of the unknown, which forms the bulk of the Fifth and conclusive treatise of the *Physics* of the *MF*. The resulting material, really treated in its entirety as a «metaphysics of the rational soul»⁵⁸¹, is appended to the three preceding metaphysical *arkān* of the *Maḍnūn* in the form of a

⁵⁷⁸ Cf. also *supra*, §1.4.3. *Internal Cross-References*, and the Commentary *ad locum*.

⁵⁷⁹ JANSSENS 2019: 110, and cf. *infra* the Commentary *ad locum*.

⁵⁸⁰ This is indeed the general thesis that emerges from AL-AKITI 2009: 52: «I intend to show how the 'good' falsafa used by al-Ghazali in the *Major Maḍnūn* excludes the 'bad' falsafa he exposed in the *Tahāfut* and departs from the 'ugly' falsafa he presented in the *Maqāṣid (DN)*, which is in fact the mother text of the *Major Maḍnūn*». If the 'good' *falsafa* turns out to be more Avicennan than the purported 'bad' one, some serious problems of interpretation inevitably arise.

⁵⁸¹ For this key notion of Avicennan philosophy cf. GUTAS 2000 and its English abridgment in GUTAS 2012^b; valuable information on the topic can also be gathered *inter alia* from GUTAS 1998 and GUTAS 2006^b.

fourth, and conclusive, pillar. Despite the differences in arrangement, thus, the eminently conclusive function of the philosophical material concerning the *ma'ād* of the rational soul results nonetheless strongly confirmed. Indeed, the doctrines concerning the afterlife of the human soul, connected with a set of oneirological, prophetological, and finally also politico-religious teachings, are the culminating point of the *DN*, the *MF*, the *Major Maḍnūn*, and even of the *Ilāhiyyāt* of the *K. al-Šifā'*, alike⁵⁸².

2.1.3. Ibn al-Malāḥimī

Rukn al-Dīn Maḥmūd ibn Muḥammad al-Malāḥimī al-Ḥwārazmī (d. 1141), known simply as Ibn al-Malāḥimī, was the most prominent Mu'tazilite theologian and Ḥanafite jurist of 12th century Ḥwārazm⁵⁸³. Among his works, the only recently discovered⁵⁸⁴ *Tuḥfa al-mutakallimīna fi l-radd 'alā l-falāsifa* [*The Gift to the Theologians concerning the Refutation of the Philosophers*]⁵⁸⁵ is an elaborate condemnation of the theological metaphysics of the Peripatetic philosophers, and of Avicenna in particular. The editors of the text, Ḥasan Anṣārī and Wilferd Madelung, were able to identify in it a surprisingly high number of Ḡazālīan quotations which have their origin in the *MF*. These quotations are used as pieces of evidence of the theses of the philosophers, precisely the ones which Ibn al-Malāḥimī proposes himself to refute as a theoretical «gift» to his fellow theologians. The author of the best-known refutative work of Islamic philosophy, the *TF*, is thus curiously reduced – with a move which finds a striking parallel in the Latin world⁵⁸⁶ – to the philosophical theses he reported in the *MF*. The usefulness of the latter as a perfect primer to Avicennan philosophy results by the way confirmed by Ibn al-Malāḥimī's direct quotations, which are paired with lengthy *verbatim* citations of other actually Avicennan works of philosophy, such as the *K. al-Šifā'*, the *K. al-Mabda' wa-l-ma'ād*, the *Maqāla fi l-quwā l-insāniyya*, a *K. al-Nafs* (seemingly different than the one pertaining to the *Šifā'*), and *al-Iṣārāt wa-l-Tanbīhāt*⁵⁸⁷.

In his 2007 article on the *Tuḥfa al-mutakallimīna*, Madelung argued that the main source employed by Ibn al-Malāḥimī for his work «often agrees literally» with the *MF*, «but occasionally deviates substantially» from it. While Madelung acknowledged that this might look like a «different recension» of al-Ḡazālī's work, he then concluded that «[it] seems more likely... that he [*scil.* Ibn al-Malāḥimī] and al-Ghazālī both copied from an exposition of philosophical teaching designed for Muslim readers by a follower of Ibn Sinā». In the brief introduction to the critical edition of the *Tuḥfa*, published the following year and

⁵⁸² I have touched on this important structural point *supra*, §1.4.2. *The Order of the Sciences*; cf. also in particular §1.4.2.1. *Why Didn't al-Ḡazālī Do His Math?*. Strikingly, also other texts in different traditions which are based on the *MF* maintain this conclusive collocation, despite the choice of a different, standard ordering of the philosophical sciences – with *Physics* preceding *Metaphysics*: cf. *infra*, §2.4.1. *Syriac*, for the case of Barhebraeus' *Treatise of Treatises*.

⁵⁸³ For a quick overview on his life and works, see MADELUNG 2011.

⁵⁸⁴ The announcement of the discovery of the only known extant manuscript was made by ANSARI H. 2001 (in Persian); cf. MADELUNG 2007: 331 and fn. 1.

⁵⁸⁵ Edited in ANSARI-MADELUNG 2008.

⁵⁸⁶ Cf. *infra*, §2.2. *Latin*.

⁵⁸⁷ Cf. MADELUNG 2007: 334.

largely dependent on the previous contribution, Madelung repeated his position, settling on the somewhat puzzling thesis that the primary source for Ibn al-Malāḥimī's *reportatio* of the doctrines of the philosophers was «an anonymous teaching manual of Ibn Sīnā's philosophy which was also extensively copied by al-Ghazālī in his *Maqāṣid al-falāsifa*»⁵⁸⁸.

This is however entirely speculative, since there is no separate evidence, as far as I know, for the existence of such a manual of philosophy. Moreover, once a conjectural *Urtext* has been assumed, the links of the chain of previous hypothetical sources implicitly envisaged could be further multiplied *ad libitum*, thus leading to non-falsifiable, and clearly anti-economical, conclusions. Further, it is not entirely clear to me why the differences between the *MF* and the *Tuhfa* should be explained away by the common recourse of both texts to a common ancestor: if both authors copied from a single source, substantial differences of the kind that made the original hypothesis necessary would still remain in principle unexplained. By contrast, it seems safe to assume, until proof to the contrary, that those that look like quotations of the *MF* in the *Tuhfa* are indeed *verbatim* – or almost *verbatim* – citations of al-Ġazālī's text⁵⁸⁹, perhaps in a different recension (the existence of which would however remain to be demonstrated), or maybe simply in a different, and more explicitly 'philosophical' textual asset than the one – comprising the *Prologue* and the *Epilogue* – we normally read in modern editions. The existence of the latter configuration of the text, devoid in particular of all references to the *TF*, is indeed witnessed beyond doubt by the Dublin manuscript discussed in a previous section⁵⁹⁰, as well as – partially – by the Latin tradition⁵⁹¹.

Without any further evidence concerning an Arabic *Urtext* from which both al-Ġazālī and Ibn al-Malāḥimī would have copied, I therefore propose for the time being to consider the *Tuhfa* as an interesting example of the reception of the *MF* as a proper textbook of philosophy in the Arabic world. As such, the *Tuhfa* could and should also be used as an important indirect witness of the *MF*, also in the philological perspective of the making of a fully critical edition of al-Ġazālī's text⁵⁹². Although the doctrinal reasons – which might also have to do with Ibn al-Malāḥimī's Mu'tazilite allegiance, as opposed to al-Ġazālī's Aš'arite one – and the historical circumstances of the reception of the *MF* in the *Tuhfa* are yet to be determined, the following Table provides a preliminary *conspectus* of the parallels between the two texts. As already noticed by Frank Griffel, Ibn al-Malāḥimī's use of the *MF* is «highly eclectic», with *verbatim* or almost *verbatim* quotations alternating with summarised

⁵⁸⁸ Cf. Madelung in ANSARI-MADELUNG 2008: iv. The passage goes on to say: «Much of the text quoted by Ibn al-Malāḥimī agrees literally with al-Ghazālī's text. There are, however, sometimes substantial differences, indicating that Ibn al-Malāḥimī did not quote from the *Maqāṣid al-falāsifa*», as already clarified in MADELUNG 2007: 334.

⁵⁸⁹ GRIFFEL 2016: 449 is of like mind when he writes that Ibn al-Malāḥimī's hypothetical drawing from an «adaptation» of the *MF* «is less likely» than his direct usage of al-Ġazālī's text itself. Griffel's point is also based on the consideration that a highly problematic adaptation of the *MF* from this time period already exists, *i.e.* the so-called *Major Maḥnūn* (on which see *supra*, §2.1.2). Accordingly, he concludes *ibidem* that «Ibn al-Malāḥimī did not use this *Major Maḥnūn*, but most likely the *Maqāṣid al-falāsifa* in a form that is identical or at least very similar to how we know it today». The same conclusion is reprised in GRIFFEL 2021: 435. As I try to explain in more length in what follows, I also agree with this conclusion, against Madelung's ones.

⁵⁹⁰ *Supra*, §2.1.1, *Trimming al-Ġazālī*.

⁵⁹¹ *Infra*, §2.2. *Latin*.

⁵⁹² An interesting example of this philological utility can be found at number [26] in the following Table 22. Cf. also *supra*, §1.9.1.

passages, rearrangements, and various other forms of restructuration of the text⁵⁹³. Apart from quotation number [29] in Table 22, which refers to the chapter on prophecy in the Fifth treatise of the *Physics* of the *MF*, all quotations appear to be taken from the *Metaphysics* of al-Ġazālī's work, and particularly from the Third treatise, which deals with divine attributes [*ṣifāt*] (numbers [5]-[17], for a total of thirteen quotations out of the global thirty ones)⁵⁹⁴. Further research will however be needed in order to ascertain the details, both textual and doctrinal, which could help characterising in a better way the interesting relationship between the *MF* and the *Tuḥfa al-mutakallimīna*.

TABLE 22. *Quotations of the MF in Ibn al-Malāḥimī's Tuḥfa al-mutakallimīna*

	IBN AL-MALĀḤIMĪ, <i>TUḤFA</i>	AL-ĠAZĀLĪ, <i>MF</i>	NOTES
1	13.11-15	<i>Met. IV.b.2.3</i> , §278	
2	58-59.13	<i>Met. II.1</i> , §176; <i>Met. II.2</i> , §177; <i>Met. II. 11</i> , §189; <i>Met. II.10</i> , §187 + <i>Met. II.3</i> , §178 (?)	
3	61.7-15 (? O anche ff.?)	<i>Met. II.4</i> , §179	
4	66.7-17	<i>Met. II.8</i> , §§183-185	
5	67.8-21	<i>Met. III.a</i> , §§196-198 + <i>Met. III.b.1</i> , §199	
6	72.22-73.9 (?)	<i>Met. III.b.1</i> , §200 + <i>Met. III.b.2</i> , §201 (?)	
7	74.1-7	<i>Met. III.b.2</i> , §202	
8	78.22-79	<i>Met. III.b.3</i> , §203 + <i>Met. III.b.4</i> , §§204-209	
9	81.3-8	<i>Met. III.b.3</i> , §203	
10	86.1-14	<i>Met. III.b.5</i> , §§210-211	
11	92.1-16	<i>Met. III.b.7</i> , §§214-218	
12	93.16 ff.	<i>Met. III.b.7</i> , §221	The editors' reference seems to include also my §§219-220.
13	94.21-95.8	<i>Met. III.b.8</i> , §§222-223	

⁵⁹³ GRIFFEL 2016: 449.

⁵⁹⁴ Also GRIFFEL 2016: 451 notices how Ibn al-Malāḥimī «sticks closely to the table of contents» of the *MF* while discussing the positive and negative attributes of God, *i.e.* precisely the material of *MF*, *Metaphysics* III. GRIFFEL 2021: 435-436 insists again on the issue, and on the importance of the treatment of divine attributes in the *MF* as an almost unparalleled specimen of this doctrine in Islamic philosophy.

	IBN AL-MALĀĪMĪ, <i>TUḤFA</i>	AL-ĠAZĀLĪ, <i>MF</i>	NOTES
14	98.5-99.12 (?)	<i>Met.</i> III.b.11, §§227-235	
15	102.24-103.5	<i>Met.</i> III.b.11, §233	esp. D247.11-21
16	103.16-21	<i>Met.</i> III.b.10, §226	
17	104.19-105.16	<i>Met.</i> III, <i>Epilogue</i> , §§239-244	
18	110.21-112.2	<i>Met.</i> V, §§307-314	
19	114.20 ff.	<i>Met.</i> IV.b.2.3, §275	<i>passim</i>
20	115.10-11	<i>Met.</i> IV.b.1, §249	esp. D256.3-6
21	115.18 ff.	<i>Met.</i> IV.b.2.3, §§275-276	<i>passim</i>
22	116.15-20 (?)	<i>Met.</i> IV.b.2.3, §277	<i>passim</i>
23	119.5-20	<i>Met.</i> IV.b.2.3, §§279-281	almost <i>verbatim</i>
24	123.11-124.3	<i>Met.</i> IV.b.3.1, §§282-283	
25	125.6-18	<i>Met.</i> IV.b.3.1, §§284-286	
26	129.12-16	<i>Met.</i> IV.b.3.4, §293	<i>rabb al-arbāb</i>
27	130-131.5	<i>Met.</i> V, §§294-298	§298: D291.1
28	132.17-133.13	<i>Met.</i> V, §§298-306	§298: D291.15
29	153.22-154.17	<i>Phys.</i> V.9, §§443-451	To a first inspection looks like a <i>versio breviar</i> of <i>Phys.</i> V.9, without §§444-445
30	172.16-20	<i>Met.</i> I.8, §§172-173	

2.1.4. 'Ġazālīan' Philosophers

In this brief subsection, I will address two post-Avicennan philosophers active in the Eastern parts of the Muslim domain in the 12th century, Ibn Ġaylān al-Balḥī and Šaraf al-Dīn al-Mas'ūdī (both d. around 1194). The label of 'Ġazālīan' philosophers, which was used for

them by Frank Griffel⁵⁹⁵, can be partly misleading, as the origins of the doctrinal trend they instantiate can be traced back to both al-Ġazālī and Abū l-Barakāt al-Baġdādī (d. *ante* 1164-1165)⁵⁹⁶. Ayman Shihadeh has thus spoken more precisely of a «counter-Avicennan current» for al-Balḥī and al-Mas‘ūdī, carefully distinguishing it from a more structured ‘school’, as well as from a more decidedly ‘anti-Avicennan’ stance⁵⁹⁷. Shihadeh also aptly distinguished this counter-Avicennan trend into two waves, one «harder» and more combative, instantiated by al-Balḥī, and the other «softer» and keener on philosophical arguments, represented by al-Mas‘ūdī⁵⁹⁸. More details on the definition of the cultural milieu in which these two thinkers were active, as well as on their importance as «twilight’» and «transitional» sources capable of shedding new light onto the developments of Islamic philosophy and theology in the fundamental phase of the 12th century, are available in further, extremely valuable contributions by Shihadeh, to which I refer the reader for a supplement of well-pondered information⁵⁹⁹. A specific aspect which can be extracted from those analyses, and which is important to bear in mind when addressing these thinkers, is that their criticism of philosophy owes much to *kalām* strategies and methods of argumentation. In what follows, I will limit myself to point at some cases in which not so much al-Ġazālī’s general influence on this Eastern philosophical milieu, but rather the specific impact on it of the *MF*, can be gauged with a certain clarity.

2.1.4.1. Ibn Ġaylān al-Balḥī

Farīd (or Afḍal) al-Dīn ‘Umar ibn ‘Alī Ibn Ġaylān al-Balḥī (d. c. 1194) is to be considered the first main exponent of the post-Ġazālīan trend of philosophy sketched above. He probably studied at the Niẓamiyya *madrassa* in Nišāpūr under the supervision of Muḥammad ibn Yaḥyā al-Ġanzī (d. 1154), who had been in turn a pupil of al-Ġazālī⁶⁰⁰. Interested in medicine and keen critical reader of Avicenna’s *Canon of Medicine*, about whose section on simple drugs he composed a critical gloss⁶⁰¹, his best-known work is however the cosmological treatise *The Origin in Time of the World* [*Ḥudūt al-‘ālam*], a two-part, anti-eternalist philosophical tract formally conceived as the refutation of a minor book by Avicenna, *The Appraisal of the Proofs of Those Who Establish a Temporal Beginning for the Past* [*al-Ḥukūma fī l-ḥuġaġ al-muḥbitīna li-l-māḍī mabda‘^{am} zamāniyy^{am}*]⁶⁰². This very specific and apparently reductive

⁵⁹⁵ Cf. the title *Two Ghazālīans of Transoxania: al-Mas‘ūdī and Ibn Ghaylān al-Balkhī* in GRIFFEL 2021: 226. Cf. also his characterization of this trend given *ivi*: 228: «Ghazalianism in philosophy describes the acceptance of al-Ghazālī’s criticism of *falsafa* and, in this case, continuing his project».

⁵⁹⁶ The importance of Abū l-Barakāt’s *al-Kitāb al-Mu‘tabar* for Ibn Ġaylān al-Balḥī and al-Mas‘ūdī is however strongly highlighted by Griffel himself, up to the conclusions of his 2021 monograph; cf. *e.g.* the conclusive statements in GRIFFEL 2021: 563.

⁵⁹⁷ SHIHADÉH 2016: 3 and fn. 7.

⁵⁹⁸ SHIHADÉH 2016: 3.

⁵⁹⁹ Cf. SHIHADÉH 2005, SHIHADÉH 2013; SHIHADÉH 2014.

⁶⁰⁰ GRIFFEL 2021: 226.

⁶⁰¹ Studied in SHIHADÉH 2013.

⁶⁰² The Arabic text of Ibn Ġaylān’s *Ḥudūt al-‘ālam* is edited in MOHAGHEGH 1998 together with that of Avicenna’s *Ḥukūma*. For an outline of Ibn Ġaylān’s book cf. the pathbreaking essay by MICHOT 1993, as well as Michot’s French introduction to Mohaghegh’s Arabic edition of the work (MICHOT 1998).

scope notwithstanding, Ibn Ġaylān's treatise reveals a sure-footed acquaintance with the entire Avicennan *corpus*, as well as with Abū l-Barakāt al-Baġdādī, who is quoted no less than thirty times in the work⁶⁰³. The first part of the *Hudūt al-ʿālam* provides a thorough refutation of Avicenna's *Hukūma*, while the second part presents a series of «doubts» [*šukūk*] of the *falāsifa* against the origin in time of the world⁶⁰⁴.

The presence of al-Ġazālī in the book is consistent and *prima facie* full of praise. Al-Ġazālī is explicitly mentioned six times in the work, always with the highly honorific epithet of *Huġġa al-Islām* («the Proof of Islam»), which is accompanied only in the first occurrence by the name «Muḥammad al-Ġazālī», and which is most often preceded by the further praiseworthy epithet *al-Imām*⁶⁰⁵. All these quotations of al-Ġazālī can be traced back to the *TF*, which is explicitly mentioned in at least two cases, and implicitly evoked in the majority of the others⁶⁰⁶. The *MF*, by contrast, is never mentioned. This is in keeping with the utmost importance of the model of the *TF* for the post-Ġazālīan generation of thinkers of which Ibn Ġaylān and al-Masʿūdī can be taken as the main representatives. However, it is important to stress – in keeping with the findings of the section devoted to the anti-eternalist examples above⁶⁰⁷ – that the *MF* itself showcases with clarity⁶⁰⁸ the utmost relevance of the topic of the origin in time of the world, explicitly treated in the *TF*, but surreptitiously present also throughout the philosophic *summa*. If recent scholarship is right to see in Ibn Ġaylān's œuvre an outstanding witness of the counter-Avicennan and post-Ġazālīan current in Islamic thought, and an intermediate step towards the definition of a fuller distinction between the concurring genres of *ḥikma* and *kalām*, this is largely (although not exclusively) because it spells out the crucial problem of the eternity of the world as a theoretical dividing line between *falāsifa* and genuine Muslim believers⁶⁰⁸. This notwithstanding, the *Hudūt al-ʿālam* is clearly a philosophical work, fraught with discussions of philosophical arguments. In this framework, it is thus relevant to notice that the *MF*, with its peculiar doctrinal stance, is a perfect forerunner for the tendencies displayed by Ibn Ġaylān. While the *TF* is of course the most important single source for the overall attitude of the post-Ġazālīan philosophers of Transoxania, the underlying presence of the *MF* – as the first specimen of a later consolidated doctrinal stance, and as the model of an exquisitely philosophical work written by a theologian⁶⁰⁹ – can also be seen as a significant element of the counter-Avicennan trend in 12th century Islam. This is confirmed even more clearly by the case of Šaraf al-Dīn al-Masʿūdī, which will be treated in the next paragraph.

⁶⁰³ GRIFFEL 2021: 370.

⁶⁰⁴ Cf. GRIFFEL 2021: 229 ff.

⁶⁰⁵ See MOHAGHEGH 1998: 8.3 (with *al-imām*), 9.4, 40.22, 79.3 (with *al-imām*), 86.9 (with *al-imām*), 98.4 (with *al-imām*).

⁶⁰⁶ MOHAGHEGH 1998: 8.3-4 [*fi šadr kitābī-hi al-musammā Tahāfut al-falāsifa*], 40.22-23 [*fi kitāb al-Tahāfut*]. A partial criticism of al-Ġazālī on the part of Ibn Ġaylān is perceivable in his reproach of al-Ġazālī's mild stance in the *TF* with respect to the philosophers, whose general belief in God is assessed, despite the specific accusations of *kufīr* moved to single tenets of their cultural enterprise: cf. also the French translation of the text in MICHOT 1993: 313.

⁶⁰⁷ Cf. *supra*, §1.8.2.

⁶⁰⁸ Cf. GRIFFEL 2021: 230-231.

⁶⁰⁹ Cf. *supra*, §1.10.

2.1.4.2. Šaraf al-Dīn al-Mas‘ūdī

Šaraf al-Dīn Muḥammad ibn Mas‘ūd al-Mas‘ūdī (d. c. 1194), despite long ignored in scholarship, was an outstanding intellectual figure in 12th century Transoxania and Ḥurasān. One of his most interesting works is his aporetic commentary on Avicenna’s *Išārāt*, titled *Inquiries and Doubts on the Book of Pointers and Reminders* [*al-Mabāḥiṭ wa-l-Šukūk ‘alā kitāb al-Išārāt wa-l-tanbīhāt*], which was recently edited, with a long and detailed historical and doctrinal introduction, by Ayman Shihadeh⁶¹⁰. Al-Mas‘ūdī’s stance in this work combines a fine criticism of Avicenna’s positions with the presentation of al-Mas‘ūdī’s own theses, whose concurrence and complementarity with respect to the critique made by al-Ġazālī in the *TF* is often spelt out by the author⁶¹¹. In this context, the usage of the *MF* appears somewhat limited, and certainly pales in comparison to that of the *TF*⁶¹². By contrast, another important work by al-Mas‘ūdī, the *Commentary on (Avicenna’s) Glistening Homily* [*Šarḥ al-Ḥuṭba al-ġarrā’*], was characterized by Frank Griffel in terms close to the *MF* in both goals and philosophical style. This commentary on a short text by Avicenna⁶¹³ is indeed aimed *prima facie* at explaining Avicennan views, but it is also designed to make those views acceptable to more theologically inclined thinkers, in a fashion recognizable as genuinely Ġazālīan⁶¹⁴.

A first, interesting parallel between al-Mas‘ūdī’s *Commentary* and the text of the *MF* is given by al-Mas‘ūdī’s initial plea to an uncommitted account of philosophical doctrines in his *Prologue* to the *Šarḥ al-Ḥuṭba*⁶¹⁵. Some further hints of al-Mas‘ūdī’s direct reading and quotation of the *MF* can perhaps be gathered by subsequent passages of the text, although a fuller study of the work would be needed in order to ascertain the point. One instance of this underground reception could be seen in the simile of the young boy who does not know yet the pleasures of sexual intercourse and thus loathes it, which is given in the Fifth treatise of the *Physics* of the *MF* as an example of how it could be that someone ignores the highest

⁶¹⁰ SHIHADDEH 2016.

⁶¹¹ Cf., for a very notable case of this attitude, the critical discussion on the concept of dispositional possibility, against Avicenna’s demonstration of the pre-eternity of prime matter, carefully reconstructed by SHIHADDEH 2016: 127-136; for the explicit connection with the *TF*, cf. in particular al-Mas‘ūdī’s text quoted at 135.

⁶¹² The three explicit nominal quotations of al-Ġazālī in the text of the *Šukūk* all refer to the *TF*: cf. SHIHADDEH 2016: 259, 273, 287.

⁶¹³ An edition and translation is available in AKHTAR 1935. In the list of Avicennan works provided by GUTAS 2014: 509 this *Ḥuṭba* is registered with the main title of *al-Ḥuṭba at-tawḥīdīyya* [*Homily on the Oneness of God*] under the *siglum* GPW 6, at point (a). The title *al-Ḥuṭba al-ġarrā’*, adopted by al-Mas‘ūdī’s *Commentary*, is also registered by Gutas, along with further variant headings. Avicenna’s homily was translated into Persian by ‘Umar Ḥayyām, and referred to by Faḥr al-Dīn al-Rāzī’s in his *al-Mabāḥiṭ al-mašriqīyya*: cf. GUTAS 2014: *ibidem*.

⁶¹⁴ See GRIFFEL 2021: 473-474 and ff. Cf. in particular 473: «At the outset, the text wants to be a mere explanation of someone else’s teachings. In that, it is similar to al-Ġazālī’s *Maqāṣid al-falāsifa*. Like that book, it includes disclaimers about its character as a report at the beginning. Yet on closer inspection, this book is far from being just a report. It is written for mutakallimūn – or for similar readers not yet familiar with Avicennism – and explains it in ways that wish to make it appealing to them».

⁶¹⁵ Cf. the English translations of the text given in SHIHADDEH 2016: 21 and GRIFFEL 2021: 463. In relation to this, SHIHADDEH 2016: 28 writes: «That al-Mas‘ūdī subscribed to positions that we would describe as theological is readily evident in the manner in which he distances himself, in the preface to *Sharḥ al-Kuṭba*, from views expressed in the book that do not accord with the teachings of revelation (though he does not specify any of the contents or teachings in question)».

(intellectual) pleasures, favoring instead the lower (bodily) ones. As a matter of fact, the same example, which is peculiar in that it argues for the superiority of the lofty intellectual enjoyment, as opposed to the corporeal one, precisely by comparing the former to a strong corporeal pleasure, is also to be found in the *Commentary on the Glistening Homily*. More precisely, the example occurs in the appendix on the afterlife that comes at the conclusion of the work, and it is thus located in a position structurally equivalent to that in which the simile originally occurs in al-Ġazālī's text⁶¹⁶. Likewise, the contiguous passage of the *MF* in which a traditionist source is quoted to the effect that punishment in the afterlife will not be eternal (§431 in the Translation) has a parallel in the same conclusive section of al-Mas'ūdī's *Šarḥ*, in which al-Mas'ūdī explains the Sunnī teaching on the temporariness of hell «by appropriating» – to use Griffel's words – «Avicennan ideas»⁶¹⁷. The notion itself of validating those Avicennan ideas in a theological environment by means of apt quotations of religious sources is however once again distinctively Ġazālīan⁶¹⁸, and moreover quite typical of the attitude towards philosophy displayed in the *MF*, which appears then as a valuable further source for al-Mas'ūdī's work.

For the theoretical framework delineated in this Introduction, the most interesting case of similarity between al-Mas'ūdī's commentary on the *Ḥuṭba* and the *MF* is probably, however, the parallel passage concerning the terminology of the heavenly movers which is to be found at the end of the *Šarḥ* and at the very beginning of the Fourth treatise of the *Metaphysics* of the *MF*. For both al-Ġazālī and al-Mas'ūdī in the respective passages, the celestial intellects [*ʿuqūl*] can also be called «cherubim» (*karūbiyyūna* in the *MF*, *malāʾika karūbiyya* in al-Mas'ūdī), while the celestial souls [*nufūs*] are identifiable with simple angels [*malāʾika*]⁶¹⁹. I have argued in a previous section of this Introduction for the crucial importance of the issue of the possible 'translation' of philosophical terms into the lexicon of revelation when it comes to defining the theoretical stance displayed by al-Ġazālī in the *MF*⁶²⁰. The presence of the parallel text on cherubim/intellecets and angels/souls in al-Mas'ūdī's work reveals the existence of a very similar doctrinal attitude in the *Šarḥ al-Ḥuṭba*, as well. This interesting historical circumstance thus substantiates Griffel's claim that al-Mas'ūdī's commentary on the *Ḥuṭba* «showcases how the genre of *ḥikma* takes its starting point from al-Ġazālī's *Doctrines of the Philosophers (Maqāṣid al-falāsifa)* and moves toward fully developed manifestations such as al-Rāzī's two major philosophical works, *The Eastern Investigations* and *The Compendium*»⁶²¹. Thus, an in-depth study of al-Mas'ūdī's *Šarḥ* appears likely to corroborate the thesis that the *MF* is to be seen as the starting point of the later tradition of *ḥikma* as a genre of philosophy enriched with a perceivable

⁶¹⁶ Cf. GRIFFEL 2021: 466, who however does not quote this place of the *MF* as a parallel, and see also *infra*, Commentary, ad §429.

⁶¹⁷ GRIFFEL 2021: 466; cf. also SHIHADDEH 2016: 42-43.

⁶¹⁸ For systematic documentation of this tendency in the *MF* cf. *supra*, §1.9.

⁶¹⁹ For the passage of the *MF* cf. *infra*, Translation, §245, and the Commentary *ad locum*. GRIFFEL 2021: 462 provides a useful paraphrase and partial translation of the relevant passage of al-Mas'ūdī's *Šarḥ al-Ḥuṭba al-ġarrāʾ* based on MS Istanbul, Süleymaniye Yazma Eser Kütüphanesi, H. Hüsnü Paşa 1243, fol. 54^b. As noticed in the Commentary on §245, a further parallel to the same equivalence between cherubim and intellects, on the one hand, and angels and souls, on the other hand, is to be found in al-Ġazālī, *TF*, Discussion 16, MARMURA 2000: 153.

⁶²⁰ See *supra*, §1.7.2. *Angels and Intellects*.

⁶²¹ GRIFFEL 2021: 563. The detailed treatment of al-Mas'ūdī in the monograph is performed at GRIFFEL 2021: 417-478.

theological, and more generally religious, orientation, in keeping with the results already described in a previous section of this Introduction⁶²².

2.1.5. Averroes

The analysis of the reception of the *MF* in the Western part of the Islamic domains, and specifically in Averroes (Ibn Rušd, d. 1198) requires some words of caution and contextualization. Averroes' interplay with al-Ġazālī, indeed, is far better known inasmuch as the Andalusian philosopher sharply rejected the rejection of *falsafa* contained in the theologian's *Tahāfut al-falāsifa* by producing his own *Tahāfut al-Tahāfut* [*The Incoherence of the Incoherence*, or, with an alternative translation, *The Precipitance of the Precipitance*] (1180-1181)⁶²³. The *Tahāfut al-Tahāfut* was translated into Latin in the 14th century⁶²⁴, and is also available in translation in various modern Western languages⁶²⁵. Due to the intrinsic doctrinal interest of both al-Ġazālī's and Averroes' *Tahāfuts*, but also to the long-lasting scholarly prejudice concerning the utmost historical importance of the *TF* for all account of Islamic philosophy after Avicenna, the reception of al-Ġazālī's *TF* in Averroes' vindication of philosophy historically received the lion's share of the scholarly attention⁶²⁶. Arguably, this circumstance also contributed, although indirectly, to the genesis of the anti-philosophical stereotype so often uncritically applied to al-Ġazālī's own work, and to the *TF* in particular⁶²⁷. An opposite piece of testimony of Averroes' reception of al-Ġazālī – in this case entirely positive – is to be found in the juridical field, since one of Averroes' first works, if not the very first of his writings, is an elaborate abridgment of al-Ġazālī's *Mustasfā min 'ilm al-ʿuṣūl* [*The Distillation of the Science of the Principles (of Jurisprudence)*], dated to 1157. Averroes' work, the *Ḍarūrī fī uṣūl al-fiqh* [*The Abridgment on the Principles of Jurisprudence*], was edited and translated into French⁶²⁸, and constitutes a valuable testimony of the importance of al-Ġazālī's rationalistic attitude for the young Averroes, who was soon to develop different theoretical preferences, later leading him to become the Commentator of Aristotle *par excellence*⁶²⁹.

By contrast to both the wide academic interest in the *Tahāfut*, and the more circumscribed study of Averroes' early dependence on al-Ġazālī in juridical matters, the

⁶²² Cf. *supra*, §1.10. *The First Text of ḥikma*.

⁶²³ I follow the dating given in BEN AHMED-PASNAU 2021: A. *Works of Ibn Rushd*. A1. *Religious Treatises*.

⁶²⁴ Cf. *supra*, §2.2. *Latin*.

⁶²⁵ English translation in VAN DEN BERGH 1978³; Italian one in CAMPANINI 1997.

⁶²⁶ For specific studies on various issues regarding the relation of Averroes and al-Ġazālī cf. WOLFSON 1956, BELLO 1989, GRIFFEL 2002, KUKKONEN 2006.

⁶²⁷ Recent scholarship has by contrast strongly reaffirmed the eminently philosophical method, and the authentic conceptual value, of the refutation of Avicennan *falsafa* undertaken in the *TF*: cf. *e.g.*, for a very clear formulation, GRIFFEL 2021: 8-9.

⁶²⁸ BOU AKL 2015.

⁶²⁹ Cf. ENDRESS 1999: 9: «L'importance d'al-Ġazālī, pris comme premier modèle d'analyse critique rationnelle, pour l'orientation et le discours philosophiques du jeune Ibn Rušd apparaît dans les références explicites et dans les restrictions que s'impose le juriste pendant son premier parcours vers la "science naturelle"». For a specific inquiry into the relationship between al-Ġazālī and Averroes in the abridgment of the *Mustasfā* see GRIFFEL 2002.

Commentator's stance with respect to the *MF* has been far less investigated. However, a single quotation of the title of the *MF* is to be found in the *Tahāfut al-Tahāfut* itself, and it is by all means a very interesting one.

TEXT 33. Averroes, *Tahāfut al-Tahāfut*, Eighth question [*mas'ala*], ed. BOUYGES 1930^b: 391.14-15⁶³⁰

¹ say: Abū Hāmid [al-Ġazālī] did not report [*lam yanqul*] قلت لم ينقل أبو حامد مذهب ابن
 the opinion of Avicenna as it should be [*'alā waḡhⁱ-hi*], سينا على وجهه كما فعل في المقاصد
 like he had done in the *Intentions* [*of the Philosophers*] [*fī* [...]
l-Maqāṣid] [...]

Averroes laments here the cunningness with which al-Ġazālī would have presented the theses of Avicenna in the *TF*, presumably in order to make them easier to refute, while in the *MF* he had been more faithful to the authentic thought of Avicenna. This is a noteworthy instance of Averroean fair play with regard to his starkest enemy in *falsafa*, particularly relevant insofar as Averroes is, notoriously, far from delicate when addressing what he perceives to be Avicenna's misunderstandings of Aristotle's thought, as well as his other equally serious philosophical shortcomings⁶³¹. By the same token with which he criticizes the deliberate imprecision of the exposition in the *TF*, however, Averroes also praises the greater precision of the formulations of the *MF*, which is then implicitly commended – at least – as a reliable *reportatio* of Avicenna's teachings. The passage however does not seem to imply that the *MF* was intended, or perceived by Averroes, as an actual preparatory work to the *TF*⁶³². Rather, it might simply entail a comparison of the account given in the *TF* with a different account of the same set of doctrines, as available in another work of al-Ġazālī's also known to Averroes⁶³³. This also helps to explain Averroes' silence, in his *Tahāfut*, on all the other possible cases of discrepancy between *MF* and *TF*, which would have had by contrast a strong textual importance for his own work of counter-refutation, had he truly believed the *MF* to be as tightly linked to the *TF* as a strict interpretation of its *Prologue* and *Epilogue* would make it to be⁶³⁴.

Besides the *Tahāfut al-Tahāfut*, some explicit, direct quotations of the title of the *MF* and of the aim of the book are also to be found – in bold relief – at the beginning or at the

⁶³⁰ ZEDLER 1961: 314: «Ait Averroes. Non transtulit Algazel opinionem Avicennae debite, prout est, ut fecit in libro intentionum». Judging from her *Index nominum et rerum*, in which this passage is not listed, Zedler did not recognize this as a reference to the *MF*. The passage corresponds to fol. 43th in the 1527 Venice edition of the Latin translation of the *Tahāfut al-Tahāfut*, for which cf. *infra*, §2.2. *Latin*, fn. 666. Cf. also the English translation of Averroes' Arabic by VAN DEN BERGH 1978³: 236: «Ghazali does not relate Avicenna's doctrine literally as he did in his book *The Aims of the Philosophers*».

⁶³¹ On Averroes' well-known sharp criticisms of Avicenna, also in the light of their reception in further (Latin authors), cf. e.g. MENN 2011; BERTOLACCI 2007^b; BERTOLACCI 2013^d; BERTOLACCI 2018; CERAMI 2018.

⁶³² On the issue cf. *supra*, §1.2. *Chronological and Doctrinal Collocation*.

⁶³³ For some hints, in Averroes' text, that suggest his idea that the *TF* might be the astute concealment of philosophical doctrines actually held by al-Ġazālī, cf. BOUYGES 1930^b: 108 and 159-160, and the short discussion HARVEY 2001: 367 gives of these passages. Had this really been the actual opinion of Averroes, it might go in the direction of his reading of the *MF* as the account of al-Ġazālī's real tenets in philosophy, but this is perhaps too far a stretch, which the texts in themselves cannot sustain in full.

⁶³⁴ For a further discussion of the issue of the introductory and conclusive statements of the *MF* cf. *supra*, §1.2. *Chronological and Doctrinal Collocation*.

end of some of Averroes' commentaries on Aristotle's natural philosophy. One example is the prologue to Averroes' *Short Commentary* [*Epitome*] on the *Physics* [Arabic] (1159, but revised after 1186), in which the author writes what follows:

TEXT 34. Averroes, *Short Commentary* on Aristotle's *Physics*, ed. PUIG MONTADA 1983: 8.4-7, transl. HARVEY 2001: 362, modified ⁶³⁵

Abū Ḥāmid [al-Ġazālī] had this [same] desire [*rāma hāda l-murām^a*] in his book known as *Intentions of the Philosophers* [*Maqāṣid al-falāsifa*], but he did not achieve in full what he had desired [*lam yaf bi-hā bi-mā rāma*] in that regard. Therefore, we saw [fit] to aim at what he intended [*an naqṣida qaṣd^a-hu*], for what we have hoped in that regard for the people of our time [*li-ahl' zamānⁱ-nā*] in terms of the [same] benefit [*manfa'a*] for which he [himself] had hoped, and for the reason that he had mentioned.

Al-Ġazālī's intent in the *MF* is clearly deemed by Averroes to be highly commendable, and as such it is said to be also adopted in the Aristotelian *Epitome* of which this statement constitutes part of the preface. While al-Ġazālī's desire (root *r-w-m*) and his intent (root *q-ṣ-d*) were noble, their realization is found by Averroes to be wanting (*lam yaf*, jussive from the weak root *w-f-y*). Thus, a new attempt at the same goal is in order, so that the people of Averroes' own time may finally have at their disposal an effective exposition of true philosophy. Another interesting example of al-Ġazālī's appearance in the liminary texts of Averroes' Aristotelian commentaries is reported in the following Text 35. The passage is taken from the end of Averroes' *Middle Commentary* on the *Physics* (1169), a work lost in Arabic but available in two independent Hebrew translations⁶³⁶.

TEXT 35. Averroes, *Middle Commentary* on Aristotle's *Physics*, Hebrew transl. Qalonymos ben Qalonymos⁶³⁷, English transl. HARVEY 2001: 363 and fn. 13, slightly modified

What we have written of these matters has been written by way of explanation, in accordance with the opinions of the Peripatetics, so that whoever wants to understand it can do so easily, as al-Ġazālī intended in his book, the *Intentions* [*Maqāṣid*]. For when a man does not delve deeply into the opinions of people, he cannot know the error attributed to them, nor distinguish it from what is correct.

Both works from which Texts 34 and 35 are taken are, at least in their originary redaction, relatively early writings. However, the earliest of them – the *Epitome* on the *Physics*, of 1159

⁶³⁵ Cf. also HARVEY 1977: 401.

⁶³⁶ See BEN AHMED-PASNAU 2021: A. *Works of Ibn Rushd*. A2. *Aristotelian (and Related) Commentaries* for the dating. The passage is also quoted by ENDRESS 1999: 10 (who takes the reference from the French translation from Hebrew by MUNK 1857: 442 and fn. 1): «[L]e but est le même que celui d'Abū Ḥāmid [al-Ġazālī] dans son livre *al-Maqāṣid*: car, lorsqu'on n'approfondit pas les opinions des hommes dans leur fondement, on ne saurait pas reconnaître les erreurs qui leurs sont attribuées ni les distinguer de ce qui est vrai».

⁶³⁷ From MS Paris, Bibliothèque nationale de France, Hébr. 938 (Oratoire 125), fol. 156^v. This corresponds to the Hebrew translation by Zerahyah ben Isaac Šealtiel Hen as transmitted by MS Oxford, Bodleian Library, Neubauer 1386 (Bodl. 601) (IMHM 22410), fol. 138^f. Cf. HARVEY 2001: 363 fn. 13.

– is known to have been revised far later in Averroes' life, in 1186⁶³⁸. It is thus difficult to ascertain whether the references to al-Ġazālī's *MF* in these works are to be seen as a vestige of a merely juvenile esteem of the Commentator for the theologian (which would be somewhat confirmed by the very existence of Averroes' *Abridgment* of al-Ġazālī's work on *fiqh*), or else if they might be statements endorsed by Averroes (also) at a later stage in his career. This latter hypothesis could in turn be branched into two alternatives. On the one hand, the modest appreciation of the aim of the *MF* expressed by Averroes could be sincere, thus expressing nothing more than a (possibly long-lasting) scholarly respect for the effort of faithfully reproducing the thought and doctrines of one's "master" – Aristotle himself, for Averroes; Avicenna, for al-Ġazālī as author of the *MF*. On the other hand, it has been suggested that the recourse to the authority of the Aš'arite al-Ġazālī even in philosophy might be explained through assuming a necessity of self-apology on the part of Averroes, after the harsh persecution he had to endure in 1197⁶³⁹.

Now, since in the *Tahāfut al-Tahāfut*, written in 1180-1181, there is to be found a comparable, though nuanced, appreciation of the reliability of the *MF* (as per Text 33 above), it seems to me that both the hypotheses of a solely juvenile engagement, on the one hand, and of a late and merely contextual attempt at self-defence, on the other hand, are not really tenable. Although tentatively, I would thus personally incline to the middle alternative of a relatively stable valuing, on Averroes' part, of the method of the faithful account which al-Ġazālī at least claims to be following in the drafting of his *MF*. Such a nuanced appreciation, which is particularly visible in the prefatory text from the *Epitome* of the *Physics*, would not contradict any more profound reasons of theoretical disagreement between Averroes and al-Ġazālī, neither from the crucial point of view of the relation between philosophy and theology, as expressed for instance in the interplay of the two *Tahāfuts*, nor from the other possible point of view, this time internal to philosophy, of the doctrinal disagreement between Averroes and Avicenna (of which al-Ġazālī in the *MF* would be seen as a mere spokesperson). Averroes' positive evaluation of the effort of reliability displayed by the *MF* in reporting faithfully someone else's views can rather be seen as a distinctive and ultimately unsurprising feature of Averroes' own mature thought, being in fact perfectly consistent – despite a crucial change of object, from Avicenna to Aristotle – with Ibn Rušd's own project of meticulously reporting, and patiently commenting upon, the entire *corpus aristotelicum*.

⁶³⁸ For the dating cf. the *conspectus* of Averroes' works in BEN AHMED-PASNAU 2021: A. *Works of Ibn Rushd. Az. Aristotelian (and Related) Commentaries*.

⁶³⁹ Cf. PUIG MONTADA 1997: 137: «En 593/1197, Averroes subit la persecution et le bannissement a cause de ses idées; c'est contre lui que les Ash'arites, qui alimentent, dans une large mesure, l'idéologie almohade, aussi bien que les Malikites, profondément enracinés chez les Andalous, se sont concertés. Peut-être, cette situation sert-elle à expliquer l'attitude d'Ibn Rushd, qui va jusqu'à faire appel à l'autorité d'Algazel à l'appui de son travail de philosophe». By contrast, HARVEY 2001: 363 strangely claims instead that «Averroes' purpose in mentioning» the *MF* in these two places might have been «to make clear to the reader the insignificance of this book». As it is presented there, this seems to me an untenable explanation.

2.2. Latin

The Latin reception of the *MF* is likely the single most studied aspect among the complex of problems that gravitate around the work⁶⁴⁰. The medieval Latin translation of al-Ġazālī's *summa* was probably achieved in the third quarter of the 12th century⁶⁴¹ – only around 60–70 years after al-Ġazālī's death – in Toledo – at more than 6500 kilometers from al-Ġazālī's hometown and place of death, Ṭūs –, thanks to the conjoined effort of Dominicus Gundissalinus and Iohannes Hispanus⁶⁴². The Latin version of the *MF* is thus a notable example of the method of Arabic-Latin translation involving two interpreters and two distinct phases of translation – from Arabic to Iberian vernacular, and from this intermediate language to the Latin of the final text –, so well studied by previous scholarship on the Toledan

⁶⁴⁰ The misleading study of al-Ġazālī's thought *via* the sole Latin translation of the *MF* is very ancient, as a paradigmatic instance of it can be found as early as the first half of the 19th century, in the *Essai sur les écoles philosophiques chez les Arabes et notamment sur la doctrine d'Algazel* by SCHMOELDERS 1842. Schmoelders only considers the Renaissance edition of the Latin version of the *MF* – for which cf. *infra*, fn. 646 –, using it as a basis for the description of the system of philosophy which he attributes *tout court* and without reservations to al-Ġazālī (cf. for instance SCHMOELDERS 1842: 220: «De prime abord on est frappé de la ressemblance complète entre Gazzâlî et les autres Philosophes et Dogmatiques, en ce qui concerne les base de la philosophie en général et de la logique en particulier»). For further important studies on the Latin reception of the work in the 19th-20th centuries cf. BOUYGES 1921 (and in part BOUYGES 1930^a); DUHEM 1913-1959 (IV: 1916): 501-502 and fn. 2; ROUGIER 1925: 316. The latter two authors are critically quoted in MINNEMA 2014: 162 and fn. 24 as belated supporters of the historiographical prejudice concerning the identity of the doctrines of al-Ġazālī with the ones of the Latin Algazel. However, Duhem at least seems to me an intelligent, although critical, receptor of the novel understanding of al-Ġazālī as a critic of *falsafa* brought about by the pathbreaking French translation of the Hebrew version of the Prologue of the *MF* provided in MUNK 1857, since he writes (DUHEM 1913-1959 (IV: 1916): 501-502 and fn. 2): « Il est fort étrange de voir un auteur construire d'une façon si solide un monument qu'il se propose de jeter bas; il est non moins étrange que la *Destruction* reprenne toujours sur nouveaux frais l'exposé des opinions des Philosophes, sans jamais renvoyer le lecteur au livre qui lui devait servir d'introduction. La phrase citée par Munk n'aurait-elle pas été ajoutée après coup au *Makâcid*, par Al-Gazâlî lui-même ou par quelqu'un de ses disciples, pour masquer le volte-face de l'auteur? Et si la traduction de Gondisalvi ne contient pas cette phrase, mais seulement: *Hoc est quod volumus inducere de scientiis philosophorum divinis et naturalibus*, n'est-ce pas qu'elle aurait été faite sur un exemplaire arabe de la rédaction primitive?».

⁶⁴¹ For an overview of the Latin translation of the *MF* cf. now JANSSENS 2011^b, but see also BURNETT 2005: 820. A brief but informative synthesis is also to be found in GRIFFEL 2020: §2.

⁶⁴² For the sheer data cf. the synthesis provided by BURNETT 2005: 820. On the 'Magister Iohannes' who helped Gundissalinus with the translation, with fresh archival information, cf. BURNETT 2009^a (reprinted in MINNEMA 2014: 158 fn. 14), who also reports the *incipit* of the Latin translation in the oldest known manuscript, Vatican City, Ottob. Lat. 2186: «Liber Algazelis de summa theorice philosophie translatus a magistro Iohanne et D. archidiacono in Tolet. de arabico in latinum», where the names and titles of both translators appeared. For a wider discussion of the Toledo «community of translators» (BERTOLACCI 2011^a) in the 12th century see the unsurpassed series of studies devoted to the topic by Burnett himself, esp. BURNETT 1994; BURNETT 2001, and BURNETT 2011, to be seen in connection with the important reappraisals on the figure of Dominicus Gundissalvi provided to the scholarly community by Alexander Fidora and, more recently, by Nicola Polloni: cf. FIDORA 2002; FIDORA 2006; FIDORA 2011; FIDORA 2013; POLLONI 2015; POLLONI 2016; POLLONI 2017; and POLLONI 2018. On the specificities of Gundissalinus as a translator cf. also ALONSO 1943 and ALONSO 1955.

translation movement⁶⁴³. As shown at the beginning of this Introduction⁶⁴⁴, two titles are witnessed for the Latin text of the translation in the manuscript tradition: the seemingly more literal, but far less diffused *De philosophorum intentionibus*, and the more widely attested, though periphrastic *Summa theoricæ philosophiæ* [*STP*], which is however to be recognised as an adequate rendition for the actual contents of the work, and thus to be retained in further references in this section⁶⁴⁵.

The translation, which still lacks a proper and comprehensive critical edition⁶⁴⁶, enjoyed a documentably widespread fortune in Latin thought, from the immediate aftermath of its composition up at least to the Renaissance. It should be the task of a future «Algazel Latinus» project to provide, in the footsteps of the meritorious and still ongoing efforts of the «Avicenna Latinus» *corpus* of texts, a reliable edition of the Latin text of the *MF*, as well as of the later Latin versions of the *TF*⁶⁴⁷. A first witness of the quantity and the quality of the reception of the *MF* in Latin milieu is the number itself of the manuscripts of the translation that have been preserved, no less than forty if one is also to count the incomplete and fragmentary codices that transmit sections or subsections of the work⁶⁴⁸. The long and differentiated *Wirkungsgeschichte* of the *STP* was meritoriously, but still only generally, overviewed in recent scholarship, and a more in-depth analysis of it awaits to be written⁶⁴⁹. More specific contributions on the reception of al-Ġazālī's work in single authors are however already available, especially for towering figures of Dominican thought such as Thomas Aquinas⁶⁵⁰ and his master, the *doctor universalis* and keen reader of Arabic philosophy Albert the Great⁶⁵¹. A parallel analysis of the presence of Algazel in Franciscan thought is still,

⁶⁴³ Cf. BURNETT 1987, D'ALVERNY 1989, and BURNETT 1997.

⁶⁴⁴ See *supra*, §1.1, *Title*.

⁶⁴⁵ On the issue of the Latin title cf. also MINNEMA 2014: 161 and SIGNORI 2019: 478 and fn. 32.

⁶⁴⁶ The *Metaphysics* and the *Physics* of the Latin translation of the *MF* were edited in MUCKLE 1933 on the basis of a single manuscript, and published with the deceptive title of *Algazel's Metaphysics*. For early criticisms on this and other wanting aspects of Muckle's edition, which has however the merit of having brought a large part of the *STP* to the attention of scholars, cf. SALMAN 1935-1936: 106 and, later on, ALONSO 1960. Only recently, a small portion of the text – corresponding to the psychological discussion of *Physics* IV – has been critically edited anew: see ST. CLAIR 2005. While philologically more accurate than Muckle's (six manuscripts have been systematically collated in the making of the edition), the occasional notes of St. Clair's work betray little acquaintance with the philosophical doctrines at stake, a circumstance which sometimes negatively affects the text she prints. The Latin *Logic* of the *MF* is by contrast available in a sound and perceptive critical edition, provided by one of the leading scholars of Arabic-Latin Aristotelianism, Charles Lohr (LOHR 1965). To Lohr the scientific community also owes the anastatic reprint of the Renaissance edition of the Latin *MF*, originally printed in Venice in 1506 by Petrus Liechtenstein, under the title *Logica et philosophia Algazelis Arabis*: cf. LOHR 1969.

⁶⁴⁷ Cf. *infra* for further information on this aspect.

⁶⁴⁸ Cf. the list of Latin manuscripts provided *infra* in *Appendix* 3.

⁶⁴⁹ Cf. D'ALVERNY 1986; JANSSENS 2011^b; the unpublished PhD dissertation by MINNEMA 2013, and the synthesis thereof provided in MINNEMA 2014. A specific topic of Latin reception, relative to the example of the killing of the camel advanced by al-Ġazālī in *Physics* V.9 to explain the possibility of the action of the soul at distance, is studied in MINNEMA 2017.

⁶⁵⁰ See HANLEY 1982. DE BEAURECUEIL 1947 and DE BEAURECUEIL-ANAWATI 1956 are more dated studies of the relation between Thomas and al-Ġazālī, based however on a cross-religious comparison of theological views rather than on the actual reception of Algazel's philosophical doctrines available to Thomas in the Latin *MF*.

⁶⁵¹ CORTABARRÍA 1962 and, more recently, my two-part reappraisal in SIGNORI 2019 – with a list of 335 explicit quotations of Algazel in Albert – and in SIGNORI 2020^b – with an analysis of the extravagant quotations, which betray a partly different understanding of al-Ġazālī in Albert than the medieval *vulgata*. Such an understanding, despite nuanced and certainly idiosyncratic, would strikingly seem to bring Albert's Algazel closer to the actual

by contrast, a scholarly *desideratum*, despite promising hints already well-focused as far as the reception of Avicenna is concerned⁶⁵².

Historically, one of the most relevant features of the Latin translation of the *MF* is that, at least in its *versio vulgata*, it lacks the important *Prologue* in which al-Ġazālī describes his programme of accounting in a neutral way the theses of the philosophers, and his project – logically subsequent, but chronologically probably anterior⁶⁵³ – of a refutation titled *Tahāfut al-falāsifa*. Notably, the Latin translation also lacks the final reference to the *TF* contained in the *Epilogue* of the *MF*⁶⁵⁴. The Latin *Prologue* is transmitted by only one known codex, MS Paris, BNF lat. 16096, which belonged to the Parisian *magister* Godfrey of Fontaines⁶⁵⁵. Despite recent efforts to settle the question, also aided by advanced computational methods⁶⁵⁶, it is still not clear whether the Latin translation of the *Prologue* of the *MF* can be ascribed to the same translators of the bulk of the work, or if it is rather due to a different, and for the time being still anonymous, translator⁶⁵⁷. As a contribution to the debate on the authorship of the Latin *Prologue*, it is worth noticing that the highly stylistic expression *mazilla* (or *mazalla*)⁶⁵⁸ [*qadam*] – which I have rendered somewhat periphrastically as «the place where the step slips» – is translated with the Latin *lapsus* [*pedum*] («fall [of the feet/steps]») in both the *Prologue* and its further occurrence in *Logic* IV (§54 of my Translation)⁶⁵⁹. While a third occurrence of the same term in *Logic* III, §26 was admittedly

historical image of the theologian as it emerges from contemporary scholarship.

⁶⁵² Cf. e.g. BERTOLACCI 2020^a, which discusses the reception of Avicenna's *Ilāhiyyāt* in the Franciscan *Summa Halensis*, in the framework of Lydia Schumacher's overall study of the work, its sources, and its doctrinal and historical context. A specific case of influence of Algazel in a Franciscan author is PODKOŃSKI 2006, which focuses on John Duns Scotus' reception, in his commentary on the *Sentences*, of the (Avicennan) anti-atomistic geometric proofs reproduced by al-Ġazālī in the First treatise of the *Metaphysics* of the *MF*.

⁶⁵³ Cf. *supra*, §1.2. *Chronological and Doctrinal Collocation*.

⁶⁵⁴ However, the Latin text ends at a different point than the similarly decurated Arabic one transmitted by MS Dublin, Chester Beatty Library, Ar. 5328. As a matter of fact, the Latin translation also omits the statement (parallel to the ones contained in the *Prologue*) according to which al-Ġazālī's report of the theses of the philosophers is uncommitted, while the CBL manuscript has it. For the details cf. *supra*, §2.1.1. *Trimming al-Ġazālī: A Decurated Arabic Manuscript*, esp. Text 30 and Diagram 3.

⁶⁵⁵ On the historical figure of Godefridus de Fontibus (d. ca. 1306), the owner of our manuscript and a renowned Scholastic *magister* in his own right, cf. DE WULF 1904 and WIPPEL 1981. On his marginal notes in the Paris manuscript see DUIN 1959; esp. 151-160.

⁶⁵⁶ Cf. HASSE-BÜTTNER 2018: 356, who conclude, concerning the Latin *Prologue*, that «[t]his extremely short text of 414 words [...] does not yield enough stylistic evidence for any of the translators of the corpus». The conservative conclusion of the analysis is thus that the translator of the *Prologue* must remain, for the time being, anonymous.

⁶⁵⁷ As opposed to the recent conclusions by HASSE-BÜTTNER 2018 (cf. *supra*), MINNEMA 2014: 160 fn. 18 holds, with SALMAN 1935-1936: 125, that the Latin *Prologue* could have been added by Gundissalinus (and Iohannes Hispanus?) themselves in a «redacted version» of their core translation, without need to presuppose a further, anonymous translator of this short text alone.

⁶⁵⁸ LANE 1863: 1243^a, *sub voce* ل. The term is not registered in WEHR, and it is also not mentioned in the Arabic-Latin Glossary ALGloss, consultable online.

⁶⁵⁹ Cf. *infra* the Commentary *ad locum*. Linguistic arguments based on word choice are of course not conclusive, and one should also bear in mind the possibility of counterexamples. For instance, while Gundisalvi is acknowledged as the translator of both the *STP* and Avicenna's *De anima*, Simone Van Riet noticed that in the two works identical Arabic words are translated in different ways: this is the case of *maneria* (al-Ġazālī) and *liber* (Avicenna) for Arabic *fann*, and of *archa* (al-Ġazālī) and *thesaurus* (Avicenna) for Arabic *maḥzan* (see VAN RIET 1972: 99* fn. 26). However, in Dunyā's edition the term translated in Latin as *archa* is *ḥizāna* rather than *maḥzan*, which admittedly shares the same root but is nonetheless a different word (cf. *infra*, Commentary *ad* §397; and

rendered by Gundissalinus and Iohannes Hispanus in a different, and entirely periphrastic, way (*sed hic errant multi*, «but here many are wrong»)⁶⁶⁰, the parallel translation of such a rare term in two contexts – one in the *Prologue* (§1), and one in the main part of the *STP* (§54) – could give at least a clue in the direction of the possible common authorship of the two chunks of translated text⁶⁶¹.

The limited textual tradition of the Latin *Prologue* contributed decisively to the formation of the image of the Latin Algazel as a mere follower of Avicenna⁶⁶², whose teachings, perceived as eminently or exclusively philosophical, deserved criticism and refutation in the same right as those of the other philosophers⁶⁶³. Algazel and Avicenna were so frequently paired in the works of Latin authors that the study of the dissemination of the latter in Latin medieval culture cannot do without a thorough investigation of the reception of the former: Avicenna's views were read, studied, and gained traction also *via* the translation of al-Ġazālī's philosophical *summa*⁶⁶⁴. By contrast, the genuine stance of the historical, Arabic al-Ġazālī with respect to the philosophical teachings expounded in the *MF* – far more nuanced, if not utterly critical – remained for long obscure to Latin readers.

The genesis of this picture of Algazel – which has memorably, although perhaps too sharply, been defined as «one of the most unhappy misunderstandings in the history of

cf. also §398).

⁶⁶⁰ LOHR 1965: 254.82-83.

⁶⁶¹ On a different note, the same feature (*i.e.* the repeated occurrence in the *Prologue* and in the main text of the *MF* of a very characteristic and rare expression) could also be used as a hint of the unity of composition of the two chunks. For this, and its implications on the dating of the work, cf. also *supra*, §1.2. *Chronological and Doctrinal Collocation*.

⁶⁶² Building on previous scholarship, MINNEMA 2013 and MINNEMA 2014, which derives from the former, insist on this point. My own analysis of the case of Albert the Great in SIGNORI 2019 confirmed the overall validity of this historical picture, while in SIGNORI 2020^b I have considered some extravagant features of Albert's reception of Algazel, which, while not denying the general soundness of the commonly accepted interpretation, introduce in it some possibly important nuances (cf. also *infra* in this section).

⁶⁶³ Giles of Rome includes some of al-Ġazālī's doctrines among his *Errores philosophorum*: see ch. VIII, *De collectione erroris Algazelis*, in KOCH 1944: 38 ff. (apart from the English translation by John Riedl in the same volume, cf. also the further translation of the errors of al-Ġazālī by SHAPIRO 1964: 401-404). Cf. also MINNEMA 2017.

⁶⁶⁴ BERTOLACCI 2013^a: 264-266 emphasises this point, with special reference to Albert the Great, but cf. already the seminal suggestions in this direction by VAN RIET 1972: 99* fn. 26, also reprised with the greatest clarity, as far as the doctrines of Avicenna's *De generatione et corruptione* are concerned, but also more generally for Avicennan natural philosophy, in VAN RIET 1999: 72: «On peut y lire (*scil.* in the Latin *MF*) un excellent résumé des thèmes principaux de la philosophie avicennienne de la nature». A philosophical field in which the influence of Algazel in disseminating Avicennan ideas was particularly strong is the one of logic. Indeed, among Avicenna's logical works, only the commentary on Porphyry's *Isagoge*, chapter 2.7 of his commentary on the *Posterior Analytics* and some excerpts of his commentary on the *Rhetoric* were translated into Latin during the Middle Ages (see D'ALVERNY 1952 and BURNETT 2005: 818). On the Latin translations of Avicenna see also the recent overviews by JANSSENS 2011^b, BERTOLACCI 2011^a and BERTOLACCI 2013^a: esp. 246-247. In his conclusive remarks, BERTOLACCI 2001: 274 already advanced the hypothesis that Albert might have used al-Ġazālī's logic in substitution of Avicenna's logical works that were unavailable to him, as an alternative explanation to that proposed by GRIGNASCHI 1972, and later reprised for instance by EBBESEN 1981: 91-92. According to Grignaschi, Albert could in fact have had at his disposal a complete Latin translation of Avicenna's logic, otherwise unattested. A more recent reassessment of the entire question has been provided by JANSSENS 2013, who maintains that the source of Albert's knowledge of Arabic logic can be found in philosophical works assuredly translated into Latin, or else in *florilegia* and excerpts of relevant doctrinal passages. A further reappraisal of the topic, focusing in particular on Albert's *De praedicamentis*, is to be found in CAMINADA 2017. Cf. for this synthesis also SIGNORI 2019: 492-493 and fn. 91.

philosophy»⁶⁶⁵ – was only possible, however, because of a further concurring circumstance, namely, the lack of any Latin translation of al-Ġazālī's *TF* up at least to 1328. On 18th April of that year, as a matter of fact, Qalônîmôs ben Qalônîmôs (henceforth simplified to the more standard spelling 'Qalonymos ben Qalonymos') ben Me'îr of Arles completed a partial version from the Arabic of Averroes' *Incoherence of the Incoherence* [*Tahāfut al-Tahāfut*], which also contained, in the *lemmata* of Averroes' refutation, the text of al-Ġazālī's *TF*⁶⁶⁶. The translation – which is incomplete, as it includes only fourteen discussions out of the twenty that compose al-Ġazālī's, and Averroes', original treatises⁶⁶⁷ – was given the curiously doubly plural title of *Destructiones destructionum* [*The Destructions of the Destructions*]. Commissioned by the king of Naples Robert of Anjou (1275-1343), the translation was later printed in Venice in 1497 together with a long commentary and an independent treatise by Agostino Nifo (Augustinus de Suessa, d. 1538)⁶⁶⁸. Not even this new, substantial piece of evidence was however sufficient to dismantle the long-lasting eminently philosophical picture of Algazel held by Latin readership, if the Latin version of the *MF* went on to be quoted as an Avicennan text even by the editor himself of the *Destructiones destructionum*, Agostino Nifo, in his own treatise *De intellectu*, published in 1503⁶⁶⁹.

⁶⁶⁵ MACDONALD 1936: 9.

⁶⁶⁶ For a thorough reconstruction of the history of the tradition of the *Tahāfut al-Tahāfut* in Latin and Hebrew translation – complicated by the circumstance that all the three involved translators bear the first name of Qalonymos – see ZEDLER 1961: 18-31, esp. 24-28 for the first Latin translator Qalonymos of Arles. On the intellectual figure of this Provençal translator see also SHINEDLING 1942. Zedler edited not the first, but the second Latin translation of the *Tahāfut*, realised in the 16th century by Qalo Qalonymos (or Calo Calonymos, also known as Qalonymos ben David the Younger) on the basis of the 14th century Arabic-Hebrew translation by Qalonymos ben David ben Ṭodros (or Qalonymos ben David the Elder). This second Latin translation is complete, and is thus the first piece of work in which the text of Averroes' *Tahāfut al-Tahāfut*, and consequently of al-Ġazālī's *Tahāfut al-falāsifa*, became available in Latin in its entirety. It was printed in Venice in 1527 under the complete title: *Subtilissimus liber AVERROIS qui dicitur destructio destructionum philosophie Algazelis [...] cui additus est libellus seu epistola Aver. de connexione intellectus abstracti cum homine ab eximio [...] Calo CALONYMOS, [...] atque preclarum EIUSDEM volumen de mundi creatione physicis probata rationibus*, in aedibus J.B. Pederzani, Venetiis, 1527. On some of these aspects see also MINNEMA 2014: 156 fn. 10, and compare for a synthesis the useful summarizing chart of the Latin editions provided by ZEDLER 1961: 55-56 in her *Appendix A*. I have also summarized this material in SIGNORI 2020^b: 154 fn. 6.

⁶⁶⁷ Discussions 10 and 16-20, i.e. two metaphysical disputations – 10 and 16 – and the entire conclusive section of four discussions on natural philosophy, are missing in this Arabic-Latin version.

⁶⁶⁸ Complete reference: *Destructiones destructionum Averrois cum* AUGUSTINI NIPHI DE SUESSA *expositione*. EIUSDEM AUGUSTINI *Quaestio de sensu agente*, Octavianus Scotus per Bonetum Locatellum, Venetiis 1497.

⁶⁶⁹ Ed. SPRUIT 2011. The text contains no less than 22 explicit nominal quotations of Algazel, which I list here (all references are to pages and lines of SPRUIT 2011): 143.11, 148.7, 202.7-8, 204.23, 241.4, 242.11, 303.12, 303.21, 341.35, 372.6, 374.29 (u.), 377.13, 381.16, 398.30, 398.31, 423.26, 460.18, 463.14, 565.17, 571.26, 571.32, 639.2 (cf. MINNEMA 2014: 198). Among the most notable affirmations of the identity of thought and doctrine between Algazel and Avicenna cf. in particular SPRUIT 2011: 303.12-23, with a long *verbatim* quotation of the beginning of *Physics* IV.2.2: «Item, Algazel Avicennae collega subtilis ac profundus in *Metaphysica* eius tractatu de anima vegetabili et anima humana dictione de sensibus interioribus, prope principium inquit. «Cum mistio elementorum fuerit pulchrioris et perfectioris aequalitatis, qua nihil possit inveniri subtilius et pulchrius, sicut sperma hominis, quod venit in corpus hominis, ex cibis qui sunt subtiliores cibis animalium, et cibis vegetabilium, ex virtutibus et mineris, quae sunt pulchriores virtutibus et mineris animalium, tunc fiet apta ad recipiendum a datore formarum pulchriorem formam, formis quae est anima humana.» Haec ille nec porro Algazelem expediabat in testem huius veritatis advocare, cum omnibus illis partibus veritatem hanc non tantum sua auctoritate, verum et rationibus confirmat; et id circo tuum sit eum videre». Cf. also SPRUIT 2011: 398.31: «Avicenna et suus abbreviator Algazel». On the issue of Nifo's reception of Algazel see MINNEMA 2014: 176, who notices the curious feature that «Nifo quoted from both the *STP* and the *Destructio* in his *De intellectu*, presenting dissimilar arguments by

While all these data certainly appear to confirm, in its broad strokes, the distortion of the genuine image of al-Ġazālī in Latin milieu, not only in the Middle Ages but even up to the Renaissance, the dominant historiographical narrative of an utter disjunction between the Arabic al-Ġazālī and the Latin Algazel, as fascinating as it might appear, likely needs by now to receive some nuancing⁶⁷⁰. It was sometimes assumed with excessive assurance, for instance, that the *Prologue* of the *MF* remained practically unknown in its entirety to virtually all Latin authors⁶⁷¹, despite an early *caveat* by Dominique Salman to the effect that the transmission of the Latin preface in the Parisian manuscript which witnesses it, and which belonged, as mentioned, to such a renown *magister* of the University of Paris as Godfrey of Fontaines, must be seen, by all means, as a sign of some sort of ‘open’ circulation of the more complete version of the *STP*, not only in marginal contexts but rather in the very centre of late medieval intellectual life⁶⁷². Godfrey himself, for one, must have known the text, as well as the translator(s) who produced the Latin version of the *Prologue*, be it the work of Gundissalinus and Iohannes Hispanus, or of some other translator. Likewise, clear hints of the circulation of the *Prologue* of the *MF* are to be recognised in Roger Bacon’s *Liber primus communium naturalium*, alongside the traces of his reading of the *Prologue* to Avicenna’s *K. al-Šifā*⁶⁷³. Despite the poor state of the available Latin edition, it is worth reporting here the most relevant excerpt of this long and fascinating text:

TEXT 36. Roger Bacon, *Liber primus communium naturalium*, ed. STEELE 1911: 248-250

dicendum quod in prologo libri *Sufficiencie*, qui est de omnibus partibus philosophie, cuius liber *Phisicorum* est una pars, dicit quod in isto libro *Sufficiencie* sequitur opinioniones aliorum per totum, et non est secundum ejus sentenciam, et ideo non est mirum si aliqua falsa contineantur, sicut in libris quos recitat Algazel de logicalibus, naturalibus, et methaphisicis [*sic*], ad imitacionem libri Avicenne, de quibus Algazel in prologo librorum illorum asserit quod omnia que recitat in eis sunt secundum opinionem aliorum, in quibus dicit multa contineri que vult reprobare et aliter exponere in libro suo *De controversia philosophorum*. [...] Et hoc omnino considerandum est pro libris qui Avicenne ascribuntur et Algazeli, quoniam eis non sunt ascribendi nisi tanquam recitatoribus non auctoribus, sicut ipsimet volunt in prologis illorum librorum. Set illi prologi vulgo sunt invisī, propter quod errat circa autoritatem [*sic*]

the same person».

⁶⁷⁰ For a particularly emphatic formulation of this by now traditional thesis, which mainly presents itself as contrasting the medieval misunderstanding concerning the identity of al-Ġazālī, cf. MINNEMA 2014: 162-165 and *passim*. At one point (MINNEMA 2014: 165), Minnema describes the Latin Algazel as «a figment of the Latin imagination», for which Arabists would have no interest. Part of the goal of this dissertation, which gives great importance to the Latin translation in both the Introduction and the Commentary, is to correct such an impression. However, Minnema also writes that the exceedingly pessimistic image of a «mistaken identity» that medievalists seem to have when discussing al-Ġazālī/Algazel is sometimes «verging on hyperbole» (MINNEMA 2014: 165).

⁶⁷¹ This is most notably the case with the authoritative, but ultimately wrong, stance taken by GILSON 1929: 75, according to whom the Latin Scholastics had no instrument to solve the historical problem posed by the *MF*. Cf. also HANA 1972: 886-887.

⁶⁷² SALMAN 1935-1936: esp. 118. Cf. also SIGNORI 2019: 479 fn. 35.

⁶⁷³ For the Latin text of the *Prologue* of the *K. al-Šifā* cf. BIRKENMAJER 1934: 314-317, D’ALVERNY 1954: 32, and BERTOLACCI 2002^b: 133-134.

librorum, et tunc utitur eis tanquam auctoritate Avicenne at Algazelis essent stabilita. Et magnum inconueniens oritur ex hoc, quoniam alique graves falsitates recitantur in [250] istis libris, et vulgus accipit ea pro veris propter hoc quod auctoritati Avicenne et Algazelis hoc ascribit. Unde, precipue in naturalibus et methaphisica sunt errores aliqui qui sunt omnino vitandi, sicut in naturalibus de generatione substancie et in methaphisica de produccione universi secundum ordinem intelligenciarum, et de pena animarum post hanc vitam, quamvis pauce sunt iste falsitates | in enarrabilibus [*sic pro inenarrabilibus?*] et pulcherrimis veritatibus constipate, et magnificis secretis philosophie interposite. De logicalibus autem et partibus mathematice in nullo dubitandum est, quin eorum auctoritati et sentencie possunt ascribi, quia in talibus apud sentencias philosophorum vulgatas error non reperitur nec diversitas, ut dicit Algazel, et ideo eas approbant et confirmant.

While Alexander Birkenmajer mainly studied this and other texts by Roger Bacon in relation to Avicenna's *Prologue*, he also mentions the occurrence, in the *Communium naturalium libri*, of al-Ġazālī's preface alongside Avicenna's one⁶⁷⁴. Maurice Bouyges studied the issue of Bacon's atypical knowledge of the prologues in a landmarking short contribution, in which he maintained that the English Franciscan did not read the introductions to Avicenna's *Šifā'* and to al-Ġazālī's *MF* in the original Arabic, having on the contrary at his disposal some kind of Latin translation («un document, traduction plus complète, addition, reenseignement isolé, ouvrage, annotation, écrit latin quelconque, resté invisible ou incompris à la plupart de ses contemporains»)⁶⁷⁵. This assessment seems to be confirmed by the way in which Bacon references the *TF*, with the Latin title *De controversia philosophorum*. The rendition, indeed, is mirrored in the Latin text of the *Prologue* of the *MF*, where *tahāfut* is consistently rendered *controversia*⁶⁷⁶. Likewise, also the frequent usage of the verb *recitare* and of its deverbal noun *recitatores* in Bacon's text could be traced back to the occurrences of *recitatio* – probably meant as a rendition of Arabic *ḥikāya* 'account', together with the concurring and contiguous term *narratio* – in the Latin *Prologue* of al-Ġazālī's work⁶⁷⁷. Finally, a very strong doctrinal parallel is represented by Bacon's own adoption in his text of the classification of trustworthiness of the sciences provided by al-Ġazālī in the *Prologue*⁶⁷⁸. In other words, Bacon warns his readers against the dangers of the opinions reported by al-Ġazālī (and, according to Bacon, by Avicenna as well), but he does so by means of the same system of evaluation of the relative incidence of error in the various philosophical sciences elaborated in the *Prologue* of the *MF* by al-Ġazālī himself: metaphysics and natural philosophy are the most susceptible to contain mistakes, while logic and mathematics are virtually safe from the perils of error. Interestingly, the text of al-Ġazālī's *Prologue* is thus taken here by Bacon at face value, and its warnings and disclaimers directly adopted as useful advice against the erroneous opinions allegedly reported not only by al-Ġazālī himself, but also by Avicenna.

The quotation of the *Prologue* on the part of Roger Bacon, which certainly deserves

⁶⁷⁴ BIRKENMAJER 1934: 310-311.

⁶⁷⁵ BOUYGES 1930^a: 314.

⁶⁷⁶ Cf. SALMAN 1935-1936: 125.6-7: «ad detegendum philosophorum controversiam et ipsorum repugnantiam»; 126.41-42: «declarabitur autem in Libro Controversie»; 127.46-47: «in libro speciali quem nominabimus Librum Controversie Philosophorum».

⁶⁷⁷ Cf. SALMAN 1935-1936: 126.21-22: «secundum viam narrationis et recitationis».

⁶⁷⁸ Cf. *supra*, §1.4.2.1, Diagram 1.

further scrutiny as far as al-Ġazālī is concerned, is not however the only important case in which the Latin introductory text of the *MF* comes to light as better known to medieval authors than previously assumed. Recently, as a matter of fact, Amos Bertolacci persuasively suggested that Albert the Great himself might have been acquainted with Algazel's preface, on the basis of a striking similarity between the passage of the *Prologue* in which al-Ġazālī describes the necessity of an uncommitted exposition before refutation, and the structure of Albert's own so-called 'disclaimers' stating his neutral discussion of the philosophical, and especially Peripatetic, teachings⁶⁷⁹. Moreover, a glimpse of al-Ġazālī's more faithful historical picture might be discernible in some extravagant statements by Albert the Great, very far from the traditional Latin description of Algazel as *insecutor Avicennae*, which can be found in Albert's *Super Ethica* and in his *Physica*⁶⁸⁰.

2.2.1. Cultural Acclimations in the Latin Translation

An interesting aspect of the Latin version of the *MF*, until now not studied systematically in scholarship, is its perceivable tendency to accommodate the eminently Arabic and Islamic aspects of al-Ġazālī's text, in order to fit into the set of beliefs and cultural practices of a Christian and Latin audience⁶⁸¹. This is a notable feature, because the *STP* is situated at the crossroads of two trends in the Arabic-Latin translation movement, already well-known in scholarship: to use Dag Nikolaus Hasse's effective and synthetical words, these can be summarized as «a growing tendency among the translators to translate *verbum de verbo*, and a growing tendency not to disguise the Arabic origin of the texts and not to give it a Greekizing appearance, as the earlier Arabic-Latin translators had tried to do»⁶⁸². Domingo Gundisalvi's and Iohannes Hispanus' Latin version of the *MF* shares with other coeval Toleman translations the acceptance of an ideal of literal translation ultimately referring to Boethius' model of *verbatim* rendition. Accordingly, the Latin in which it is written does not conceal in most occasions its Arabic origin, and in some cases it even preserves direct

⁶⁷⁹ BERTOLACCI 2019^a: 321-323; see in particular *ivi*: 322-323: «We cannot be sure that Albert knew Text 22 [*scil.* the *Prologue* of the *MF*], in lack of explicit attestations on his part. The similarity, however, between Albert's disclaimers and what al-Ġazālī says [...] is striking, not to say astonishing. [...] The cumulative presence of all the sub-classes of typology B [*scil.* 'Disclaimers by Implication'] and of the main point of disclaimers C [*scil.* 'Disclaimers Properly Speaking'] in this short text of al-Ġazālī makes the hypothesis of its knowledge by Albert enticing and likely, though still speculative».

⁶⁸⁰ I have discussed these interesting cases, which seem to imply Albert's knowledge of Algazel respectively as a theologian (although Jewish, rather than Muslim), and as a believer in the origin in time of the world, in my SIGNORI 2020^b.

⁶⁸¹ Valuable contributions have already highlighted the importance of this aspect in other cases of Arabic-(Hebrew-)Latin translations: cf. *e.g.* DI DONATO 2006 (on the treatment of Qur'anic and *aḥādīṭ* quotations in Averroes' *Kitāb al-kašf*), as well as the observations by BERTOLACCI 2017^b: 482 regarding the abbreviation performed in the Latin translation of Avicenna's *Ilāhiyyāt* (the *Philosophia prima*) on the last two chapters of the work, which constitute «an appendix on practical philosophy with many Islamic underpinnings» (in a similar way as the end of the Fifth treatise of the *Physics* of the *MF*, although that section is not abbreviated in the Latin translation). Bertolacci detects in the abbreviation of the aforementioned chapters of the *Ilāhiyyāt* an intentional intervention on the part of the Latin translators, among whose possible reasons he also lists «the reluctance to convey non-Christian, i.e. distinctly Islamic, notions and ideas» (*ibidem*).

⁶⁸² HASSE 2011: 160. For rich documentation on the two trends cf. at least BURNETT 1997 and BURNETT 2006.

transliterations of the Arabic original⁶⁸³. However, many Arabic and Islamic features – names of people and places, religious and various cultural references – are changed, altered, or altogether eliminated from the Latin version, in partial tension with the general literalist trend of the translation. This process of acclimation appears to be done, however, without an equal and contrary Greekizing tendency, despite the fact that, in at least one case, a mangled Greek sentence – seemingly deriving from a grammatical example used by Priscian, and entirely absent in the Arabic original – is used for illustrating a logical point in the Latin text⁶⁸⁴.

Some of the broadly cultural and linguistic acclimations appearing in the Latin text of the *STP* and separating it from its Arabic antigraph are rather mechanic, and thus overall unsurprising – e.g. the substitution of Arabic given names (such as *Zayd*, typically used in generic examples) with Latin ones (typically *Petrus*). Others, however, are not devoid of cultural and religious interest. For example, as already noticed in the relevant section of the first part of this *Introduction*⁶⁸⁵, the Latin translators appear to have consciously omitted all the direct quotations of the Qurʾān they explicitly recognized in the text, while they attempted a translation – albeit sometimes misunderstanding the text – of those Qurʾānic expressions which, being embedded within the philosophical prose, probably looked to them like an integral, and thus not dispensable, part of it.

In some cases, the Latin acclimation operates on a linguistic and grammatical level. These occurrences are not necessarily trifling, and rather entail sometimes a good level of reflection on the part of the Latin translators. For instance, the substitution of a person's theophoric name such as the Arabic *ʿAbd Allāh* with the Latin *Adeodatus* is not merely a replacement of the trivial kind *Zayd* > *Petrus*, but is rather carefully chosen in order to maintain the sense and the utility of the original example – that is, a composite expression, the parts of which have an autonomous meaning, but which can also be used in a unitary way as a given name (*ʿAbd Allāh* means ‘servant of God’; *Adeodatus* – by the way, the name of Augustine of Hippo’s son – can be unpacked as *a Deo datus*, ‘given by God’). Similarly, the word *ʿayn* – ambiguous or polyonymous *par excellence* in Arabic – is substituted by Latin *canis* in both *Logic* I, §9 and *Metaphysics* I.1, §134 (Table 23, numbers [5] and [16]). A properly grammatical example is the one appearing at §75 in my Translation (Table 23, number [11]), in which the Arabic «particles of the [personal] pronoun» [*ḥurūf al-ḍamīr*] – certainly incomprehensible for non-Arabophone Latin readers – are substituted by an example more appropriate to the new linguistical context: «ut observes copulam et nomina».

⁶⁸³ Cf. e.g. the case of the crocodile [Arabic *tīmsāḥ*], called *temza* in two cases in the Latin version of the *MF*: cf. *supra*, §1.8.1.2. *A Philosophical Bestiary*. Other cases include *alcotoni* for Arabic *al-quṭn* (at *Physics* III.3, §367 in the Translation) or *atale* for Arabic *al-ṭalq* (in *Physics* III.5, §375); cf. *infra* the Commentary *ad locos* for further remarks.

⁶⁸⁴ The sentence is the rather mysterious «anthropos necten», which appears at the beginning of the Fifth treatise of the *Logic* of the *MF* (§77 in my Translation). Cf. *infra* the Commentary *ad locum*, for further information on the possible derivation from Priscian of the clause, which is said in the *STP* to mean «homo ambulat» («man walks»). A promising path for uncovering the origin of the expression in the text of the Latin *MF* lies in the connection, already well ascertained in scholarship, between one of its translators, Gundissalinus, and the School of Chartres, where the interest in Priscianus was keen: in particular, Gundissalinus’ reception of Thierry of Chartres (and Petrus Helias) on Priscianus is documented in FREDBORG 1974, while Gundissalinus’ usage of William of Conches’ *Glosulae super Priscianum* in his own *De divisione philosophiae* is recalled in FIDORA 2011^b. Cf., for a preliminary synthesis, POLLONI 2015: esp. 10–11.

⁶⁸⁵ See *supra*, §1.9. *The Authority of Revelation*.

Another level at which the Latin strategy of cultural acclimation is visible and effective is the toponomastic, and more generally geographical, one. The examples of disjunctive propositions given at the beginning of the Third treatise of *Logic*, for example, all entail the mention of territories belonging to the Islamic domain, such as ‘Irāq, Ḥiğāz, and Syria (Table 23, [7]). The names of these Islamicate domains are systematically substituted in the Latin version by toponyms more familiar to a Latin reader, respectively Rome [*Roma*], Constantinople (modern Istanbul) [*Constantinopolis*], and Jerusalem [*Hierosolyma*]. This kind of merely geographic replacement becomes religiously significant when it comes, shortly after in the text, to the substitution of the Holy City of Islam, Mecca, with Jerusalem, here clearly intended as its Jewish, but more specifically also Christian, counterpart. The name of Mecca is instead plainly omitted in a further occasion (number [10] in Table 23). In a further passage of the *Metaphysics* of the *MF* (Table 23, [18]), one finds in Arabic a rather articulate geographical example meant to account for the notion of anteriority in degree or order, which includes anteriority in place (notably, during a journey from A to B, if one encounters A before B it can be said that A is anterior, or prior, in order with respect to B). This example is adapted into Latin to the effect that the caliphal city of Bağdād is equalled to Rome (politically, as capital of the Roman Empire, and/or as centre of Christianity and papal seat), while France [*Gallia*] is evoked as a correspondent for the Ḥūrāsān (indeed a region, rather than a city name). Finally, the religiously important Muslim towns of Kūfa and Mecca are reunited in only one example of holy city, *i.e.* the oft-cited and by all means pivotal Jerusalem. In a second statement appearing shortly after in the text, the geographical acclimation provided by the Latin translation is however only partial, because it evokes in this case the even more remote (from the point of view of the Andalusian translators) India instead of the Arabic places mentioned by al-Ġazālī: «iherusalem [*sic*] prior est roma venienti romam de india» (see number [20] in Table 23 below). This is probably done because India represented for a Latin reader the antonomastic ‘East’ much better than the Muslim cities cited in the original Arabic text of the *MF*, and as such contributed to render the articulate geographic example more immediately comprehensible.

The kind of acclimations occurring in the text of the Latin *STP* which is probably most interesting is however the explicitly religious one, which is fairly common in the translation. In *Logic* IV, for instance, an example of syllogism with typically Islamic overtones – «If this prayer [*ṣalāt*] is legally valid, then the place of prayer is pure; but it is pure»⁶⁸⁶ – is plainly omitted in the Latin version. In another case, in §155, al-Ġazālī mentions as an example of «anteriority in dignity» [Arabic *taqaddum bi-l-šaraf*, Latin *prius dignitate*] the first two Muslim caliphs, Abū Bakr – the name with which ‘Abd Allāh ibn Abī Quḥāfa, nicknamed al-Šiddīq (d. 634), was known –, and his successor ‘Umar ibn al-Ḥaṭṭāb (d. 644). Both are among the closest, and most notable, of the «Companions of the Prophet» [*ṣaḥāba al-nabī*], and both are recorded among the ten companions who were promised paradise by Muḥammad, according to the so-called *ḥadīṭ* of the «Ten promised (or: granted) paradise» [*al-‘ašara al-mubaššarūna bi-l-ğanna*]⁶⁸⁷. The strong religious value of the example in the original Arabic is confirmed by the similarly strong cultural acclimation provided in the

⁶⁸⁶ The reasoning is used as an instance of the oft-called fallacy of the converse, *i.e.* of affirming the consequent, from which neither the truth nor the falsity of the antecedent can be inferred.

⁶⁸⁷ As reported by both AL-TIRMIDĪ 1992 (*Ġāmi‘*, book 49, *ḥadīṭ* 4112) and ABŪ DĀ’ŪD (al-Siğistānī) 1998 (*Sunan*, book 42, *ḥadīṭ* 54).

Latin translation, which evokes the eminent apostles Peter and Paul: «Petrus prior est Paulo, et ceteris apostolis» (number [21] in Table 23 below). The resulting acclimation is particularly remarkable in terms of interreligious dialogue, since it posits an implicit parallelism between the *ṣaḥāba* of Muḥammad and the Christian apostles. In another passage, which aims to explain the movement of the heavens, al-Ġazālī speaks *exempli gratia* of the «attainment of the Kaʿba» [*al-wuṣūl ilā l-Kaʿbat*⁶⁸⁸] as the possible destination of a journey, which guides the previous steps directed to it. While the Arabic text thus clearly refers to the ritual pilgrimage [*ḥaġġ*] to Mecca, one of the five pillars of Islam – the circumambulation of the Kaʿba being one of the most important rites to be performed while on pilgrimage –, its Latin translation obliterates the Muslim note, rendering the entire sentence in a much more generic way: «hoc autem non provenit nisi ex voluntate universalis, cuius intentio est durare motum usque ad terminum peregrinationis» (see number [27] below).

Finally, a very interesting case appears in the meteorological discussion of the Third treatise of the *Physics* of the *MF* ([28] in Table 23 below). There, in the passage corresponding to my §362, the Latin translators perform a surprising identification of the «world of the aether» [*ʿālam al-aṭīr*] (Greek αἰθήρ) with the Empyrean Heaven [*c(o)elum empireum*] of Christian theology⁶⁸⁸. Within this terminological, but also conceptual, shift, the following gloss *scilicet igneum* (which regularly translates the original Arabic *aʿnī al-nār* [«I mean of the fire»]) assumes in Latin the weaker function of a linguistic explanation of the preceding term *empyreum* (which indeed derives from the Greek ἐμπύριος, in turn connected with πῦρ 'fire'), rather than of a (more problematic) extralinguistic statement on the nature of aether (and conversely of fire)⁶⁸⁹. Actually, it might even have been this problematic Arabic gloss in itself to have influenced the Latin translation of the preceding *ʿālam al-aṭīr* with *coelum empireum*, since the *Glossa ordinaria* – an important source for the Latin doctrine of the Empyrean Heaven – explains *empyreum* precisely in these terms: «id est, igneum vel intellectuale, quod non ab ardore, sed a splendore dicitur»⁶⁹⁰. Since the notion of the Empyrean Heaven is in itself one of the most debated results of Christian scholastic theology⁶⁹¹, its sudden appearance in a text of Arabic philosophy, written by a leading Muslim theologian such as al-Ġazālī, is a sure sign of an ongoing, active elaboration performed by the Latin translators onto the text they had at their disposal. The determination of the precise methods, and even more of the underlying rationale, of this interesting intercultural elaboration represents a decidedly important aspect for our better comprehension of the Arabic-Latin translation movement that flourished, in Toledo as well as elsewhere in Europe, during the 12th century.

The following Table gathers in a synopsis the previously discussed cases, together with

⁶⁸⁸ The same rendition of 'aether' [*aṭīr*] with 'empyrium/empirium' happens in a further passage of the meteorology of the *MF* (§370 of my Translation) which discusses the formation of falling stars: cf. *infra*, Table 23, number [29].

⁶⁸⁹ In Arabic, the gloss seems to imply that aether and fire share the same nature, which is impossible in rigorous Aristotelian terms (aether being the famous 'fifth essence', *quinta essentia*, which differs from the natures of the four elements of the sublunary world in that it admits circular rather than rectilinear movement, and is moreover incorruptible). Cf. *infra*, the Commentary *ad* §362, for further discussion on the issues arising from the Arabic text.

⁶⁹⁰ *Glossa ordinaria. Liber Genesis*, I, 1, in *PL*, CXIII, 68.

⁶⁹¹ For a reconstruction of the complicated history of the notion of the Empyrean Heaven see NARDI 1967; cf. also FIORAVANTI 2011.

all the other occurrences of comparable strategies of alteration of the original Arabic text I was able to detect in the Latin version. Omissions, when the omitted text is culturally significant, have also been taken into account. In the last column of the Table, I have attempted a typological classification of the 35 acclimations I have considered, subdividing them in religious (16 cases), cultural/linguistic (10), specifically onomastic (7), and broadly geographic ones (5)⁶⁹².

TABLE 23. *Cultural acclimations in the Latin translation of the MF*

	LOCUS	§	ENGLISH / ARABIC	LATIN	LOCUS	TYPE
1	<i>Logic</i> , Preface	2	demon [ǧinn]	omitted	---	religious
2	<i>Logic</i> I.2	6	‘Abd Allāh	<i>Adeodatus</i>	LOHR 1965: 244.28 and 31	onomastic / linguistic
3	<i>Logic</i> I.5	9	Zayd, ‘Amr, Ḥālid	<i>Petro et Iohanni</i>	LOHR 1965: 246.78	onomastic
4	<i>Logic</i> I.5	9	<i>layt</i> / <i>asad</i> (‘lion’) <i>ḥamr</i> / ‘ <i>uqār</i> (‘wine’)	<i>ensis</i> , <i>mucro</i> , <i>gladius</i> (‘sword’)	LOHR 1965: 246.79-80	linguistic
5	<i>Logic</i> I.5	9	‘ <i>ayn</i> (‘eye’, ‘spring’, ‘name of the letter ʿ’...)	<i>canis</i> (‘dog’, ‘shark’, ‘con- stellation of <i>Canis</i> <i>major</i> ’)	LOHR 1965: 246.84	linguistic
6	<i>Logic</i> III	22	Zayd	<i>Petrus</i>	LOHR 1965: 252.14	onomastic
7	<i>Logic</i> III	22	<i>‘Irāq</i> , <i>Ḥiǧāz</i> , <i>al-Šām</i>	<i>aut est Romae aut</i> <i>Constantinopoli</i> [...] <i>eo quod potest</i> <i>esse Hierosolymis</i>	LOHR 1965: 252.14-15	geographic
8	<i>Logic</i> III.3	28	«Man is in loss» [<i>al-</i> <i>insān</i> ^u <i>fi ḥusn</i> ^u] Cf. <i>supra</i> , §1.9.1, Table 17, [1]	<i>Homo est Toleti</i>	LOHR 1965: 255.98	geographic / religious
9	<i>Logic</i> IV.a.	46	[...] when you say: «If this prayer [<i>ṣalāt</i>] is le- gally valid, then the place of prayer is pure; but it is pure», from	omitted	---	religious

⁶⁹² I have characterised some cases ([2], [8], [10], [15] in Table 23) with more than one label, so that the sum of the cases pertaining to each label sums up to a higher total than the global number of acclimations.

	LOCUS	§	ENGLISH / ARABIC	LATIN	LOCUS	TYPE
			that it does not follow that the prayer be legally valid, nor that it is vain.			
10	<i>Logic</i> IV.b.	63	the existence of Egypt and Mecca [<i>Makka</i>]	<i>Aegyptus est</i> (omission of 'Mecca')	LOHR 1965: 275,560	geographic / religious
11	<i>Logic</i> IV	75	the particles of the personal pronoun [<i>hurūf al-ḍamīr</i>]	<i>ut observes copulam et nomina</i>	LOHR 1965: 280,772	linguistic
12	<i>Logic</i> IV	75	= [8] Cf. <i>supra</i> , §1.9.1, Table 17, [2]	omitted	---	religious
13	<i>Metaph.</i> Preface	92	the essences of the angels [<i>malā'ika</i>], of the demons [<i>ḡinn</i>], of the devils [<i>ṣayāṭīn</i>], and so forth	<i>spiritus et cetera huiusmodi</i>	MUCKLE 1933: 1,26	religious
14	<i>Metaph.</i> I.1	115	since the Sun passes through [several] parasangs [<i>farāsīḥ</i>], while the shadow does not move except for the measure of a hair	<i>Sol enim pertransit milies milies milia miliariorum, cum umbra non moveatur quantum est tenuitas unius pili</i>	MUCKLE 1933: 13,13-15	linguistic
15	<i>Metaph.</i> I.1	128	like its being wrapped in a <i>ṭaylasān</i> [<i>mutaṭallis^{am}</i>] or in a turban [<i>muta'ammim^{am}</i>], dressed in a shirt [<i>mutaqammiṣ^{am}</i>], shod [<i>mutana'it^{am}</i>]	<i>ut capatum, et togatum, et tunica-tum, et calciatum</i>	MUCKLE 1933: 20,20-21	cultural / linguistic
16	<i>Metaph.</i>	134	like the expression 'ayn [<i>ka-laḟḟ' l-'ayn'</i>]	<i>ut hoc nomen canis convenit diversis sensibus appellativis</i>	MUCKLE 1933: 25,1-2	linguistic
17	<i>Metaph.</i>	136	humanity for Zayd and 'Amr	<i>et sicut homo Petro, et vel Iohanni</i>	MUCKLE 1933: 25,31	onomastic
18	<i>Metaph.</i> I.4	154	«Baḡdād is before Kūfa when one is headed towards Mecca from the Ḥurāsān»	<i>roma est ante ierosolimam quantum ad euntem de gallia ierosolimam</i>	MUCKLE 1933: 36,8-9	geographic

	LOCUS	§	ENGLISH / ARABIC	LATIN	LOCUS	TYPE
19	<i>Metaph. I.4</i>	154	«This row [of people praying] is before this row», with the meaning that it is closer to the end relative to it as from the <i>qibla</i> , or [from] some other [point in the mosque]	<i>hec linea est prior illa quantum ad finem propositum</i> (omission of the <i>qibla</i> , part of the mosque and direction of Muslim prayer)	MUCKLE 1933: 36.9-10	religious
20	<i>Metaph. I.4</i>	154	if you take the consideration from Mecca, Kūfa will be before Baġdād	<i>ihersalem [sic] prior est roma venienti romam de india</i>	MUCKLE 1933: 36.13-14	geographic
21	<i>Metaph. I.4</i>	155	«Abū Bakr and then ‘Umar – may God be satisfied of them both! Indeed, Abū Bakr is before all the other Companions of the Prophet [<i>ṣaḥāba al-nabī</i>] – may God be satisfied of them – in dignity and virtue»	<i>Petrus prior est Paulo, et ceteris apostolis</i>	MUCKLE 1933: 36.15	religious
22	<i>Metaph. III.b.7</i>	220	«[He] Who gave each thing its creation and then guided [it]» [<i>allādī a‘tā kull^a šayⁱⁿ ḥalq^a-hu tumm^a hadā</i>] Cf. <i>supra</i> , §1.9.1, Table 17, [3]	omitted	---	religious
23	<i>Metaph. III.b.7</i>	220	«[He] Who created me, He [also] guides me» [<i>allādī ḥalaqa-nī fa-huwa yahdī-nī</i>] Cf. <i>supra</i> , §1.9.1, Table 17, [4]	omitted	---	religious
24	<i>Metaph. III.b.7</i>	220	«[He] Who destined and guided» [<i>wa-llādī qaddara fa-hadā</i>] Cf. <i>supra</i> , §1.9.1, Table 17, [5]	omitted	---	religious
25	<i>Metaph. IV.b.1.3</i>	257	«He walks for a parasang [Arabic <i>farsaḥ</i> , cf. Persian <i>farsang</i>]»	<i>unam leugam</i> ('league')	MUCKLE 1933: 98.9	linguistic

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	LOCUS	§	ENGLISH / ARABIC	LATIN	LOCUS	TYPE
26	<i>Metaph.</i> IV.b.1.3	258	a parasang [...] two parasangs	<i>duas leguas</i> [...] <i>unam leguam</i>	MUCKLE 1933: 98.18-19	linguistic
27	<i>Metaph.</i> IV.b.2.2	273	The particular wills are only provoked from the universal will, which requires the persistence of the movement up to the attainment of the Ka'ba [<i>al-wuṣūl ilā l-Ka'bat</i>]	<i>hoc autem non provenit nisi ex voluntate universali, cuius intencio est durare motum usque ad terminum peregrinacionis</i>	MUCKLE 1933: 107.10-12	religious
28	<i>Physics</i> III.3	362	the world of aether [<i>'ālam al-aṭīr</i>]	<i>celum empireum</i>	MUCKLE 1933: 156.15-16	religious
29	<i>Physics</i> III.4	370	aether	<i>empirium</i>	MUCKLE 1933: 158.21	religious
30	<i>Physics</i> IV.2.2	384	parasangs [...] two hundred parasangs [...] two hundred parasangs	<i>multis leugis</i> [...] <i>ducentis leugis</i> [...] <i>per ducentas leugas</i>	ST. CLAIR 2005: 63.96; 64.98-99	linguistic
31	<i>Physics</i> IV.3	403	«Zayd ought not to commit injustice» [<i>Zayd lā yanbaḡī an yaḡlīma</i>]	<i>Petro non debet fieri iniuria</i>	ST. CLAIR 2005: 72.280	onomastic
32	<i>Physics</i> IV.3	422	Zayd, 'Amr	<i>Ioannes, Petrus</i>	ST. CLAIR 2005: 82.536	onomastic
33	<i>Physics</i> V.2	427	Zayd	<i>Petri</i>	MUCKLE 1933: 184.20	onomastic
34	<i>Physics</i> V.4	431	the revealed law [<i>al-ṣarī'a</i>] Cf. <i>supra</i> , §1.9.3, Table 20, [3]	omitted	---	religious
35	<i>Physics</i> V.5	435	in the revealed law [<i>fi l-ṣar'</i>] Cf. <i>supra</i> , §1.9.3, Table 20, [4]	omitted	---	religious

2.3. Hebrew

If the Latin reception of the *MF* was, as we have seen, extremely widespread, its fortune in Hebrew – though globally less studied – was arguably even more staggering. The influence of the *MF* is inscribed into a wider, and more general trend of reception of al-Ġazālī in Jewish thought, which invests different authors and works⁶⁹³, and which culminates in the heated question whether al-Ġazālī did, or did not, have an impact on the leading scholar of Jewish philosophy, Moses Maimonides⁶⁹⁴. In this elaborate and nuanced scenario, the *MF* stands in a position of crucial importance for medieval Jewry, especially from the 14th century onwards⁶⁹⁵. A first sign of the extraordinary historical relevance of al-Ġazālī's text in Jewish environments is the presence of at least two, but most likely three different Hebrew translations of the work. These were produced respectively by (1) Yiṣḥaq [Isaac] Albalag at the end of the 13th century (later completed by Isaac Pulgar [Polqar]), (2) Yehūda [Judah] ben Solomon Nathan before 1340⁶⁹⁶, and (3) by a third, anonymous translator, again before 1340⁶⁹⁷. While scholarship generally assumes that Nathan's translation and the anonymous one are different Hebrew versions of the *MF*⁶⁹⁸, Steven Harvey suggested that they might perhaps be considered to be one the reworking of the other, due to the strong similarity he

⁶⁹³ For 13th century Hebrew translations of al-Ġazālī's *Mizān al-'amal*, *Miškāt al-anwār*, and *Mi'yār al-'ilm* see HARVEY 2009: 55*: fn. 9. For other aspects of reception of al-Ġazālī in medieval Jewish thought see the inspection of ṣūfi terminology of probable Ġazālīan provenance in Judah ha-Levi's *Kuzari* performed by LOBEL 2000: 6-8; 171-176, as well as her opposite denial of any Ġazālīan influence on Baḥyà ibn Paqūda's *Duties of the Heart* on the grounds that this work would antedate the corresponding Ġazālīan writings (LOBEL 2007: *passim*). For a brief overview on these aspects see also HARVEY 2009: 53*.

⁶⁹⁴ On this issue cf. most recently GRIFFEL 2019, who favours the hypothesis of a Maimonidean reception of al-Ġazālī, and LANGERMANN 2019, who starkly opposes it. In favour of the influence of al-Ġazālī, despite expressing himself with great caution, see also PINES 1963: cxxvi-cxxx, and cf. also ERAN 2001; IVRY 2005: esp. 68-69; HARVEY 2005; and HARVEY 2009 (see also the synthesis in HARVEY 2015^b: 293-296). For the more general issue of the influence of Islamic thought on Maimonides, cf. the extremely well-researched and balanced entry of the Stanford Encyclopedia of Philosophy prepared by PESSIN 2016.

⁶⁹⁵ HARVEY 2001 *passim* and HARVEY 2009: 56* insist on the historical divide between a 13th century in which Jews did not show any particular interest in al-Ġazālī's philosophy (despite translating some works of his, as recalled above in fn. 692), and a 14th century in which al-Ġazālī's influence and popularity dramatically increased, then remaining stably high for a long period time. For the achieved popularity in the 15th and 16th century, cf. also TIROSH-SAMUELSON 1997.

⁶⁹⁶ On Nathan's translation of the *MF*, entitled *Kavvānōt ha-pīlōsōfīm*, cf. RENAN 1893: 230-231 [576-577]. Renan dates the translation before 1340, because it is mentioned by Ṭodros Ṭodrosi, whose latest work has that date (cf. RENAN 1893: 229 [575] for the Hebrew text of Ṭodrosi's mention of Nathan's version; on Ṭodrosi's own partial Hebrew translation of Avicenna's *Kitāb al-Naǧāt* cf. ELGRABLY-BERZIN 2015). ZONTA 1996: 165 proposes the anterior date of 1330, also followed by HARVEY 2009: 60*. RENAN 1893: 230 [576] writes that Nathan did the translation at the request of an uncle of his, and that he had produced, before the extant one, another translation of the text of the *MF*, which later got lost in his travels in France. Accordingly, HARVEY 2001: 364 writes that Nathan «translated the work twice shortly before 1340», without however any further information. Nathan in the preface also laments that he only had at his disposal a bad Arabic copy of the text of the *MF* for his second attempt at translation, while he did have, and thus could use, some Avicennan texts.

⁶⁹⁷ Cf. ZONTA 1996: 165; MANEKIN 2000; HARVEY 2001: 364.

⁶⁹⁸ See ZONTA 1996: 165; MANEKIN 2000: 288-289.

detects between the two versions⁶⁹⁹.

While for the Latin *STP* around 40 codices of the work are extant⁷⁰⁰, the witnesses of the Hebrew translations reach altogether the unusually high number of 70 or, according to some esteems, even 75 *codices*⁷⁰¹. This circumstance alone, very uncommon in the technical and sometimes scattered landscape of the manuscript transmission of philosophical texts, is already a decisive witness of the all-peculiar relevance the *MF* had for medieval Jews. This importance has already been explored in scholarship, at least in part, dating from the epoch-making *summa* of medieval Hebrew knowledge, *Die hebräischen Übersetzungen des Mittelalters und die Juden als Dolmetscher*, published in 1893 by Moritz Steinschneider⁷⁰². After his painstaking effort, still a fundamental starting point for research after more than 120 years since its publication, only a few syntheses – however very valuable – on the influence of the *MF* in Hebrew have been produced⁷⁰³.

From the point of view of doctrines and teachings, previous contributions have shown, in particular, that al-Ġazālī's *MF* was a fundamental vehicle for the transmission of Avicennan doctrines in Hebrew⁷⁰⁴, as well as more generally of Arabic sciences and philosophy to the Jewish world⁷⁰⁵. According to some well-documented analyses, by the 15th century the Hebrew version of the *MF* even became the chief source for the study of Aristotelian natural philosophy in Jewish scholarship, effectively replacing Averroes' commentaries on it⁷⁰⁶. Jehuda Halper also recently suggested that the study of the *MF* may have led some Jewish authors to commenting on Aristotle, in particular through «those parts of the *Maqāṣid* with which they did not agree»⁷⁰⁷. Jewish Aristotelianism since its very beginning is actually documentably linked with the study of the *MF*, as the case of Arabophone Jewish writers such

⁶⁹⁹ See HARVEY 2001: 364 and fn. 18; and even more clearly HARVEY 2015^b: 296-297 fn. 26. *Contra*, CHERTOFF 1952: 111 writes that the «anonymous translation...deviates much from those of Albalag and Nathan», and that it is probably to be identified with «the translation of the Provençal scientist of whom Jehuda Nathan speaks in the introduction of his translation». However, HARVEY 2001: 364 and fn. 18 also suggests that Moses Narboni, the commentator of the anonymous translation (see *infra* in this paragraph) might also be the author of the reworking of Judah Nathan's translation, in keeping with Narboni's *usus*, «whose commentaries on some works of other Islamic philosophers are also associated with anonymous translations».

⁷⁰⁰ Cf. *supra*, §2.2.

⁷⁰¹ Cf. HARVEY 2001: 363 («over seventy»). HARVEY 2015^b: 289 and 296 gives the number of 75 manuscripts (cf. also GRIFFEL 2020: §2).

⁷⁰² STEINSCHNEIDER 1893^a (1): 296-326.

⁷⁰³ See the elegant overview by MANEKIN 2000: esp. 287-292, which was extremely useful for the compilation of the present section, as well as the articles specifically devoted to the issue by HARVEY 2001 and HARVEY 2015^b. A brief but informative synthesis is also provided by GRIFFEL 2020: §2.

⁷⁰⁴ The issue of Avicenna's influence in Hebrew as mediated by al-Ġazālī was at the centre of a heated recent scholarly debate: cf. the initial, very valuable contribution by FREUDENTHAL-ZONTA 2012 (followed by FREUDENTHAL-ZONTA 2013), the reply by HARVEY 2015^a, and the brief counter-reply by FREUDENTHAL-ZONTA 2016. Already CHERTOFF 1952: 84 wrote: «The *Maqāṣid* served for the Jews as a textbook of the peripatetic philosophy according to the version of Ibn Sīnā. And al-Ghazālī, whatever his own attitude in writing the *Maqāṣid*, came to be regarded by the Jews, by virtue of it, as the chief popularizer of philosophy».

⁷⁰⁵ MANEKIN 2000: 288 writes that «[t]o judge from the large number and distribution of the manuscripts, it was one of the chief vehicles for the transmission of classical science and philosophy to the Jews through the sixteenth century».

⁷⁰⁶ Cf. HARVEY 2015^b: 289; GRIFFEL 2020: §2. See also the conclusive formulation of HARVEY 2015^b: 302, which reprises the conclusions of his own HARVEY 2001: 374-376: «After Crescas, the *Maqāṣid* received legitimacy as an important scientific text in its own right, and Jews flocked to it, not in order to criticize it, but to learn from it».

⁷⁰⁷ HALPER 2019: 111.

as Abraham Ibn Da'ūd and Moses Maimonides himself might well indicate⁷⁰⁸. While the Ġazālīan sources of Abraham Ibn Da'ūd's *The Exalted Faith* have already been recognized clearly in previous literature⁷⁰⁹, the case of al-Ġazālī's influence on Maimonides' *Guide of the Perplexed* is – as mentioned – still debated in scholarship⁷¹⁰. Strikingly for our purposes, however, Herbert Davidson even maintained that «virtually everything of a metaphysical character attributed by Maimonides to Aristotle but actually deriving from Avicenna can be found» in al-Ġazālī's *MF*⁷¹¹. Although a full analysis of this bold claim would be impossible to carry on here, its formulation itself reflects the increasing importance that scholarship on Jewish thought in the last decades has been acknowledging to the *MF*. Al-Ġazālī's *summa* is thus portrayed more and more as a decisive piece of work, nested at the very centre of a formidable process of transmission of Aristotelian-Avicennan philosophy from Arabic into Hebrew.

2.3.1. Isaac Albalag

We do not have much information on the life and works of Isaac Albalag, the first Hebrew translator of the *MF*⁷¹². He was active in Southern France (Provence) or, more likely, in Catalonia at the end of the 13th century⁷¹³. As already pointed out by Moritz Steinschneider, Albalag translated the *Logic*, the *Metaphysics* and the beginning of the *Physics* of the *MF*, but the drafting of his Hebrew version of the text was later taken up and completed by another scholar, Yiṣḥaq ben Yosef [Isaac ben Joseph] Pulgar⁷¹⁴. Pulgar, who was an admirer of Albalag and himself an important figure of Jewish philosophy at the beginning of the 14th century, achieved the translation of the *Physics* of the *MF* in 1307. Isaac Albalag gave to his work containing the Hebrew translation of the *MF* the title *Tiqqun ha-De'ot* [*The Improvement (or: Correction/Emendation) of the Opinions*], which seems to imply that he referred to al-Ġazālī's work in itself as *De'ot ha-pīlōsōfīm* [*The Opinions of the Philosophers*]⁷¹⁵. As a convinced Averroist, Albalag wanted to correct al-Ġazālī's Avicennist – or properly

⁷⁰⁸ I briefly mention here these important Jewish authors writing in Arabic, while in what follows I will focus on actual translations and commentaries of the *MF* into Hebrew.

⁷⁰⁹ Cf. the bibliographical references given *supra*, §1.7.2. *Angels and Intellects*, fnn. 389-391.

⁷¹⁰ Cf. the references given at the beginning of this chapter, fn. 693. GIL'ADI 1979 (quoted in HARVEY 2015^b: 294 and fn. 16) even suggested that the Arabic title itself of the *Dalāla al-Hā'irīna* might come from the Ġazālīan expression *dalīl al-mutaḥayyirīna*, used as an epithet for God in the *Iḥyā'*. ERAN 2001 also discusses the similarities between some texts of the *Iḥyā'* and Maimonides' account of spiritual pleasures, although she does not mention the presence of very similar statements also in the *MF*: cf. *infra*, Commentary *ad* §§230-231 of my Translation, for the indication of the relevant parallel passages.

⁷¹¹ DAVIDSON 2005: 104. The same passage is also quoted by HARVEY 2015^b: 294.

⁷¹² Cf. CHERTOFF 1952: 86, and see STEINSCHEIDER 1893^a: §166 and VAJDA 1960. For a more recent reappraisal on the intellectual figure of Albalag cf. ABDALLA 2020.

⁷¹³ Cf. ABDALLA 2020: §1; see also MANEKIN 2007: xviii-xix and SIRAT 1985: 238.

⁷¹⁴ On Pulgar see the biographic entry by SÁENZ-BADILLOS-TARGARONA BORRÁS 1988, as well as the recent monograph – focusing on his *'Ezer ha-Dat* and *Tešuvat Epiqoros* – by HALIVA 2020.

⁷¹⁵ *Contra*, one might argue that the *de'ot* envisaged by the title are more generally the opinions of the philosophers, of which al-Ġazālī's treatise simply happens to provide a useful specimen. This latter option, however, seems to me rather farfetched.

Avicennan – presentation of the doctrines of the philosophers with his own ‘improvement’ or ‘correction’ [*tiqqun*], which consists in seventy-five critical emendations to the text of the *MF*, largely based on the different stance adopted on those various issues by Averroes⁷¹⁶. Only five of these emendations refer to the *Logic*⁷¹⁷, while the vast majority of them is focused on metaphysics and related issues⁷¹⁸. This is an interesting, though perhaps only casual, structural homology with what al-Ġazālī himself stated in his Arabic *Prologue* about the relative trustworthiness of the philosophical disciplines: logic all but true, metaphysics all but false, and physics ambiguously perched between the two⁷¹⁹.

Albalag’s own preface to his translation was published and translated in both English and French⁷²⁰. It is a very interesting piece of writing, in which the first translator of al-Ġazālī’s *MF* into Hebrew explains at length the motivations behind his work, and in which he also gives an important judgment concerning the role and utility of al-Ġazālī’s writing. Albalag frames his translation in a very wide political project of loosely Fārābian inspiration, directly linked however to Biblical revelation, and directed to the greater happiness of humankind as organized in society⁷²¹. In the framework of this ambitious political and theological project, Albalag writes:

TEXT 37. Isaac Albalag, *Tiqqun ha-De’ōt*, transl. HARVEY 2009: 58*-59*, slightly modified⁷²²

I have decided first to translate this book by Abū Ḥāmid al-Ġazālī for it includes

⁷¹⁶ Hebrew text edited in VAJDA 1973, French translation in VAJDA 1960. The *Logic* of the *Tiqqun* is also printed in AUERBACH 1999. An excerpt of Albalag’s work, concerning the knowability of future contingents, was translated into English by MANEKIN 2007: 140-142.

⁷¹⁷ See MANEKIN 2000: 296. *Ibidem* Manekin also notices that the same disproportion between the criticism advanced against *Logic*, on the one hand, and *Metaphysics* and *Physics*, on the other hand, is to be found in Moses Narboni’s commentary on the anonymous translation of the *MF* (another text of clear Averroist inspiration). Concerning *Logic*, it is worth noticing that a «sympathetic discussion» of the fourth figure of the syllogism is included in the manuscript tradition of the *Tiqqun*, despite being absent in al-Ġazālī’s *MF* (ABDALLA 2020: §2). While this might have been composed by Abner of Burgos (see VAJDA 1960: 275-276), its presence in the *Tiqqun* without critical remarks is still noteworthy.

⁷¹⁸ Emendations pertaining to the Avicennan metaphysics expounded in the *MF* include the criticism of the metaphysical proof for the existence of God, which – *iuxta* Averroes – should rather be taken and start from natural philosophy; the introduction of volitional causes to mitigate the sheer determinism of efficient causes; criticism of the rigid scheme of emanation deriving from the axiom *ex uno non nisi unum*; rejection of the ensoulment of the orbs; etc. (for a fine, though brief discussion on all these points cf. ABDALLA 2020: *passim*).

⁷¹⁹ Cf. *Prologue*, §1 in the following Translation; and see *supra*, §1.4.2.1. *Why Didn’t al-Ġazālī Do His Math?*, Diagram 1, for a further discussion.

⁷²⁰ Hebrew text in VAJDA 1973: 1-5; French translation in VAJDA 1960: 15-21; English translation by Charles Manekin in LEAMAN-FRANK-MANEKIN 2000: 247-250 under the title *The Emendation of the ‘Opinions’*. Cf. HARVEY 2009: 56*-59* for a detailed discussion of the text of the introduction.

⁷²¹ Albalag links his project of translating Aristotle’s books to the explanation of the teachings of the Torah, in themselves useful to the happiness of the many. The translation of al-Ġazālī’s *MF* is seen as a further preliminary step towards the realization of such an ambitious goal. Cf. HARVEY 2009: 57*-58*. As acutely noticed by ABDALLA 2020: §10, it is remarkable that «Albalag starts the *Tiqqun* with the political theme with which al-Ghazali concludes the *Maqāṣid*» (cf. *infra*, Translation, §§450-453).

⁷²² Cf. also STEINSCHNEIDER 1893^a: §167, reprised in CHERTOFF 1952: 85, who provides the following translation of an excerpt of the prefatory text here quoted: «[...] because it comprises most of those views, and because its method is that of the middle way, suited both to philosophy and common belief, and its presentation tends toward simple narration, which is easily understandable to the uninitiated layman».

mention of most of these opinions in a middle path common to philosophy and the belief of the multitude, and his method is close to that of narrative so it is easy to understand for one who is not accustomed to science. [...] I have seen fit to translate [al-Ġazālī's] language into ours, and to translate his method that accords with the belief of the multitude to the demonstrative method, which accords with the inner belief of the Torah. Thus, this book is not only a translation, but also a composition in itself, and therefore I have called it *Tiqqun ha-De'ot*.

It is particularly interesting to notice, in these prefatory statements, Albalag's praise of al-Ġazālī's *MF* as a useful introductory text on Aristotelian philosophy, perfect for beginners. The reason of this special usefulness is recognized in the peculiar «method» employed by al-Ġazālī in his presentation of the teachings of the *falāsifa*, a method described as intermediary («in a middle path») between philosophy proper and more commonly held beliefs. Since this method is further characterized as being close to «narrative», a qualification which also applies, in Albalag's introduction, to the Torah, it seems safe to identify the beliefs of the multitude towards which al-Ġazālī's presentation inclines with religious and revealed tenets. Thus, the «middle path» or 'middle way' pinpointed by Albalag as a crucial feature of the *MF*, and the main reason for its success, appears altogether remarkably similar to the distinctively Ġazālīan *via media* identified above in this Introduction while discussing the relation between Avicennan *falsafa* and Muslim revelation displayed in the *MF*⁷²³.

This kind of laudatory statements on the utility of the work notwithstanding, Albalag is not shy of providing explicit criticism of al-Ġazālī's doctrines as expressed in the *MF*, despite still recommending their study and teaching because more suitable to the learning abilities of the masses⁷²⁴. Thus, theoretical criticism of the Avicennan tenets expounded by al-Ġazālī, which is performed on the basis of Averroes' teachings because of their perceived closeness to the *interpretatio recta* of Aristotle, welds in the Averroist Albalag with a pedagogical appreciation for the didactic value of the *MF*, seen as capable of providing a precious tool for the instruction of inexperienced students⁷²⁵. The purge of the Neoplatonic aspects of Avicenna's Peripatetic philosophy attempted by Albalag in the wake of Averroes, then, passes through the translation of al-Ġazālī's synthesis of Avicenna's version of Aristotelian philosophy. The value of the *MF* as a handbook of philosophy appears thus to exceed even the boundaries – normally insurmountable – of the philosophical hostility between Ibn Sīnā and Ibn Rušd.

⁷²³ Cf. *supra*, §1.7. *Lexicon* and §1.8. *Examples*; see also, for a synthesis, §1.10. *The First Text of hikma*. As for Albalag himself, it is important to stress that the relationship between philosophy and revealed knowledge in his thought is of particular historical interest, as it has been described as an instance of the so-called 'double truth' theory: cf. SIRAT 1985: 238; ZINBERG 1973: 107; VAJDA 1960: 264-265; ABDALLA 2020: esp. §8. *Contra*, that is, for the absence of any such theory in Albalag, see GUTTMANN 1966: 227-229.

⁷²⁴ MANEKIN 2007: xx: «Still, Albalag recommends teaching al-Ghazālī's theory as appropriate for the multitude, since it will be easy for them to grasp».

⁷²⁵ Cf. ABDALLA 2020: §1.

2.3.2. Judah ben Solomon Nathan

The second translator of the *MF* was the Provençal savant Judah ben Solomon Nathan, also known as Maestro Bongodas (his Provençal name being En Bongodas or Bonjues)⁷²⁶. A member of the influential and cultivated Nathan family, which flourished in Avignon and close centres of Southern France in the 14th century, Judah Nathan translated al-Ġazālī's *MF* at the express request of his uncle, although his preface makes it clear that he also had a personal, keen interest in the study of the work⁷²⁷. His translation, as opposed to Isaac Albalag's one but like the anonymous version⁷²⁸, bears the title *Kavvānōt ha-pilōsōfīm* [*The Intentions of the Philosophers*]⁷²⁹, with a teleological rendition of *maqāṣid* in the place of the more content-referring term *de'ōt* ('opinions') chosen by Albalag⁷³⁰.

Judah's preface is full of the traditional motifs of inadequacy typical of the introductions to translated materials⁷³¹: the translator is unworthy due to his imperfect knowledge of both languages involved, and of the doctrines taught in the text; translations are in themselves an extremely difficult task, and all the more so when al-Ġazālī is involved; the manuscript copy at Judah's disposal was faulty and full of errors. This feigned resistance notwithstanding, Judah also gives three reasons for his final undertaking of the translation. Apart from faith placed in God (but also in the help of his fellows scholars), Judah underlines the great helping value of philosophical works of similarly oriented thinkers as al-Ġazālī, among which he mentions not only Avicenna (useful for both the *K. al-Šifā* and the *K. al-Nağāt*), but also Faḥr al-Dīn al-Rāzī, who makes here, with his *Eastern Investigations* [*al-Mabāḥiṭ al-mašriqīyya*], one of his very first appearances in the Hebrew language⁷³². Interestingly, the direction of the usage of sources looks for Nathan quite the opposite as the one modern scholars would perhaps find more natural, because in his view Avicenna and al-Rāzī are best used to explain al-Ġazālī's *MF*, and not vice versa. This is consistent with the picture of al-Ġazālī as a «difficult author»⁷³³, in need of explanation and commentaries, which emerges most clearly from Nathan's preface to his translation. The persistence of this picture might be also witnessed by the great extent of the commentarial work performed in Hebrew on the theologian's philosophical book⁷³⁴.

Finally, two main benefits deriving from the achieved availability of al-Ġazālī's *MF* in Hebrew translation are listed in Judah's preface. In the first place, students will be able to read this book alone in order to grasp the philosophical sciences, without any need of

⁷²⁶ Cf. CHERTOFF 1952: 87, and see STEINSCHNEIDER 1893^a: §172.

⁷²⁷ Cf. *supra*, fn. 695.

⁷²⁸ Cf. *supra*, §2.3.1 for Albalag; and *infra*, §2.3.3, for the anonymous translation as commented by Moses Narboni.

⁷²⁹ On the meaning of the word *kavvana* in scholarly medieval Hebrew cf. the entry קַבְּוּנָה in the database *PESHAT in Context - A Thesaurus of Pre-Modern Philosophic and Scientific Hebrew Terminology*, ed. Reimund Leicht/Giuseppe Veltri, accessed Thu Feb 10 14:39:27 CET 2022, https://peshat.org/display/peshat_lemmas_00007469.

⁷³⁰ Cf. *supra*, §1.1. *Title*. CHERTOFF 1952: 87 writes that this title «corresponds to that of the Arabic original».

⁷³¹ For the features of such introductions, cf. The following summary is based by and large on HARVEY 2009: 60^{*}-61^{*}.

⁷³² Cf. HARVEY 2009: 60^{*} fn. 18. As also noticed *ivi*: 61^{*}, a Judaeo-Arabic copy of *al-Mabāḥiṭ al-mašriqīyya* is discussed by LANGERMANN 1996^b: 154 (the word 'Reading' in the subtitle of Langermann's contribution as quoted by Harvey should be corrected in 'Relisting').

⁷³³ HARVEY 2009: 61^{*}.

⁷³⁴ See *infra*, §2.3.3. *Moses Narboni*, and also §2.3.4. *Other Jewish Authors, passim*.

further and lengthier books of philosophy; and thus, they will liberate useful time for the study of the Talmud. On a second note, the translated work could be used by Jewish scholars to reject – on sound philosophical grounds – the wrong views of the philosophasters or pseudo-philosophers [*mitpalsefîm*], which constitute a danger for faith and true speculation⁷³⁵. As shown by important studies by both Steven Harvey and Mauro Zonta, Judah Nathan's preface is all in all a precious witness of an important trend of non-Averroist Jewish Aristotelianism. Thinkers of this wave, who likely include the important figure of Ṭodros Ṭodrosi⁷³⁶, perceived the Avicennan version of Peripatetic philosophy as a much better fit than Averroism for the needs of the Jewish faith, and accordingly turned to al-Ġazālî as the vehicle of transmission of a synthetic, yet complete and compelling, version of this philosophy⁷³⁷.

2.3.3. Moses Narboni

According to many scholars, once again dating from Moritz Steinschneider, a third translation of the *MF* from Arabic into Hebrew was produced by an anonymous scholar around the same years of Judah Nathan's one⁷³⁸. The anonymous translation – the only one which has until now received a critical, though still partial, edition⁷³⁹ – was commented upon by Moses ben Joshua of Narbonne (better known as Moses Narboni, d. 1362)⁷⁴⁰. The resulting commentary was in itself extremely popular⁷⁴¹. It was, in turn, further commented upon, thus producing a supercommentary which is twice (or thrice, if one is also to consider the step of the Arabic-Hebrew translation) removed from al-Ġazālî's original text. All these features make Narboni's commentary on the *MF* not only the most successful commentary on al-Ġazālî's text in Hebrew, but also likely the most widely read of his own commentaries,

⁷³⁵ Cf. CHERTOFF 1952: 88.

⁷³⁶ In 1334, Ṭodrosi authored a scientific treatise, now preserved in MS London, British Library, Add. 27559, Margoliouth 890, IMHM 6094. This text includes many excerpts and quotation from al-Ġazālî, although it also discusses Averroes' commentaries on Aristotle's natural philosophy. Cf. GLASNER 2012: 190-191; HALPER 2019: 128 n. 54.

⁷³⁷ See HARVEY 2009: 62* and cf. at least ZONTA 2000, ZONTA 2002. More generally, it is useful to bear in mind the debate on the role of Avicenna among medieval Jews started in FREUDENTHAL-ZONTA 2012; with the replica by HARVEY 2015^a and the counter-reply by FREUDENTHAL-ZONTA 2016. Cf. also HARVEY 2015^b: 299, who emphasizes however that in the 14th century «[t]here is little indication that the text was used [...] as Judah ben Solomon intended it».

⁷³⁸ Cf. STEINSCHNEIDER 1893^a (1): §173 and §174. See also CHERTOFF 1952: 88. According to Steinschneider, the manuscript tradition of the anonymous translation is difficult to be ascertained, since even manuscripts with the commentary by Moses Narboni sometimes transmit one of the other two versions. Steinschneider was still able to recognize, however, that the anonymous translation is more faithful to the Arabic original than Albalag's and Nathan's versions.

⁷³⁹ In the PhD dissertation discussed at Columbia University by CHERTOFF 1952, which also contains the edition of Moses Narboni's Hebrew commentary on the *Logic* of the *MF*.

⁷⁴⁰ On Narboni's activity as a commentator cf. the recent reassessment by HALPER 2019; on his life and works see CHERTOFF 1952: 105-116. For his relationship with al-Ġazālî see also IVRY 2015.

⁷⁴¹ See HARVEY 2009: 63* and fn. 24. FREUDENTHAL-ZONTA 2013: 226 speak of «more than 30 copies» for Narboni's commentary.

overshadowing even Narboni's commentary on Maimonides' *Guide of the Perplexed*⁷⁴².

Narboni, who was (like Albalag) a convinced Averroist, deemed the doctrines of the philosophers taught in the *MF* to be the true opinions held by al-Ġazālī. The latter's claim to be merely accounting for the ideas of the *falāsifa* was thought by the Jewish commentator to be al-Ġazālī's attempt to disguise his actual positions in order not to be prosecuted by the powerful political enemies of philosophy – in Narboni's reconstruction, no less than the «king» of al-Ġazālī's time, who would have prohibited the study of philosophy⁷⁴³. Such a claim looks to the modern reader surprisingly close to Leo Strauss' famous – but unfalsifiable – hermeneutical argument for the esoteric interpretation of pre-modern authors, and notably medieval Islamic thinkers, as expressed most clearly in his *Persecution and the Art of Writing*⁷⁴⁴. Under such an assumption, the existence itself of the refutation of philosophy contained in the *TF* posed some not negligible historical problems, which Narboni did not hesitate to solve by claiming that al-Ġazālī even wrote – after the *TF* – a refutation of his own refutation of philosophy, in order to make his genuine philosophical opinions, as entrusted to the *MF*, finally triumph⁷⁴⁵.

⁷⁴² The assessment comes from HARVEY 2009: 63*, who quotes to this effect the data on the circulation of Narboni's works collected in HOLZMAN 1996: 15-24.

⁷⁴³ For Narboni's passage to this effect cf. the introduction to his commentary in CHERTOFF 1952: 3b (English)/31 (Hebrew): «He lived in a nation and in a generation in which the King banned the study of philosophy»; see also HOLZMAN 1996: 293-294. For a discussion see MANEKIN 2000: 291-292 and HARVEY 2001: 366-367 fn. 24, with English translation of the relevant passage.

⁷⁴⁴ See STRAUSS 1941.

⁷⁴⁵ Cf. Narboni's introductory note to the commentary of the *Kavvānōt ha-pilōsōfīm* in CHERTOFF 1952: 4a (English) /48 (Hebrew): «Abū Hāmid himself "revealed the secret to his friends" [*Amos* 3:7] in a short treatise which he composed after he wrote his *Tahāfut al-falāsifa*. In it he resolved all that which he had maintained against the philosophers. At the end of the treatise he enjoined and adjured anyone into whose hands it might fall to reveal it only to the worthy among philosophers. In sum, this provided the author with a pretext to explain the ideas of the philosophers. For whoever comprehends their ideas will be able, if he is favored by God, to resolve the objections which al-Ġazālī (*sic*) later brought against them. It was like building a protecting wall». MANEKIN 2000: 292 fn. 42 quotes STEINSCHNEIDER 1893²: 338-339 (§192) for his identification of the Ġazālīan work here mentioned by Narboni with a writing entitled *Kavvānōt ha-Kavvānōt*, which would also be known elsewhere with the different title *Ma'amar bi-Tešivōt Še'elōt*. CHERTOFF 1952: 112 fully endorses the latter identification by Steinschneider, by saying that «Isaac b. Nathan of Cordova (or Xativa), living in 1347 at Majorca, translated this book into Hebrew» and that its «Arabic original has not yet been found». In the notes to his translation, in the second part of the dissertation, esp. at 113 n. 18b, Chertoff also quotes to this effect MUNK 1857: 379 ff. Now, the last part of Chertoff's claim can be corrected, because Arabic copies of the text – known with the Arabic title of *Aġwiba* – have indeed been found, and the text itself was studied anew by LANGERMANN 2011. This collection of answers on philosophical topics by al-Ġazālī was already directly linked to the *MF* by the first editor of Isaac ben Nathan's Hebrew translation, Steinschneider's student Heinrich Malter (see MALTER 1896). Cf. also GRIFFEL 2021: 430 and 454. The different title *Kavvānōt ha-Kavvānōt* [*The Intentions of the Intentions*], which would be equivalent to a hypothetical Arabic **Maqāšid al-Maqāšid*, looks particularly interesting in the light of the parallelly construed title of Averroes' *Tahāfut al-Tahāfut*: while Averroes' work would be the refutation of al-Ġazālī's refutation of philosophy in the *TF*, the *Kavvānōt ha-Kavvānōt* attributed by Narboni to al-Ġazālī himself would seem to provide a definitive validation of the opinions attributed to the philosophers in the *MF*. Both works, with their derivative and twofold titles, would thus converge in the same aim of vindication of true philosophy against its falsification, globally perceived as weak and easily dismissable. (Interestingly, but certainly unrelated to this issue, an identical Arabic title *Maqāšid al-Maqāšid* is attested for al-Taftāzānī's monumental commentary in *kalam* usually known in Arabic as *Šarḥ al-Maqāšid fi 'ilm al-kalām*: cf. MORRISON 2021: 311 for the reference.) Since Narboni himself was a convinced Averroist, the structural homology here noted looks particularly interesting, and perhaps also worthy of further examination. As far as the prohibition of divulgence of this alleged esoteric work is concerned, the Arabic *Maḍnūn* cannot but come to mind: cf. *supra*, §2.1.2, for a

These partial criticisms notwithstanding, Narboni in his introduction praises al-Ġazālī with the laudatory epithets of «excellent», «dear», «honoured», «sage» and even «prince»⁷⁴⁶, as well as the *MF* as a work expressing «the secrets of wisdom» [*sodōt ha-hoḥma*] «in wondrous brevity»⁷⁴⁷. The concision and clarity of the *MF* are thus explicitly appreciated as the most valid aspects of the encyclopaedia, which effectively introduces the reader to Aristotelian philosophy. However, its teachings, being Avicennan in nature, often diverge from Averroes' ones, and thus Narboni feels the urge to correct them in his commentary – despite a programmatic unwillingness to do so⁷⁴⁸ – whenever this is needed. Since, as mentioned, Narboni believed that al-Ġazālī only feigned submission to the tenets of revelation, while deep down remaining a pure philosopher, the errors that the commentator still individuates in the *MF* remain in principle unexplained, in the absence of a nuanced historical understanding of the trends of Arabic Peripatetism capable of distinguishing Avicennan and Averroean doctrines. Thus, Narboni resorts to the idea that the errors of the *MF* might even be deliberate additions, in the spirit of an easier fictitious refutation in the *TF*. Despite the clear historical implausibility of such a reconstruction, it is worth noticing that in the Jewish environment represented by Narboni *MF* and *TF* are conceptually considered together, although the *MF* – in its role of effective compilation of science and philosophy – receives the lion's share of the scholarly attention.

2.3.4. Abraham Avigdor

Abraham ben Mešullam ben Solomon ben Mešullam Avigdor of Arles (d. after 1399), a Provençal scholar and physician, is not one of the best known Jewish philosophers in the Middle Ages. He studied medicine in Montpellier, and he authored some translations of logical and medical works from Latin into Hebrew. Among these, his Hebrew version of Peter of Spain's *Tractatus* was recognized as the most popular of the six extant ones, as it is transmitted by no less than 22 manuscripts⁷⁴⁹. His most interesting work is however certainly his

discussion. It is also worth mentioning here, in conclusion, that HARVEY 2001: 366-367 fn. 24 quotes a parallel for the attitude here displayed by Narboni, which would be found in his commentary on the philosophical novel *Ḥayy ibn Yaqzān*, as well (as quoted by MALTER 1896: xi). In that commentary, Narboni also maintained that al-Ġazālī would have written an esoteric book after the *TF*, in which he would have refuted his own refutation of *falsafa*, thus confirming himself to be a proper philosopher. The entire set of these complicated issues is of extreme historical interest, and will require a reassessment of the available data in order to be properly addressed and understood.

⁷⁴⁶ The latter epithet might remind one of the treatment of Avicenna's epithet *ṣayḥ* in Latin sources, which led to the genesis of the curious iconography of Avicenna as prince or king: cf. on this issue HASSE 1997.

⁷⁴⁷ Cf. CHERTOFF 1952: Part II, 1-2 (and see also HOLZMAN 1996: 288). I quote the English translations of these sparse epithets as reported by HARVEY 2009: 63*.

⁷⁴⁸ Cf. Narboni's preface in the English translation provided by HARVEY 2001: 366: «Therefore, I will only explain what is hidden and sealed in his [*scil.* al-Ġazālī's] words, in concise clear language, without explaining at length the opinions of Averroes that disagree with his words and without adding what has been explained in other books, because this would change the form of this book and this is not our particular intention, which is rather to explain the words of this sage».

⁷⁴⁹ Cf. MANEKIN 1999: 127-128, also quoted in HARVEY-MANEKIN 2006: 215-216 and fn. 4. For the Hebrew translations of Peter of Spain, see also MANEKIN 1997.

Segullat Melakhim [*The Royal Treasure*], a poeticized encyclopaedia of philosophical sciences which he wrote in 1367, at the age of seventeen. The title of this little work, a veritable *summa* in a nutshell, is taken from *Ecclesiastes* 2:8, and could be rendered more literally as *The Proprium of Kings*⁷⁵⁰. One of the most peculiar features of the work is its poetic form⁷⁵¹. Indeed, the main text of the little *summa* was written by Avigdor in Hebrew rhyming verse, but with the later addition of glosses in prose which are, for the most part, direct quotations of the relevant excerpts of Judah Nathan's Hebrew translation of the *MF*⁷⁵². Nathan's translation, as mentioned, is titled *Kavvānōt ha-pīlōsōfīm*⁷⁵³. While he makes use of Nathan's version in his glosses, Avigdor at the end of his introduction uses however the highly characteristic expression *de'ōt ha-pīlōsōfīm*⁷⁵⁴, which seems rather to derive from Albalag's rendition of the title of the *MF*⁷⁵⁵.

The booklet is composed of three parts, *Logic*, *Metaphysics*, and *Physics*, in the same atypical order adopted by Avicenna's *DN* and followed in the *MF*⁷⁵⁶. The structural similarity goes as far as the inclusion, in the section on natural philosophy, of prophetological material which corresponds to *Physics* V in the *MF* (and which is rather treated within *Metaphysics* in standard Avicennan *falsafī* works)⁷⁵⁷. The relative size of the three parts is however different than the one displayed by the *MF*, since the longest section in Avigdor's composition is the *Logic*, followed by the *Metaphysics* and then by the *Physics*⁷⁵⁸. Avigdor's *Logic* is indeed the only section of the work that departs in some aspects from al-Ġazālī's source-

⁷⁵⁰ HARVEY-MANEKIN 2006: 217.

⁷⁵¹ This characteristic seems to approach the Hebrew text to the partly analogous attempt at versification of al-Ġazālī's *Logic* performed, less than one century before Avigdor, by Ramon Llull in his native Catalan: cf. *infra*, §2.4.2.1.

⁷⁵² HARVEY-MANEKIN 2006: 219: «The book is indeed written as a poem, in rhymed verse, as promised in the introduction, but at some point the author wrote a prose commentary, mostly a series of glosses, that paraphrases and, at times, explicates the poetry. Each gloss is linked to words in the poem, although this is not always apparent in the manuscripts. Now in the section on metaphysics and natural science, this commentary often comprises little more than an abridged word-for-word citation of Judah ben Nathan's (*sic*) Hebrew translation» of the *MF*.

⁷⁵³ See *supra*, §2.3.2. *Judah ben Solomon Nathan*.

⁷⁵⁴ Cf. the critical edition of Avigdor's introduction in HARVEY-MANEKIN 2006: 241.43 (Hebrew), 244 (English): «Thus I applied my heart [Eccl 1: 13, 8: 16] to compile with extreme concision a selection of the opinions of the philosophers [*de'ōt ha-pīlōsōfīm*] in poems [...].» While Harvey and Manekin do not consider this as the title of al-Ġazālī's writing, and are probably right in doing so, the terminological coincidence is still important. Cf. also *infra*, §2.3.5. *Other Jewish Authors*, the analogous considerations I advance with respect to the homonymous title of Šem Ṭov Ibn Falaquera's *De'ōt ha-pīlōsōfīm*.

⁷⁵⁵ See *supra*, §2.3.1. *Isaac Albalag*.

⁷⁵⁶ HARVEY-MANEKIN 2006: 218 insist that this inversion between metaphysics and physics was a sign of particular audacity on the part of Avigdor, because it was also in contrast with the explicit «program of scientific study» designed by Moses Maimonides, in which (as in the main Aristotelian tradition) metaphysics was to be approached at the end of the *cursus*. For more considerations on the structure of *DN* and *MF*, in their own right and vis-à-vis each other, cf. *supra*, §1.4.2. *The Order of the Sciences*.

⁷⁵⁷ Cf. HARVEY-MANEKIN 2006: 233 and *supra*, §1.4.2. *The Order of the Sciences*. *Ivi*: 234, Harvey and Manekin also notice that in this section Avigdor «parts very little from his source». This and other hints gathered by the authors seem to imply that Avigdor maintained the bits of al-Ġazālī's text more directly related to religious revelation, by adapting them to Jewish needs with the addition of appropriate Biblical and Talmudic references.

⁷⁵⁸ HARVEY-MANEKIN 2006: 219 indicate that in MS Paris, Bibliothèque nationale de France, héb. 990/1 [IMHM 33991], foll. 1r-38r, the *Logic* occupies 14 folios, the *Metaphysics* 12 folios, and the *Physics* 10 folios. In the *MF*, by contrast, the *Metaphysics* is by far the longest part, followed by *Physics* and – at great distance – by the shorter *Logic*.

text, since it abbreviates and simplifies the materials treated in Averroes' middle commentaries on the *Organon*, only however up to the *Posterior Analytics*, in keeping with the structure of al-Ġazālī's own *Logic* in the *MF*⁷⁵⁹. In many cases, however, it is clear that Avigdor is actually using the logic section of the *MF*, which uses many concrete examples and was thus clearly easier to versify than the more technical middle commentaries by Averroes, which maintain Aristotle's use of syllogistic term-variables⁷⁶⁰. The main point of departure from the *MF* – and probably also the reason why the *Logic* of the *Segullat Melakhim* is more sizable in proportion – is however represented by Avigdor's rather lengthy treatment of Aristotle's modal syllogistic, and in particular of syllogisms with premises of mixed modality. This notoriously «highly controversial area of Aristotelian logic»⁷⁶¹ is rather entirely omitted in the *MF*.

As for the metaphysical and the physical sections of the *Segullat Melakhim*, they are more prominently and explicitly a rhyming version, adaptation, and abridgment of the *Metaphysics* and *Physics* of al-Ġazālī's work. They are both opened by short introductions, full of Biblical and Talmudic references, in which Avigdor speaks in his own name⁷⁶². By bringing examples from natural philosophy, concerning the definition of place and the nature of the exhalations that produce meteorological phenomena, Harvey and Manekin show that Avigdor, while abridging the *MF* in the poem, in the commentary consistently directs his readers not to the fuller exposition contained in the *MF* itself, but rather to Aristotle *via* Averroes' commentaries on the *corpus*⁷⁶³. This seems to suggest a continuity between Avigdor's effort of using the *MF* as a vehicle towards the destination of true Aristotelian science (as mediated by Averroes), and the analogous efforts displayed by prominent thinkers such as Isaac Albalag and Moses Narboni, for which the *MF* did play a comparable 'triggering' role⁷⁶⁴. Narboni's commentary on the *MF* might actually be a prominent source for Avigdor's compilation of glosses⁷⁶⁵, while the extraordinary authority of Moses Maimonides' *Guide of the Perplexed* is also explicitly endorsed – even from a stylistic and formulaic point of view – in many passages of the young Provençal physician's adaptation of al-Ġazālī's work⁷⁶⁶.

⁷⁵⁹ *Logic* V, the last treatise of the first section of the *MF*, deals indeed with materials taken from Aristotle's *Posterior Analytics*: cf. *supra*, §1.5. *Contents*, and *infra* the Translation. For the structure of Avigdor's *Logic* and its complex interplay with Averroes' texts cf. HARVEY-MANEKIN 2006: 221-226. As noticed *ivi*: 216, the material from *MF*, *Logic* V is indeed retained, though of course in an abridged form, as the end of the logical section of the *Segullat Melakhim*.

⁷⁶⁰ This is noticed in HARVEY-MANEKIN 2006: 224 and fnn. 28-29. Among the passages of the *MF* which Avigdor quotes, Harvey and Manekin list the «concrete examples of the syllogistic moods» (*Logic* IV, §§38-45 in my Translation), as well as some more peculiar methods of demonstration listed by al-Ġazālī and absent in Averroes, such as the ekthesis and the *reductio ad absurdum* (see esp. §44 in the Translation).

⁷⁶¹ HARVEY-MANEKIN 2006: 225.

⁷⁶² HARVEY-MANEKIN 2006: 227-228.

⁷⁶³ HARVEY-MANEKIN 2006: 229-231.

⁷⁶⁴ This is the conclusion reached by HARVEY-MANEKIN 2006: 232-233.

⁷⁶⁵ HARVEY-MANEKIN 2006: 237.

⁷⁶⁶ HARVEY-MANEKIN 2006: 238.

2.3.5. Other Jewish Authors

The reception of the *MF* in Hebrew and among Jews in the long Middle Ages is definitely not limited to the main translators and commentators briefly addressed above. A great number of other intellectual figures of medieval Jewry, who were active well into the Renaissance period, show great familiarity with al-Ġazālī's text. The enduring influence of the *MF* in Jewish milieu appears thus confirmed, in parallel with the similarly long-lasting reception of the text in Latin context⁷⁶⁷.

Šem Ṭov Ibn Falaquera (d. c. 1290), one of the most prominent Jewish philosophers of the 13th century, certainly knew the *MF*⁷⁶⁸, although he does not make great use of it in his works of natural philosophy⁷⁶⁹. He appears however to be quoting, in many of his writings, one of the most characteristic theses appearing in the *Prologue* of al-Ġazālī's work, that is, the evaluation of the relative truth-value and trustworthiness of the three philosophical disciplines: logic all but true, metaphysics all but false, and physics partly true and partly false. The writings by Falaquera in which this Ġazālīan notion appears include his *Sefer ha-Mevaqqeš*⁷⁷⁰, as well as various other texts of his⁷⁷¹. Given this documentable influence, it seems noteworthy to point out that the third installment of Falaquera's philosophical trilogy, after the *Rešit Hoḥma* [*The Beginning of Wisdom*] and the *Sefer ha-Ma'alōt* [*Book of Degrees*], bears the title of *De'ōt ha-pilōsōfīm* [*Opinions of the Philosophers*], the very same with which Isaac Albalag referred, implicitly but still well-perceivably, to al-Ġazālī's *MF* in his *Sefer Tiqqun ha-De'ōt*⁷⁷². Falaquera's *De'ōt ha-pilōsōfīm*, though still unpublished, is an important encyclopaedia of science, containing broad sections on natural philosophy (including zoology) and metaphysics (though no logic nor mathematics)⁷⁷³. It has been described as «perhaps the most serious and philosophic book that Falaquera wrote»⁷⁷⁴. Its prologue, of which I reported a relevant excerpt in the following Text 36, bears some important elements of interest for us.

TEXT 38. Šem Ṭov Ibn Falaquera, *De'ōt ha-pilōsōfīm*, translation HARVEY 2000: 216⁷⁷⁵

I endeavored to translate these opinions [of the philosophers] from Arabic to Hebrew, and to compile them from the books that are scattered there, so that whoever wishes to grasp these [opinions] will find them in one book, and will not need to weary himself by reading all the books [on these subjects], for all the opinions [of the

⁷⁶⁷ Cf. *supra*, §2.2. *Latin*.

⁷⁶⁸ CHIESA 1986: 86.

⁷⁶⁹ HARVEY 2001: 368. Harvey *ibidem* also notices that the same failure to use the *MF* holds true for other Jewish encyclopedists of the same period, such as Judah ben Solomon ha-Cohen of Toledo and Geršom ben Solomon of Arles.

⁷⁷⁰ Cf. HARVEY 2001: 368 fn. 29.

⁷⁷¹ HARVEY 1987: 43 fn. 80.

⁷⁷² Cf. *supra*, §2.3.1. *Isaac Albalag*.

⁷⁷³ For general information on Falaquera's *De'ōt ha-pilōsōfīm* see JOSPE 1988: 48-61; ZONTA 1996: 204-212, and esp. ZONTA 1992.

⁷⁷⁴ HARVEY 2000: 213.

⁷⁷⁵ In the absence of any edition, Harvey's translation is made on the basis of two Hebrew manuscripts: cf. *ibidem* for details. Cf. also JOSPE 1988: 50-51.

philosophers], general and particular, on natural science and divine science are included in this composition.

Although Falaquera's work is clearly different from the *MF* in both scope and structure – as it contains, as mentioned, only physics and metaphysics, as opposed to the tripartite structure of logic, metaphysics, and physics displayed by al-Ġazālī's writing⁷⁷⁶ –, the programmatic goal of simply collecting the «opinions» [*de'ot*] of the philosophers as advanced in Text 38 looks remarkably similar to al-Ġazālī's own alleged aim in the *MF*. Falaquera, moreover, also states explicitly as a feature of his work what in the *Prologue* of the *MF* only remains implicit, but which has already been shown to be utterly crucial in the reception of al-Ġazālī's *MF*, *i.e.*, the synthesis and concision of the writing. The gathering of many sparse pieces of knowledge, difficult to achieve otherwise, in one single book is indeed an important element of success of the *MF* in Latin and Hebrew cultures, and Falaquera's emphasis on the effective summary he is offering to the reader with his own *De'ot ha-pīlōsōfīm* looks similarly important for the self-presentation of the work. This aspect, although without reference to the *MF*, has been duly underlined by Gad Freudenthal, with words that remind one even more of al-Ġazālī's programmatic stance in the *MF*, and which could thus help (at least from an interpretative point of view) bridging the gap between Falaquera's and al-Ġazālī's work⁷⁷⁷.

Levi ben Geršon, better known as Gersonides (d. 1344), a French Jewish savant famous for his supercommentaries, quotes only once the *MF* in his *Commentary on Song of Songs*⁷⁷⁸. This single quotation is interesting, however, inasmuch as it regards the typically Ġazālīan doctrine of the soul as a mirror, which should be polished and cleansed in order to achieve perfection. Harvey, in reporting the citation, only refers to the occurrence of the doctrine at the beginning of the *Logic* of the *MF*, in the section concerning the utility of logic (§3 in my Translation). While that is probably the clearest formulation of this characteristic simile in the *MF*, the likening of soul and mirror also appears elsewhere in the *MF*, notably in the Preface to *Metaphysics* (§93) and in *Physics* V.5 (§435). While it was suggested – due to its isolation – that the quotation of the *MF* in Gersonides could be indirect⁷⁷⁹, other scholars argued instead that it might directly derive from the anonymous translation of the *MF*⁷⁸⁰.

The Catalan rabbi Ḥasdai ben Abraham Crescas (d. 1410/1), one of the major exponents of anti-Aristotelian rationalistic Jewish thought, does not directly refer to the title of the *MF*, but all his references to al-Ġazālī can be traced back to the philosophical work⁷⁸¹. Crescas'

⁷⁷⁶ Cf. *supra*, §1.4.2. *The Order of the Sciences*.

⁷⁷⁷ FREUDENTHAL 2000: 368: «It would indeed seem that *De'ot* was forged with a view to reflecting the largely Aristotelian worldview of a milieu of Muslim and Jewish intellectuals in Spain (or southern France) of the middle of the thirteenth century. [...] In *De'ot ha-Filosofīm* (and in kindred works) Falaquera thus adopted the humble posture of the "seeker of truth," who searches for possible fragments of knowledge on behalf of his reader and who contents himself with taking stock of the "philosophers' opinions" (in a certain tradition), without passing a personal judgment on them. We have seen, however, that this posture does not always reflect reality».

⁷⁷⁸ *Commentary on Song of Songs* 1.9, KELLNER 1998: 32. Already TOUATI 1973: 40 had noticed the presence of this quotation. I owe the references to HARVEY 2001: 364 fn. 19.

⁷⁷⁹ This is the opinion of the anonymous referee of Harvey's article, as cited by HARVEY 2001: 364-365 fn. 21.

⁷⁸⁰ This is the view of Charles Manekin, as reported in HARVEY 2001: 365 fn. 21.

⁷⁸¹ CHERTOFF 1952: 81: «That he [*i.e.* Crescas] knew the *Maqāsid al-falāsifah* is certain because though no direct quotation of it can be found in the *'or adōnāy* [*scil. The Light of the Lord*, Crescas' major work] nor is it referred to it by title, all references to al-Ghazālī by Crescas can be traced to the *Maqāsid*. This repeats a claim by

interplay with al-Ġazālī as author of the *MF* has been summarized in scholarship in terms of the «welcome alternative»⁷⁸² the *MF* could represent with respect to the doctrines of Averroes in some phases of Jewish intellectual history⁷⁸³. Steven Harvey also noticed an important similarity between al-Ġazālī and Crescas that both authors prefaced their critique of philosophy with an exposition of it, although Crescas' critique of Aristotelianism in the *Light of the Lord* is then more radical than al-Ġazālī's one⁷⁸⁴. It is in any case important to remark that Crescas explicitly mentions al-Ġazālī as one of the most relevant authors in philosophy⁷⁸⁵. Moreover, although quoting both authors together, in parallel with what generally happens in the Latin tradition⁷⁸⁶, Crescas often prefers the formulations of the *MF* to those of Avicenna, thus showing that the *MF* «indeed was a dominant source for him»⁷⁸⁷.

In the 15th century, Shalom Anabi of Costantinople addressed the case of the philosophical doctrines taught in the *MF*, arguing for their similarity to the teachings of Moses Maimonides⁷⁸⁸. The Castilian-Aragonian Eli Habilidad, active in Spain in the second half of the 15th century, might be the author of a commentary on the *Metaphysics* and the *Physics* of the *MF*⁷⁸⁹.

Among Italian Jewry, the *MF* was read and studied long into the Renaissance. The Italian kabbalist and philosopher Yoḥanan ben Isaac Alemanno (d. after 1504) – famous in the history of philosophy as the teacher and collaborator of Giovanni Pico della Mirandola (d. 1494) and himself a pupil of Judah Messer Leon (Judah ben Jehiel, d. 1498)⁷⁹⁰ – cites with favour the Hebrew *MF* [*Kavvanōt*] for the emphasis al-Ġazālī rightly put on the matter of the syllogism, *i.e.* on the importance of the epistemic value of the premises for the obtainment of epistemically valid conclusions⁷⁹¹. As reported by Charles Manekin, Alemanno recommends «the study of the *Kavvanot* with the commentaries of Narboni and Albalag “for those who have set their hearts on the investigation of religion”»⁷⁹². Another Italian Jew active a few decades later, David Ibn Yahyà (d. *post* 1541), was a member of an influential

WOLFSON 1929: 18. CHERTOFF 1952: 82 also argues, with Steinschneider and Wolfson, that Crescas did not know the *TF*. Though *e silentio*, the argument is not unconvincing, and it has indeed been demonstrated by HARVEY-HARVEY 2002.

⁷⁸² GRIFFEL 2020: §2, who reprises HARVEY 2015^b: 302.

⁷⁸³ See HARVEY-HARVEY 2002; HARVEY 2015^b: 300-302.

⁷⁸⁴ HARVEY 2015^b: 300-301. Despite the caution also displayed by Harvey, it seems to me that this similarity owes perhaps too much to the traditional picture of the *MF* as an actual preface to the *TF*, while the actual historical framework seems far less neat than this: cf. *supra*, §1.2. *Chronological and Doctrinal Collocation*.

⁷⁸⁵ WOLFSON 1929: 130-131.

⁷⁸⁶ Cf. *supra*, §2.2. *Latin*. See esp. the remarks on Albert the Great's reception of Algazel.

⁷⁸⁷ HARVEY 2015^b: 302. Harvey adds that the reason for this is likely that «Crescas preferred al-Ghazālī's simple and clear formulations» to Avicenna's ones. This is a further testimony of the effectiveness of al-Ġazālī's elaboration of Avicenna's material, for which I have also argued *supra*, §1.4.1. *Divisio textus*.

⁷⁸⁸ Cf. ELIOR 2018.

⁷⁸⁹ Cf. ZONTA 2006: 170; I owe the reference to HALPER 2019: 129 n. 71.

⁷⁹⁰ For the relationship between Pico della Mirandola and Alemanno in the context of Italian Renaissance cf. LELLI 1994 and LELLI 1997; a general entry on Alemanno's life and works is available in LELLI 1999.

⁷⁹¹ Cf. Manekin's English translation of a passage of Alemanno's *Heṣeq Šelomo* (MS Berlin, Staatsbibliothek, Or. 832, foll. 235-236) in MANEKIN 2000: 298: «It is not sufficient to know whether a syllogism is *Barbara* or *Celarent* or *Baroco*. Rather wisdom consists in knowing the different types of premises which comprise the syllogism, whether they are axioms or conventional or false, as Alghazali states in the *Kavvanot*». Cf. also CHERTOFF 1952: 109.

⁷⁹² MANEKIN 2000: 298 fn. 59. In Alemanno's study program, the reading of the Hebrew *MF* if followed by that of al-Ġazālī's *TF* and of Averroes' *Tahāfut al-Tahāfut*: cf. IDEL 1979 (quoted in MANEKIN 2000: *ibidem*).

family of Portuguese Jews compelled by persecution to escape their homeland and seek refuge in Italy. There, in his function of rabbi of Naples, David Ibn Yahyà inserted the *MF* – in one of the two Hebrew translations titled *Kavvānōt ha-pīlōsōfīm*⁷⁹³ – within the *curriculum* of texts he trained his students in, as a specimen of Arabic Aristotelian *falsafa* useful for children approaching for the first time the subject-matter of philosophy⁷⁹⁴. Interestingly, David Ibn Yahyà copied the text of the Hebrew *Kavvānōt* in his own hand, as witnessed by David Kaufmann, a renowned scholar of Italian Jewry who, at the end of the 19th century, was in possession of that manuscript⁷⁹⁵.

The Greek rabbi Moses Almosnino of Thessalonika (d. c. 1580) composed a commentary on the anonymous translation of the *MF* to which he gave the Biblical-sounding title *Migdal 'Oz* [*The Strong Tower*], reminiscent of a verse of the book of *Proverbs*⁷⁹⁶. Finally, a great many other traces of transmission, quotation, partial commentary and translation, or in general of usage and reception of the *MF* in Hebrew have been gathered for the first time and listed by Moritz Steinschneider. The same references were then reprised by Gershom Chertoff in the introduction to his edition of the *Logic* of the *MF* in the anonymous Hebrew translation. In the momentary impossibility of a further direct inspections of the manuscripts transmitting these *disiecta membra* of Jewish reception of the *MF*, I limit myself here to point the reader to Steinschneider's and Chertoff's treatment of the phenomenon⁷⁹⁷. Future inquiries into the history of the reception of the *MF* could explore more in depth also this fragmentary, but conspicuous portion of al-Ġazālī's aftermath in Hebrew.

⁷⁹³ I was not able to ascertain whether Judah Nathan's or the anonymous translation was used.

⁷⁹⁴ MARX 1924: 613, and cf. CHERTOFF 1952: 84.

⁷⁹⁵ KAUFMANN 1890: 39 fn. 1, with a transcription of the Hebrew note added by David Ibn Yahyà's grandchild Jedaliah Ibn Yahyà to his grandfather's handwritten copy of the *Kavvānōt*.

⁷⁹⁶ *Proverbs* 18.10: «The name of the Lord is a fortified tower; the righteous run to it and are safe».

⁷⁹⁷ Cf. CHERTOFF 1952: 89-91, which quotes materials from STEINSCHNEIDER 1893^a: §§178-183.

2.4. Other Languages

While Arabic, Latin, and Hebrew certainly represent the three main linguistical domains in which the reception of the *MF* took place, the *Wirkungsgeschichte* of al-Ġazālī's work is definitely not limited to these three languages of culture. Rather, it also expressed itself in Syriac, especially in the works of Gregory Barhebraeus (§2.4.1), as well as in various vernacular tongues, from the Catalan of Ramon Llull, who translated (part of) the *Logic* of the *MF* in rhyming verses, to the Italian of Dante Alighieri, who quoted twice, albeit likely mediatedly, the text of the Latin Algazel in his vernacular *Convivio*. Finally, a partial translation of the *MF* can be recognised in a Slavic (Ruthenian) writing on philosophy, the oft-called *Logic of the Judaizers*, written in Lithuanian environment during the 15th century (§2.4.2). An interesting feature of all the episodes of reception studied in §2.4.2 is that they entail a mediation of either Latin (certainly for Dante and Alfonso de la Torre, maybe also for Ramon Llull) or Hebrew (the Slavonic *Logika*). As opposed to this linguistic mediation, the Syriac polymath Barhebraeus had direct access to the Arabic text of the *MF*, much like the Latin and Hebrew original translators of the work. All these diverse witnesses of the huge fortune of al-Ġazālī's writing are as many proofs of the incredible vitality of the theologian's compendium of philosophy, and of the latter's utility as a tool to access Peripatetic philosophy in an extremely variegated range of places, cultures, and tongues. The astonishing richness and variety of this multi-lingual aftermath corroborate the historical importance of the work, as well as its doctrinal relevance as a handy primer to the subtleties of Avicennan *falsafa*. The extraordinary success of al-Ġazālī's incursion into the domain of Avicenna's philosophy results thereby strongly confirmed.

2.4.1. Syriac

Syriac-speaking culture is more often credited to be one of the sources of Arabic thought, than the receiving end of Arabic philosophy, theology, and sciences. However, if the Syriac-into-Arabic channel of transmission of Greek culture is certainly fundamental in the crucial 7th and 8th centuries CE, the somewhat atypical reversal of the direction of cultural transmission, from Arabic into Syriac, also has its own specific importance during the so-called Syriac Renaissance, in the 13th century. The leading intellectual figure of this period, Ġrġūriyūs Abū l-Faraġ Bar 'Ebrōyō (Gregory Barhebraeus, d. 1286), a Maphrian of the Syriac Church and a prolific writer of many diversified interests, also emerges as one of the most prominent readers of Arabic culture in his age. Barhebraeus' keen attention to Arabic thought emerges through various facets of his production, already well known in scholarship: on the one hand, he personally and directly engaged with Arabic by composing works in this language⁷⁹⁸, while, on the other hand, he took as models of his own Syriac treatises several

⁷⁹⁸ TAKAHASHI 2002^a: 148. Among other reasons for this claim, Takahashi (*ivi* fn. 8) recalls that knowledge of

Arabic writings, which he extensively quoted and paraphrased, often introducing within them further (usually Christian) sources⁷⁹⁹.

More particularly, Barhebraeus' method has been characterized as involving the choice of a single Arabic 'model' (German *Muster*, in Hidemi Takahashi's authoritative formulation) for each one of his Arabic-inspired treatises⁸⁰⁰. This main model is taken as a basis for the broad structure and the organization of Barhebraeus' derivative text, which follows it also in many matters of detail, although insertion and reworking of other sources are always employed in the actual drafting of the Syriac writing. The result is an elaborate patchwork of sources, among which, however, the priority of a time by time different Arabic *auctoritas* usually emerges with great clarity. Examples of this interesting scholarly method, which is in itself a witness of Barhebraeus' ambitious cultural project of a revival of Syriac thought through the (by the time dominant) Arabic scientific standard⁸⁰¹, include the usage of theological, juridical, and philosophical sources of particular interest for us. In application of this method, Barhebraeus took time by time as models Avicenna's *Kitāb al-Šifā'*, together with Naṣīr al-Dīn al-Ṭūsī's *Ahlāq-i nāsirī* for practical philosophy, for his lengthy *Cream of Wisdom* [Latin *Butyrum sapientiae*, Syriac *Hēwat hekmtā*]; al-Ġazālī's *Ihyā' 'ulūm al-dīn* for his *Ethicon*⁸⁰²; and again al-Ġazālī's *Kitāb al-waġīz fī fiqh al-imām al-Šāfi'ī* [Book of the Summary of Imām al-Šāfi'ī's Jurisprudence] for his *Book of Directions* [*K. d-huddāyē*], also known as *Nomocanon*⁸⁰³.

Most interestingly for us, Takahashi has shown that, in the series of Barhebraeus' Syriac works with an Arabic antigraph as model, one must also count the usage of the *MF* as a prototype for Barhebraeus' *Treatise of Treatises* [Latin *Tractatus tractatum*, Syriac *Tēgrat tēgratā*]⁸⁰⁴. The earliest of the three compendia of philosophy penned by Barhebraeus, the *Treatise of Treatises* is subdivided in three treatises (respectively on logic, physics, and metaphysics, in this order), comprising altogether twelve chapters. Interestingly, while Barhebraeus' work does not respect the alteration in the order of the philosophical sciences displayed by *MF* and *DN*, its *Metaphysics* is still concluded by a prophetological and

Arabic was explicitly set as a prerequisite for the choice of the Maphrians. Cf. also TAKAHASHI 2015: 304: «He actually composed a number of scholarly works in Arabic, including several medical works, as well as the *Compendium of the History of the Dynasties* (*Mukhtaṣar ta'riḫ ad-duwal*), a work he is said to have begun writing at the request of Muslims and had almost completed at the time of his death».

⁷⁹⁹ TAKAHASHI 2002^a: 148-150. Cf. also TAKAHASHI 2002^b, for the case of the *Candelabrum of the Sanctuary* [*Mnārat qudsē*], whose Islamic and Arabic sources are explored under the visual angle of the fields of mineralogy and meteorology.

⁸⁰⁰ TAKAHASHI 2002^a: 150: «Besonders typisch für Barhebraeus ist die Weise, in der er für sein Werke in bestimmtes arabisches bzw. persisches Werk als Muster nimmt, es als Rahmen benutzt, und in diesen Rahmen auch Materien einfügt, die er aus syrischen Quellen schöpft».

⁸⁰¹ Cf. TAKAHASHI 2002^b: 260-262.

⁸⁰² Cf. also the section devoted to this dependence in TAKAHASHI 2015: 309-314. There, Takahashi also touches on the relationship between Barhebraeus' *Book of the Dove* and al-Ġazālī's *Munqid*.

⁸⁰³ TAKAHASHI 2002^a: 150 and fnn. 13-16 for further bibliography (see also TAKAHASHI 2002^b: 260). In both articles, Takahashi erroneously quotes the title of al-Ġazālī's *Kitāb al-waġīz* as «*K. al-waġīr*». The mistake is corrected in TAKAHASHI 2015: 306-309. As noticed in TAKAHASHI 2015: 304, it is an interesting aspect of Barhebraeus' method that he «does not... mention al-Ghazālī's name in those works of his where he relied on him as his main source and inspiration». He is however mentioned by name, as «GZZ'LY, the great teacher of the Muslims (*tayyāyē*)» in Barhebraeus' *Chronicon* (I owe the quotation to TAKAHASHI 2015: 305).

⁸⁰⁴ For the title see TAKAHASHI 2002^a: 152-153. For a further discussion of the usage of the *MF* as a source of Barhebraeus' *Treatise of Treatises* cf. TAKAHASHI 2015: 314-319.

oneirological section («3.4. Discourse on prophecies, signs, visions and dreams» in Takahashi's translation⁸⁰⁵) roughly corresponding to the Fifth treatise of the *Physics* in al-Ġazālī's *MF*. I have argued in a previous section of this Introduction for the strong conclusive value of this doctrinal material, which derives from a distinct Islamic elaboration of topics ultimately taken from Aristotle's *Parva naturalia*⁸⁰⁶. Despite this alteration in ordering, the structure of the *Treatise of Treatises* is easily comparable to that of the *MF*, as Takahashi convincingly shows from both a general and a more specific point of view, working in particular on the section on meteorology of the two works⁸⁰⁷. An accurate comparison between Barhebraeus' *Treatise*, al-Ġazālī's *MF*, and three different treatises of Avicenna's – *ʿUyūn al-ḥikma* [*The Springs of Wisdom*], *K. al-Šifā'* and *K. al-Naġāt* – allows Takahashi to achieve the important result that the order itself of presentation of the meteorological phenomena in the *Treatise* is closest to the one displayed in the *MF*⁸⁰⁸. Curiously, some specific pieces of information present in Barhebraeus, but missing in the *MF*, are to be found in the *DN*. Although Barhebraeus seems to have been acquainted with Persian sources, Takahashi judiciously maintains that the most likely source of transmission to the Syriac treatise of these extravagant data is not Avicenna's Persian *summa*, but rather Faḥr al-Dīn al-Rāzī's *Eastern Investigations* [*al-Mabāḥiṭ al-mašriqiyya*]⁸⁰⁹. The key role of the *MF* as a channel of transmission of Avicennan ideas into Barhebraeus' Syriac *Treatise of Treatises* results thus once more confirmed, also in opposition to the possible reception of Avicenna's own original encyclopaedia.

2.4.2. Vernaculars and Early Modern Languages

Interestingly, the *MF* enjoyed a relatively wide fortune even in the vernaculars. While this fortune would certainly need more in-depth analysis in order to assess its actual purport, the data at our disposal are already highly significant, especially in relation to the apparently far more modest reception of other comparable works of philosophy⁸¹⁰. Although the

⁸⁰⁵ TAKAHASHI 2015: 317, within a comparative table of chapter headings in the *MF* and the *Treatise*. The table reproduces the preceding one available in German in TAKAHASHI 2002^a (compare «III.4. Über die Prophetie, die Zeichen, die Visionen und die Träume»).

⁸⁰⁶ Cf. *supra*, §1.5. *Contents*. Cf. TAKAHASHI 2002^a: 156: «Man bemerkt, daß Barhebraeus [...] die Reihenfolge geändert hat, indem er die Naturphilosophie vor die Metaphysik stellt und den letzten Teil von Ġazālī's Naturphilosophie seiner Metaphysik zuordnet, aber solche Änderungen befinden sich auch in anderen Werken des Barhebraeus [...]». See also TAKAHASHI 2015: 319.

⁸⁰⁷ TAKAHASHI 2002^a: 157-167.

⁸⁰⁸ TAKAHASHI 2002^a: 158.

⁸⁰⁹ TAKAHASHI 2002^a: 160. The topic of the possible derivation of some material from Avicenna's Persian text is touched upon again in TAKAHASHI 2015: 315. As far as the chapter headings of the 'divisions of being' (the eight divisions of the First treatise of *Metaphysics* in the *MF*) are concerned, Takahashi states there that the «wording of the *Treatise of Treatises* more closely resembles that of the *Maqāṣid al-falāsifa* than the *Dānīshnāma*, which Barhebraeus could also potentially have used given what we know about his ability to read Persian». Cf. also the comparative table on these subtitles given in TAKAHASHI 2015: 318-319.

⁸¹⁰ The very first known vulgarization of an Aristotelian work is for instance the translation in Old French of the *Meteorologica* realized by Mahieu le Vilain around the end of the 13th century, very close in time to (and possibly even later than) the vernacular version of al-Ġazālī's *Logic* due to Ramon Llull (probably composed at the beginning of the 1270s; see below). On Mahieu le Vilain's groundbreaking translation of Aristotle's text, which is

contexts of reception I will analyse in what follows are in themselves very differentiated, and thus posit individual problems of interpretation, a general way of explaining the success of the *MF* also outside the boundaries of the languages of culture of medieval Europe might be that of referring, once again, to the didactic value of the work. The relative modest size of the work, and the introductory character of some of its doctrines – especially in logic – might once more have been important reasons for prompting authors to translate parts of the *MF* into the vernacular. This happened in particular with Ramon Llull's *Logica del Gatzell* (treated in §2.4.2.1) and with the translator(s) into Ruthenian of the *Logika* – which actually also includes al-Ġazālī's *Metaphysics* – previously known in scholarship as the *Logic* 'of the Judaizers' (§2.4.2.3). Llull's insistence on the utility of his abridged vernacular translation for non-specialists of either Arabic or Latin is by the way in surprising resonance with Dante Alighieri's ambitious project for his *Convivio*, explicitly directed to making philosophy accessible to laypeople, as well⁸¹¹. Despite the fact that Dante did not engage in any form of direct translation or abridgment of al-Ġazālī's text, the Latin 'Algazel' is explicitly mentioned twice in the *Convivio*, and for doctrines which have no logical, but rather psychological and metaphysical, bearings (§2.4.2.2). All this evidence contributes to corroborate the image of the *MF* as a text of philosophy literally directed to everyone, and thus also made accessible – *via* translations or quotations – to readers of the vernaculars, whether in Spain, Italy, or the Grand Duchy of Lithuania, up to the end of the 15th century.

2.4.2.1. Ramon Llull (Catalan) and Alfonso de la Torre (Castilian)

A first context of influence is the one of medieval Spain, the same in which the Latin translation of the *MF* was produced at the end of the 12th century⁸¹². Around one century after the completion of Gundissalinus' and Iohannes Hispanus' version, an abridgment of its *Logica* was drafted by Ramon Llull (d. c. 1315-1316) under the Latin title of *Compendium logicae Algazelis*⁸¹³. According to its prologue, the *Compendium* would have been originally drafted by Llull in Arabic, and later translated into Latin in Montpellier⁸¹⁴. This same treatment of Ġazālīan logic is also transmitted to us in another version, written in Catalan rhyming verse and known as *Lògica del Gatzell*. Charles Lohr described this text as a partial translation and abridgment of the *Compendium* made by Llull himself, with additions from Peter of Spain's

also a witness of the vast popularity of Aristotle's *Meteorology* in the late Middle Ages, cf. DUCOS 2001; DUCOS 2008; FIORAVANTI 2008: 64-65 and fn. 5.

⁸¹¹ Cf. on this point the still unsurpassed analyses by IMBACH 1996; cf. also his IMBACH 1989, and, more recently, IMBACH-KÖNIG-PRALONG 2013.

⁸¹² Cf. *supra*, §2.2. *Latin*.

⁸¹³ An edition and introduction to it is available in LOHR 1967.

⁸¹⁴ Cf. LOHR 1967: 1: «Deus, ad laudem tuae clementiae, a qua singulae gratias emanantur, et consolationem scholarium affectantium suscipere pabulam scientiae logicalis, praesens libellus, continens partem logicae Algazelis, ac etiam de theologia et philosophia paululum comprehendens, in Monte Pessulano, illo annuente qui regnat ubique, translatus est de Arabico in Latinum. Cuius titulus talis est: Compendium logicae Algazelis». BURNETT 2005: 820 lists Llull's *Compendium* as a Latin translation from an «Arabic logical compendium, dependent on the logic of *The Aims*».

*Summulae logicales*⁸¹⁵. A very recent reappraisal of the available evidence, conducive to a new critical edition of the *Lògica del Gatzell* which is currently under preparation, has however called into question Lohr's reconstruction, by showing that in many cases the Catalan text is closer to al-Ġazālī's original than to Llull's Latin *Compendium*⁸¹⁶. It is possible, then, that the Catalan *Logic* antecedes the Latin *Compendium*, rather than following it as it is normally assumed.

The text of the *Lògica del Gatzell* is particularly instructive as for the success of al-Ġazālī in the vernaculars, because Llull is explicit in stating that the aim of his vernacular version is to make al-Ġazālī's logic accessible to people who are not able to read Arabic nor Latin:

TEXT 39. Ramon Llull, *Lògica del Gatzell*, vv. 5-10⁸¹⁷

[...] que translat de latí en romans⁸¹⁸
 en rimes e'n mots qui son plans,
 per tal qua hom puscha mostrar
 logica e filosofhar
 a cels qui non saben latí
 ni arabich [...]

A second, later example of the fortune of the *MF* in late medieval Spain is possibly represented by Alfonso de la Torre's Castilian *Visión deleytable*. The work is an encyclopaedic compendium on philosophy, the sciences, and the seven liberal arts, written in allegorical fashion – with personified characters such as Razón (Reason) and Entendimiento (Understanding) – around 1440⁸¹⁹. While the greatest part of the thematic chapters of the *Visión deleytable* appear to depend on Maimonides' *Guide of the Perplexed*⁸²⁰, its section on logic has been authoritatively claimed to depend on the Latin translation of the *Logic* of the *MF*⁸²¹.

⁸¹⁵ LOHR 1967: 28-39, following and developing an earlier assessment by RUBIÓ I BALAGUER 1913-1914: 316, distinguished five phases of composition, from an originary, lost Arabic compendium, through three stages of Latin elaboration, and up to the Catalan rhyming version. The text of the latter, composed of 1612 verses of nine syllables, coupled in distichs, was first edited by RUBIÓ I BALAGUER 1913-1914, and then again by GALMÉS 1936 in the first of the two volumes on *Rims* (vol. XIX) of the complete edition of Llull's works. The Latin and the Catalan versions are transmitted together by MS München, Clm 10538: cf. LOHR 1967: 3.

⁸¹⁶ STACCIOLI 2021. The fractioning of the Latin prose text at pp. 13-14, functional to the comparison with the Catalan verse, looks a particularly compelling proof of the direction of transmission from Catalan into Latin for which Staccioli argues, since it seems arduous to suppose the contrary passage from prose to a poetic rendition already corresponding to it.

⁸¹⁷ As quoted in STACCIOLI 2021: 15.

⁸¹⁸ MS Roma, Biblioteca dell'Accademia Nazionale dei Lincei e Corsiniana, 44.A.3, presents here the important variant «que translat d'arabich en romans», against the reading of the other two available manuscripts. Also before, at v. 3, the manuscript preserved in Rome reads «la qual es dita del Gatzell» for «la qual es compendi novell» of the other manuscripts. For the most recent analysis of the variants and their implications, see STACCIOLI 2021: 15-17, which concludes: «Ipotizzando una doppia redazione volgare e latina a partire da un comune antecedente in arabo, l'affermazione contenuta nel prologo del *Compendium* e la variante del manoscritto corsiniano troverebbero entrambe la loro giustificazione: una traduzione "de arabico in latinum" e una "d'arabich en romans"».

⁸¹⁹ Critical edition in GARCÍA LÓPEZ 1991.

⁸²⁰ WICKERSHAM CRAWFORD 1913^b.

⁸²¹ Cf. WICKERSHAM CRAWFORD 1913^a: 66 and WICKERSHAM CRAWFORD 1913^b: 189.

Despite these dominant Muslim and Jewish sources, the work enjoyed a documentably vast fortune in Christian Spain, thus contributing implicitly to the widespread diffusion of al-Ġazālī's basic, but clear and neat, treatment of Aristotelian logic⁸²².

2.4.2.2. Dante Alighieri (Italian)

The reception of al-Ġazālī in Italian vernacular is witnessed by the work of Dante Alighieri, who quotes him twice, by the Latinized name of 'Algazel', in his incomplete philosophic treatise in four books, the *Convivio*⁸²³. Both passages in which Algazel is quoted have to do with psychology, though broadly taken. In the first case, the doctrine at stake is the thesis of the heavenly production of substantial forms in sublunary matter.

TEXT 40. Dante Alighieri, *Convivio* II XIII 5

E la terza similitudine si è lo inducere perfezione nelle disposte cose. Della quale induzione, quanto alla prima perfezione, cioè della generazione sustanziale, tutti li filosofi concordano che li cieli siano cagione, avegna che diversamente questo pongano: [(a)] quali dalli motori, sì come Plato, Avicenna e Algazel; [(b)] quali da esse stelle, spezialmente l'anime umane, sì come Socrate, e anche Plato e Dionisio Academico; e [(c)] quali da vertude celestiale che è nel calore naturale del seme, sì come Aristotile e li altri Peripatetici.

The doxography reported by Dante distinguishes between thinkers who attribute this celestial influence in substantial generation (a) to the movers of the heavens (*i.e.* the intellects), (b) to the planets or orbs themselves, and (c) to a «celestial virtue» located in the seed. Al-Ġazālī is correctly listed in the first group (a), since he unambiguously states in the *MF* that forms come from the separate intellects⁸²⁴. Interestingly enough, this group is however sharply distinguished from (c), formed by the Aristotelian philosophers – an understanding of Peripatetic thought not precisely in line with our modern account of it (in which Avicenna and al-Ġazālī would certainly belong to a Peripatetic trend, although Neoplatonized), nor with coeval assessments by contemporaries of Dante⁸²⁵. Gianfranco Fioravanti, the most recent and reliable commentator of Dante's *Convivio*, quotes for the reference to Avicenna and Algazel a parallel passage of Albert the Great's *De anima*: «dicunt isti [*scil.*

⁸²² For a general study on the influence of the *Visión deleytable* in Spain during the 15th century, as well as on its sources (especially Jewish), and on its philosophical rationalistic (though perhaps slightly anachronistic) model, cf. the monograph by GIRÓN-NEGRÓN 2001.

⁸²³ Critical edition in AGENO 1995; commentary by FIORAVANTI 2014.

⁸²⁴ Cf. *e.g.* *Metaphysics* V, §300 in my Translation: «On account of the fact that these celestial bodies are concordant in a universal nature, which is the one that requires the circular movement in all [of them], the matter benefits of the absolute disposition to the reception of every form. Inasmuch as every one of them has a proper nature which necessitates in some of them a proper disposition to some of the forms, then *the form is, for every matter, from the separate [intellect]*» (emphasis added).

⁸²⁵ Albert the Great, for instance, is clear that Algazel belongs to the *Peripatetici*; cf. SIGNORI 2019: 513-521, esp. 514-515.

Avicenna et Algazel] splendorem intelligentiarum dare formas»⁸²⁶. While the passage certainly associates the two authors in a very characteristic Albertinian way⁸²⁷, and could thus well be the source for Dante's quotation, it seems however peculiar that the Albertinian source for the attribution of the same doctrine to Plato should be retrieved in another work, the *De somno et vigilia*⁸²⁸. Fioravanti rightly speaks in this case of a model of work «à bricolage» on the part of Dante. Given the independent necessity of assuming a patchwork of different sources to explain the passage, Dante's direct reading of the text itself of the Latin Algazel could perhaps also be surmised in this case, since the doctrine which is at stake is certainly expressed more diffusely, if not more clearly, in that text than in Albert's reprise of it in the *De anima*.

The second explicit nominal quotation of 'Algazel' in Dante occurs in the fourth treatise of the *Convivio*. The topic is the relative difference of the individual human souls, which are stronger or weaker – and thus also nobler or less noble – depending on various reasons. Avicenna and al-Ġazālī are quoted together as supporters of the idea that the souls of different human beings are noble and vile «by themselves and for their own principle» [*da loro e per loro principio*], while Plato and other thinkers linked the relative nobility of the souls to the nobility of the star which influences them.

TEXT 41. Dante Alighieri, *Convivio* IV XXI 2

In prima è da sapere che l'uomo è composto d'anima e di corpo; ma dell'anima è quella [*scil.* la nobiltà]; sì come detto è che è a guisa di semente della virtù divina. Veramente per diversi filosofi della differenza delle nostre anime fue diversamente ragione: ché Avicenna e Algazel volsero che esse da loro e per loro principio fossero nobili e vili; e Plato ed altri volsero che esse procedessero dalle stelle, e fossero nobili e più e meno secondo la nobilitade della stella.

Fioravanti gives as a source for this Dantean text a very close passage from Albert the Great's *De somno et vigilia*: «Avicenna et Algazel [...] dicunt [...] gradus esse in anima intellectuali, quia quidam sortiuntur animas altiores et quidam inferiores»⁸²⁹. In this case, the mediatedness of the quotation seems guaranteed by the circumstance that Avicenna and al-Ġazālī are quoted together in Albert's text. The remote source in the *MF* can be recognized in a passage from *Physics* V.9, corresponding to §§447-449 in my Translation, which deals with the typical Avicennan theme of the individual differences between the speculative faculties of distinct human souls⁸³⁰.

⁸²⁶ Cf. Albert the Great, *De anima* 3.2.8, ed. STROICK 1968: 188.

⁸²⁷ Cf. *supra*,

⁸²⁸ See Albert, *De somno et vigilia* 3.1.8, ed. BORGNET 1890: 187^b: «Plato autem et Socrates praeceptor eius, sed et illius praeceptor in philosophia Dionysius Academiae praecipuus Stoicorum, dicunt concorditer omnes a comparibus stellis animas descendisse».

⁸²⁹ Albert, *De somno et vigilia* 3.1.6 ed. BORGNET 1890: 185^a. This quotation of Algazel in Albert appears in SIGNORI 2019: 590 at number [222] in the Table (the explicit nominal reference of the two authors actually appears at 184^b). The Ġazālīan source I have indicated there is relative to the first doctrinal item listed by Albert and attributed to Avicenna and Algazel, *i.e.* the perfect immateriality of the intellectual soul.

⁸³⁰ This passage corresponds to the treatment of the second kind of prophecy in that section on the text, the one linked to the speculative faculty, after a first typology of prophecy which has to do with the soul in general, and a third kind connected with the imaginative faculty. Cf. also *infra* the Commentary *ad loc.* for more details. For

Interestingly, a different text from the same Fifth treatise of the *Physics* of the *MF* was also evoked in previous scholarship⁸³¹ as a possible antecedent of an absolutely crucial passage of Dante's *Comedy*, the description of the satisfaction of the intellectual desire [*voglia*] of knowing God at the very end of the *Paradiso*: «ma non eran da ciò le proprie penne: / se non che la mia mente fu percossa / da un fulgore in che sua voglia venne» («but mine own wings were not enough for this; / had not my mind been smitten by a flash / of light, wherein what it was willing came»)⁸³². In these lines, Dante writes that he could not have understood at any rate the mystery of Incarnation and divine triunity presupposed by his vision of the Trinity (which he had just compared to the mathematical insoluble *par excellence*, the squaring of the circle), had it not been for a sudden *fulgore* – a flash of light, granted by divine grace – which revealed to his mind the desired answer. In the *MF*, the truthful visions in the wakefulness are similarly said to occur suddenly, «like the fleeting flash» [Arabic *ka-l-barq' l-ḥātīf'*, Latin *quasi fulgor cito pertransiens*]⁸³³. The terminological identity, together with the uncommon elegance of the Latin formulation and the perfect congruence of context – the description of a fugacious vision transcending the normal capacities of the human intellect –, make the possible memory of this passage on the part of Dante at least plausible. Indeed, the Latin translation of the passage mentions, just before the fleeting *fulgur*, the possibility for a soul to ascend to a higher world [Arabic *yaṭlu'ū ilā 'ālam' l-ḡayb'*, Latin *elevetur ad mundum superiorem*], a circumstance once again perfectly in keeping with Dante's journey up to the Empyrean Heaven. But if this is the case, a philosophical reminiscence of the *Algazel latinus* would appear nowhere else than at the culminating point of the *Divine Comedy*, and thus at one of the pinnacles of medieval literature as a whole. While the hypothesis as it stands certainly requires a supplement of investigation, its very possibility attests to the momentous impact of the transmission of Arabic Peripatetic ideas to Dante's poetry. Among the various channels through which these ideas of remote Aristotelian origin could be transmitted all the way down to Dante, the concise and effective formulations of the Latin Algazel – possibly through the mediation of further Latin thinkers, such as Albert the Great – look like a particularly promising path to explore.

By way of conclusion of this section, a brief note on who our al-Ġazālī, despite his many vernacular incarnations in Romance environment, most likely is not. Romance philologists, especially in the Italian and Provençal traditions, may be familiar with a rather mysterious 'Algazel' sometimes popping up in different texts of scientific medieval erudition, from an anonymous Provençal poem on geomancy edited by Gianfranco Contini⁸³⁴, up to the ponderous vernacular didactic poem *Acerba* – a harshly critical imitation of Dante's *Comedy* – written by the Italian Cecco d'Ascoli⁸³⁵. Twentieth-century scholars also identified with the

a recent treatment of the Avicennan background cf. BERTOLACCI 2020^b.

⁸³¹ FALZONE 2010: 46 fn. 1. Falzone's reference is very cursory and conveniently cautious, but is nonetheless very acute and persuasive to me.

⁸³² *Pd* XXXIII 139-141; English translation LANGDON, available online.

⁸³³ *Physics* V.7, §439. Cf. also the Commentary *ad loc.* for discussion.

⁸³⁴ See CONTINI 1940.

⁸³⁵ Ed. CENSORI-VITTORI 1971.

same ‘Algazel’ the ‘Zale’ who makes his appearance in the Italian savant Ristoro (or Restoro) d’Arezzo’s encyclopaedic treatise *The Composition of the World with Its Causes* [*La composizione del mondo colle sue cascioni*]⁸³⁶. Already in 1921, however, Italian Arabist Giuseppe Gabrieli pointed at the more correct identification of Ristoro’s ‘Zale’ with al-Zarqālī, rather than with our al-Ġazālī and his Latin-vernacular *alter ego* Algazel⁸³⁷. A renowned astrologer and astronomer active in 11th century Andalusia, Abū Ishāq Ibrāhīm ibn Yaḥyā al-Naqqāš al-Zarqālī (d. 1087) certainly looks like a more suitable candidate than the author of the *MF* not only for Ristoro’s Zale, but also for the various astrological teachings reported under the name of Algazel in Cecco d’Ascoli’s, and in the anonymous Provençal geomancer’s, respective poems. While further research into al-Zarqālī’s texts will be needed in order to definitively ascertain his identity with the thinker quoted by such authors⁸³⁸, the common identification of that vernacular Algazel with our al-Ġazālī⁸³⁹ – which, for readers of Latin script up to the Renaissance, is nothing more than the author of the *MF* – can be now dismissed with fair certainty.

2.4.2.3. The Slavic (Ruthenian) *Logika*

In 1909, Sergei Neverov published the edition of a Slavic text contained in a unique Kyiv manuscript, which was copied in part for the Russian Hebraist Pavel Kokovtsov in 1903, and was later destroyed during World War II⁸⁴⁰. Neverov’s edition, together with Kokovtsov’s copy, are thus by now our only access to the last section of an important Slavic text on logic and metaphysics of the second half of the 15th century, the so-called *Logika of the Judaizers*, also known as *Логика иудействующих* (*Logika iudeistvuyushtikh*, Logic of Jews) or *Логика Авиясафа* (*Logika Aviasafa*, Logic of Aviasaf, from the name the text itself gives to its author). The rather mysterious ‘Aviasaf’ appearing in one of the titles with which the work is known is, in fact, our al-Ġazālī⁸⁴¹, and the text itself is – at least for its main part – a Hebrew-Slavic translation of the sections on *Logic* and *Metaphysics* of the *MF*. The Slavic version was in turn prefaced by a Ruthenian translation, again from Hebrew, of the originally Arabic text known as *Logical Terminology* [*Millot higgayon*]⁸⁴². More particularly, thus, the texts which circulated (and are modernly edited) under the name of *Logika (of the Judaizers)* include: (1) *Kniga glagolemaja logika*, a Ruthenian translation of the pseudo-Maimonidean

⁸³⁶ Ed. MORINO 1976.

⁸³⁷ Cf. GABRIELI 1921: 32.

⁸³⁸ The channels themselves of his hypothetical transmission to vernacular authors remain to be investigated.

⁸³⁹ As contained *e.g.* in the list of names printed in the appendix of CONTINI 1940.

⁸⁴⁰ On the vicissitudes of the Kyiv manuscript and its copies, cf. PARAIN 1939: 319, TAUBE 2016: 78, and SHAPIRA 2018: 297.

⁸⁴¹ It seems however unlikely that Aviasaf is in itself a corruption of al-Ġazālī’s patronym Abū Ḥāmid. Cf. the reasons of caution already advanced by PARAIN 1939: 322 fn. 1, to the effect that Aviasaf might actually also be a corruption of al-Fārābī’s Jewish name, or else a reminiscence of the Old Testament’s ‘Abiasaph’. See also SHAPIRA 2018: 306.

⁸⁴² Cf. TAUBE 2016: 78, 131, 426. As aptly recalled in SHAPIRA 2018: 297 fnn. 4-5: «The Arabic original [*scil.* of the *Logical Terminology*] was translated into Hebrew three times: in Provence by Moses b. Samuel Ibn Tibbon, in Sicily by Aḥitub of Palermo, and in Spain by Joseph Ibn Vives. [...] The West Russian translator[s] worked from both Ibn Tibbon’s and Aḥitub’s versions, thus creating a combined text.».

Millot higgayon; (2) *Premoudrost' Božestvenaja*, corresponding to the Hebrew *ha-Ḥokmah ha-elohit*, i.e. the section on *Metaphysics* [*Ilāhiyyāt*] of the *MF*; and (3) *Reče Aviasaf* [*Thus Spoke Aviasaf*], corresponding presumably to the section on *Logic* of the Hebrew *MF* (this latter part corresponds to the text preserved by Neverov's and Kokovtsov's copies mentioned above)⁸⁴³.

After many erudite studies, due in particular to the efforts of Moshe Taube⁸⁴⁴, it has now been definitively ascertained that this partial Slavic version of al-Ġazālī's *MF* was achieved in the second half of the 15th century by the Jewish scholar Zacharia [Škaria] ben-Aharon ha-Cohen of Kyiv, who translated the anonymous Hebrew version of the *MF* – titled *Kavvānōt ha-pīlōsōfīm* – into Ruthenian/West Russian⁸⁴⁵. Part of the historical importance of this Hebrew-Slavic translation resides in its technical language, which innovatively renders into Slavic a difficult and variegated philosophical terminology of Arabic-Hebrew origin⁸⁴⁶. Zacharia's translation obscures the remote Arabic origin of the work, not only by changing the name of the author in 'Aviasaf', but also by producing a cultural acclimation of Arabic names, changed to Jewish ones⁸⁴⁷. It is not however entirely clear to me whether this substitution, which reminds one of the analogous methods employed by the medieval translators into Latin⁸⁴⁸, is actually original of the Ruthenian translation, or was rather already present in the Hebrew version that the Slavic translators, in their turn, employed in producing the Russian text.

As far as the method of the translation is concerned, Taube interestingly showed that the Slavic version was actually made *a quattro mani*: the Jew Zacharia, well-versed in the Judaeo-Arabic philosophical literature (although not in Arabic itself), translated orally from Hebrew to his own Slavic vernacular, heavily Polonized, while his anonymous partner, a Christian more expert of literary Ruthenian, wrote down and corrected, at least in part, the translated text⁸⁴⁹. *Mutatis mutandis*, this method is remarkably similar to the versions «à deux interprètes», studied by Marie-Thérèse d'Alverny as far as the Arabic-Latin translation movement in medieval Andalusia is concerned⁸⁵⁰. The language of the achieved Hebrew-Slavic translation presents itself as a form of Ruthenian, a Slavic language based on vernacular Middle Belarusian and Ukrainian, but in turn strongly influenced by Polish. Ruthenian was used at the time as the chancery language of the Grand Duchy of Lithuania, under

⁸⁴³ See SHAPIRA 2018: 298. Shapira makes the last part correspond in its entirety to the «*Sefer Kavvanot ha-filosofim le-Abu Ḥāmid Algazālī*», but this cannot be the case if the metaphysical section of the work is already present as the second, theological part (reported under the title of *Premoudrost' Božestvenaja*).

⁸⁴⁴ Cf. PARAIN 1939; TAUBE 1995; TAUBE 2005; ROMANCHUK 2005; TAUBE 2006; MILKOV 2016, and now also the ponderous editions, with *apparatus* and *indices*, by TAUBE 2016 and RYAN-TAUBE 2019. These will be best read together with the extremely well-informed review essays by SHAPIRA 2018 (on TAUBE 2016) and ROMANCHUK-GOFF 2020 (on both editions).

⁸⁴⁵ TAUBE 2016: 62-63.

⁸⁴⁶ According to TAUBES 2016: 54, approvingly quoted by ROMANCHUK-GOFF 2020: 221, the Ruthenian translation of the *Logika* «disregards any terminological tradition that may have existed in Slavic», and is thus highly innovative.

⁸⁴⁷ SHAPIRA 2018: 306: «The translator[s] also chose to camouflage the Muslim origin of the work by al-Ghazālī, erasing all traces of Arabic—including the author's name, Abu Ḥāmid, renamed "Aviasaf," and converting the inseparable pair of the Arabic grammatical tradition, 'Umar and Zayd, into Isaac and Jacob». Cf. TAUBE 2016: 58.

⁸⁴⁸ Cf. *supra*, §2.2.1. *Cultural Acclimations*.

⁸⁴⁹ A very clear summary of the method is in SHAPIRA 2018: 305-306.

⁸⁵⁰ See D'ALVERNY 1989, quoted also *supra*, §2.2. *Latin*.

whose rule Zacharia worked. In particular, the patronage of the noble family of the Olel'kovyči appears as the most likely origin of Zacharia's peculiar enterprise of translation⁸⁵¹, which produced a sizable *corpus* of Ruthenian writings, of mostly Arabic and Hebrew provenance. This material, as mentioned, is now available in two, very sound critical editions⁸⁵².

The name *Logika of the Judaizers* derives from the association of the text of al-Ġazālī's Ruthenian translation, and of the other writings translated by the Jew Zacharia, with a Christian heresy which developed in Novgorod, and later in Moscow, from about 1470 onwards. The 'Judaizers', thus called from a Russian pejorative term which was later abandoned⁸⁵³, was the name given in the historical sources to a group of religious dissidents, the diffusion of whose ideas was also linked to the eschatological wait for the end of the world, which had been calculated by some members of the Russian Orthodox Church for the year 1492⁸⁵⁴. While the transmission of the so-called Literature of the Judaizers, including our *Logika*, was explicitly connected by the archbishop of Novgorod Gennadi, one of the starkest adversaries of the heresy, with Zacharia's travel to Novgorod in the company of the Lithuanian prince Mikhailo Aleksandrovič Olel'kovič, the cultural programme of Zacharia does not appear in itself originally linked with the development of the heresy⁸⁵⁵.

⁸⁵¹ Cf. ROMANCHUK-GOFF 2020: 215-216, who paraphrase Taube's (and Romanchuk's own: see ROMANCHUK 2005) findings: «The question of who commissioned Zacharia's sizable undertaking remains open. [...] The Ruthenophone Olel'kovychi, ambitious politicians and liberal patrons, would seem the more likely candidates». See also SHAPIRA 2018: 305, who is very convinced by the hypothesis of a West Ruthenian aristocratic commission for the *corpus*.

⁸⁵² As partly mentioned above, the *corpus* of writings translated by Zacharia into Ruthenian includes, among others: (i) a brief *Treatise on the Art of Logic* or *Logical Terminology* [*Millot higgayon*], pseudo-epigraphically attributed to Maimonides, which constitutes the preface of the actual *Logika*; (ii) the *Logika*, itself, i.e. al-Ġazālī's own text, which is in turn subdivided into a theological (i.e. metaphysical) and a logical part, corresponding respectively to *Metaphysics* and *Logic* in the Arabic *MF*; (iii) a compilation titled *Secret of Secrets* [*Tainaia tainykh*], based on the Arabic treatise on the art of politics *Sirr al-asrār* [*Secretum secretorum*], fictitiously shaped as a letter of Aristotle to Alexander the Great. The Ruthenian *Secret of Secrets* includes translations of Abū Bakr al-Rāzī's medical letter *To Abū Šāliḥ al-Manšūr* (known in Latin as *Ad Almansorem*) and of Moses Maimonides' short writings *On Poisons and their Antidotes*, *On Coitus*, and *On Asthma* (cf. ROMANCHUK-GOFF 2020: 214 and, for a more comprehensive list, also SHAPIRA 2018: 296). (i) and (ii) are edited in TAUBE 2016; (iii) is available in RYAN-TAUBE 2019.

⁸⁵³ For the caution necessary when using such a «misnomer», which is however adopted by Taube as the title of his critical edition, cf. SHAPIRA 2018: 295: «In 1909, one version of this collection was dubbed *The Logic of the Judaizers*, although, as Taube notes, this is a misnomer if “taken to mean ‘used by’ or ‘representing the views of the Judaizers’”» (the reference is to TAUBE 2016: 70). And see again SHAPIRA 2018: 295 fn. 1: «“The heresy of the Judaizers” is a misnomer over which much ink has been spilled. Soviet-era scholars preferred the “Novgorodian heresy” and similar names. In a 2016 historical serial aired on Russian television, the “Judaizers” were converted into “Novgorodianizers” to avoid the J-Word».

⁸⁵⁴ Cf. MARTIN 2007: 290-291.

⁸⁵⁵ Cf. the useful and balanced synthesis on the heresy, and its relation with the *corpus* of writings translated by Zacharia, presented by SHAPIRA 2018: 295-296, also on the basis of Taube's findings: «The *Logika*, or *Logika of the Judaizers*, as the set of translations became known, was among the works explicitly mentioned in a 1489 letter by the archbishop of Novgorod, Gennadi, as in the possession of the “Judaizing heretics” he had recently discovered in the city. Taube makes a very important contribution by distinguishing between the pious allegations brought against the “heretics” and the facts that can be firmly established. The “heretics” of Novgorod and later of Moscow were not Judaizing Christians or possible converts to Judaism, but rather cosmopolitan freethinkers interested in the wisdom they believed they could learn from Jews; this intellectual trend flourished, with ups and downs, from around 1470 to 1504. [...] Although some of the Muscovite “Judaizers” showed interest in parts

The transmission of al-Ġazālī's *MF*, through the Hebrew tradition, to the (West)-Russian environment of the 15th century, and its very connection with an episode of such historical and theological momentum as the so-called heresy of the Judaizers, are as many further reasons for acknowledging the extraordinary vitality of al-Ġazālī's text, which spread out in an extremely wide range of different places, languages, and cultural contexts. While scholarship tends, for obvious and legitimate reasons of linguistic competence, to isolate these contexts of reception from one another, and thus to treat them separately, important cultural enterprises such as Taube's trilingual (Ruthenian, Hebrew, and English) edition of the Slavic *Logika* are important steps towards a more organic and holistic picture of the surprisingly vast aftermath of al-Ġazālī's compendium of philosophy. In turn, such effort of building bridges between different linguistic and cultural contexts, which is now still at the beginning, could help in the future to provide better critical editions of the involved texts, also in their linguistic instantiations closer – in time, language and transmission – to the original Arabic⁸⁵⁶. In the case of the *MF*, in sum, a cross-cultural and cross-linguistical approach reveals itself not only highly advisable, but even in some sense indispensable to the better comprehension of the text in its fascinating historical metamorphoses. This represents an exciting as well as challenging programme for further research.

of this corpus, it cannot be connected with the "heresy" directly».

⁸⁵⁶ In order to edit the Ruthenian text, TAUBE 2016 provided a working critical edition of the portions of the anonymous Hebrew translation used by Zacharia, based on four manuscripts (cf. also ROMANCHUK-GOFF 2020: 220).

Introduction

3

THE PRESENT COMMENTED TRANSLATION

3.1. Features of the Translation

The version of the *MF* offered in this dissertation is the first complete English translation of the work, and the third modern integral version, after the groundbreaking Spanish translation published in 1963 by Manuel Alonso Alonso [*Maqāsid al-fulāsifa o Intenciones de los filosofos*]⁸⁵⁷, and the Turkish translation published in 2002 by Cemalettin Erdemci under the title *Felsefenin Temel İlkeleri* [*The Basic Principles of Philosophy*]⁸⁵⁸. Apart from several translations of the sole Prologue in various Western languages⁸⁵⁹, only a draft – though very valuable – English version of the *Logic* of the *MF* was produced, and kindly shared online with the scholarly community, by Tony Street⁸⁶⁰.

As opposed to Alonso's translation, the present version is based on the most recent edition of the Arabic text, the one provided by Sulaymān Dunyā in 1961. While clearly not critical, this edition presents however a germinal apparatus, in the form of interlinear notes which give notice of different readings the editor found in the manuscript – MS Cairo, Dār al-Kutub al-Azhariyya 86/27143 *Ḥikma wa-falsafa* – and the preceding edition (by Kurdī) he consulted. Given the crude and unrefined status of the inchoative apparatus printed by Dunyā, in the majority of cases it is unclear whether the variant reading given between dashes is indeed taken from the Cairo manuscript. Unfortunately, I was not able to consult the manuscript directly, either⁸⁶¹. When referring to the variant readings provided by Dunyā in my Commentary, therefore, I have designated them collectively with the *siglum* «D-Alt», meaning the alternative version (*Altera versio*) printed by Dunyā. Whenever the conditions of the text made it necessary or advisable, I have collated Dunyā's edition, as well as his germinal ecdotic remarks gathered in D-Alt, with the previous Arabic text prepared by Muḥyī al-Dīn Ṣabrī al-Kurdī⁸⁶², which I have consulted in the reprint curated in 2000 by Maḥmūd Biḡū⁸⁶³. In addition to the available Arabic editions, I have also consulted in many *loci critici* the most ancient known Arabic manuscript of the *MF*, MS Istanbul, Yeni Çami Kutüphanesi, 735 (*siglum* Y), which can be dated to the 12th century and which transmits

⁸⁵⁷ ALONSO 1963.

⁸⁵⁸ ERDEMCI 2002. Cf. also *supra*, §1.1. *Title*, for some considerations on the title of Erdemci's Turkish version.

⁸⁵⁹ MUNK 1857: 369-372; BEER 1888: 21-23 (reproduced in HANA 1972); ASÍN PALACIOS 1901: 138 ff.; MACDONALD 1936: II; VAJDA 1960: 21 fn. 1; ALONSO 1963: 3-4; LOHR 1965: 223-224; GRIFFEL 2021: 430-431.

⁸⁶⁰ STREET *s.d.*

⁸⁶¹ This is due to various reasons, the foremost of which was the extreme difficulty of getting in touch with the library staff, especially during the pandemics.

⁸⁶² KURDİ 1912¹, 1936².

⁸⁶³ BIĞŪ 2000.

overall an excellent Arabic text⁸⁶⁴. Finally, I have also taken into systematic consideration the Latin translation of the work, which can be dated to the third quarter of the 12th century, thus being coeval to the most ancient known Arabic manuscripts⁸⁶⁵. Given the largely literal character of the translation and its antiquity, the text of the Latin version also constitutes an important witness of its Arabic original, and can sometimes be used – with all the due caution, and of course together with the irreplaceable testimony of the direct tradition – as an important source to assess the *constitutio textus* of the Arabic *MF*.

On the basis of all the materials, editorial and handwritten, listed above, I have proposed to emend Dunyā's text in about one hundred and eighty places, and have accordingly translated into English what I believe to be time by time the most correct text. Of course, this process of eclectic emendation is merely to be considered as a preliminary step towards a future proper critical edition of the text of the *MF*, but hopefully represents a useful intermediate stage towards the achievement of that ambitious goal. All the corrections to the Arabic text I have proposed are reported synoptically in *Appendix 4* (see *infra*), while the justification of the correction (when not obvious) has been provided case by case in the *Commentary ad locum*.

As far as the method and style of the translation are concerned, I have tried to be literal, consistent, and to avoid ambiguity. I have thus privileged whenever possible literal, sometimes *verbum de verbo* renditions of the Arabic original, and I have at the same time tried to use one (consistency) and only one (avoidance of ambiguity) English equivalent for any given Arabic term. This ideal goal was made harder to reach by the luxuriant abundance of Arabic vocabulary, which has in many cases at its disposal two, three or even four terms where English – as well as many other modern Western languages – would reasonably use only one⁸⁶⁶. A case in point could be the lexicon of 'difference', expressed in Arabic by the different trilateral roots *ǧ-y-r*, *m-y-z*, *f-w-t*, *f-r-q*, and *ḥ-l-f*, which, in various verbal and nominal patterns, give rise to a really wide variety of terms, such as *ǧayriyya*, *taǧayyur* and *taǧāyur*, and then *ih̄tilāf* and *ḥilāf*, *tafriqa* and *farq*, *tamyīz*, *tafāwut*, and a handful of further, less common words, whose meanings appear often to overlap. In such a lexical wealth, capturing all semantic nuances and maintaining them in a long English translation appears particularly arduous, although I have made at least an attempt at consistency in my renditions.

When it was not possible to distinguish lexically every single term deriving from one and the same root in Arabic, because of the abundance of different outcomes due to the possible application of several noun and verbal patterns, in my English translation I have at least tried to be unambiguous and consistent as far as the umbrella trilateral root was concerned. Established renditions of Arabic terms in English scholarship have been taken in due consideration, and followed whenever possible in the limits of the adopted criteria of literality and legibility. The necessity to preserve the literality of the translation and the

⁸⁶⁴ Cf. *infra*, Appendix 3.

⁸⁶⁵ For information on the Latin translation of the *MF*, its dating, and its authors, cf. *supra*, §2.2. *Latin*. For its manuscripts, cf. *infra*, Appendix 3.

⁸⁶⁶ The modern translator is comforted in his discomfort when he learns that the same difficulties in rendering the *fluxus loquendi* ('exuberance of expression') and the *prolixitas* ('prolixity') of the Arabic original were also experienced, and lamented, by such a skilful Arabic-into-Latin translator as Hermann of Carinthia, who produced an heavily abbreviated version of Abū Mašar al-Balḥī's *Great Introduction to Astrology* in the 12th century. Burnett, Hasse

univocal value of the English expressions used to render technical Arabic terminology was thus given priority, in general, over the *per se* very important aspects of style and readability, hopefully without prejudging them to the point of incomprehensibility. All my translative choices, whenever not obvious to any expert reader, are accounted for in the Commentary to the relevant *locus*.

All the expressions absent in the Arabic text, but useful or indispensable in order to make the syntax and the meaning of the English translation clearer, appear in the English text enclosed in square brackets ([...]). Page numbers of Dunyā's edition are also added to the text, in bold, between square brackets and preceded by a capital 'D' (e.g. [D31]). Portions of text whose pertinence to the Ġazālīan original may be doubted are secluded by means of arrow heads (<...>), and the Commentary *ad locum* offers grounds for the recognition of the necessity of the seclusion. Common round brackets (parentheses) are sometimes used as punctuation marks within the text itself, just as commas, full stops and dashes are employed throughout the Translation to mark in a comprehensible way the syntax of the sentence. I have disregarded almost completely the scanty, in most cases merely editorial, and often overall misleading punctuation of the Arabic text as it appears in Dunyā's edition. Question marks are sometimes silently added where needed, even in cases in which Dunyā's text does not indicate them.

Direct dialogue with the fictitious interlocutor of many objections and answers appearing in the text has been marked by guillemets (French quotation marks: «...»)⁸⁶⁷. Since Dunyā does not indicate in a clear way the end of the passage which should pertain to the direct, though fictitious, dialogue formed by the interlocutor's objections and al-Ġazālī's answers to them, the end of the purported quotation can sometimes be indicated only *ad sensum*, and thus, in some sense, arbitrarily. Indeed, while the fictional objection is virtually always enclosed by the *verbum dicendi* which introduces it and the analogous verb which later introduces the answer (Arabic *fa-in qāla/qīla* [...] *qīla*), and can thus be delimited rather clearly, the answer might on the contrary continue indefinitely through the text, since it is given (implicitly) in the author's (i.e. al-Ġazālī's) own name. As such, it is in principle indistinguishable from the remainder of the text (unaffected by the objection/answer strategy of exposition). A different solution than the one I have adopted, which would eliminate the problem at the root, would be the systematic omission of any mark signalling the beginning and the end of the direct dialogue, thus leaving the boundaries of the answers fluctuate more freely in the perception of the reader. While the resulting effect of such a solution might have proved closer to that of the original Arabic, I deemed the effort of graphically marking the scope of objections and answers useful from a conceptual point of view, since it helps isolating lines of arguments and articulating more clearly the logical development of proofs and complex ideas.

The text of the Translation was subdivided, for the sake of the subsequent Commentary and for easier reference throughout this dissertation, in 455 paragraphs, numbered progressively and preceded by the symbol '§'. The progressive numbers of the paragraphs are indicated, in bold and within square brackets, at the beginning of each section of the text. The size of the paragraphs varies greatly through the Translation, depending chiefly on two

⁸⁶⁷ This kind of dialogue is a distinctive feature of the theological genre of *radd* ('refutation'), in which it serves the function of forcing the opponent into the adoption of «meaningless alternatives», as GRIFFEL 2005: 276, following VAN ESS 1975: 89, effectively puts it. The same method is followed in the *TF*, as a homage to tradition.

interrelated factors: (i) the individuation of units of meaning within the text, and (ii) the comparison with Avicenna's *DN* (as in the Table of comparison presented in Appendix 1, on which see below⁸⁶⁸). The *Prologue*, for instance, despite being a relatively conspicuous and complex portion of text, is treated as a unitary section with a unitary meaning, and it is thus marked altogether as §1. By contrast, the discussion on the five external senses in the Fourth treatise of the *Physics* is subdivided in several paragraphs, even though at least one of them – the one devoted to the sense of taste (§386) – is far shorter than the average length of the paragraphs. This is done on grounds of consistency, and of the perceivable doctrinal autonomy of a passage with respect to the contiguous items of the text. The result is that each sense results treated in an independent paragraph of the Translation. The same happens, with even greater clarity, within the discussion on the inner senses in the same psychological section of the *Physics* of the *MF*: the paragraphs describing them (§§395-399), as a matter of fact, are all very brief, because they each treat only one of the internal senses. The reason for this articulate subdivision is that each of the inner senses represents a doctrinal tenet which – despite being treated very concisely by al-Ġazālī – clearly maintains its conceptual independence from the neighbouring topics, and thus deserves, at least in principle, an autonomous treatment. The application of these criteria, notwithstanding some occasional conflict of conceptual or textual nature, has typically allowed for a regular subdivision of the text of the *MF*. This, in turn, has made it possible to analyse the text in much detail, both in its own right and against the background of its Avicennan source.

3.2. Features of the Commentary

The complete continuous Commentary on the Translation is arranged on the basis of the aforementioned subdivision of the text in 455 paragraphs⁸⁶⁹. For every paragraph, the Commentary is articulated as follows:

- (1) a first section reports, in bold, the number of the paragraph as it appears in the Translation, and its page correspondence with Dūnyā's Arabic edition, indicated by a capital letter 'D', followed by page and line number of the beginning of the paragraph, hyphen, and page and line number of the end of the paragraph in Dūnyā's text (*e.g.* **D31.1-20**);
- (2) a second section provides a brief descriptive summary of the contents of the paragraph;
- (3) a third section, which begins after a separation marked with a dinkus (three asterisks in a row: ***), contains a lemmatic commentary of all the relevant expressions occurring in the paragraph, structured with a quotation of the English translation of the text of the *MF* (in small caps) followed by a doctrinal, historical, philological, and/or comparative explanation. If the quoted lemma is quite lengthy, I only report the beginning and the end of it, replacing the missing words with suspension points in square brackets [...]. If an expression quoted in the Commentary recurs

⁸⁶⁸ The four *Appendices* to the text of the *MF* are briefly described *infra*, §3.3.

⁸⁶⁹ *Supra*, §3.1. *Features of the Translation*.

identical more than once in the same paragraph, I have added a superscript progressive number in order to mark the potentially different commentary on the different occurrences of the same word or phrase.

An example of the structure of the Commentary is the following:

- (1) [§000] D0.0-0.0
 - (2) Brief summary of the contents of §000.
- ***
- (3) QUOTED LEMMA | Arabic *Arabic equivalent of the quoted lemma*, Latin *Latin equivalent of the quoted lemma*. Textual or doctrinal explanation, or other useful information on the quoted lemma. Quotation of possibly useful scholarship in the form: AUTHOR 0000: 00.
 LEMMA¹ | Explanation referred to the first occurrence of «lemma» in the text of the Translation of §000.
 A LONGER [...] QUOTED LEMMA | Explanation of the portion of text of §000 comprised between the occurrence of «a longer» and of «quoted lemma».

The lemmatic commentary which constitutes part (3) of the annotation to each paragraph contains all the philological, historical, and doctrinal information on the text I was able to provide. Depending on the various cases offered by the text itself, this information may include:

- (i) the indication of the corresponding original Arabic text (in transliteration) and of the Latin translation of it (both in italics, preceded by «Arabic» and «Latin», respectively)⁸⁷⁰;
- (ii) various philological and textual remarks, including:
 - (a) explanation of syntactical and lexical peculiarities,
 - (b) illustration of the emendations provided to the text,
 - (c) description of the possible origin of textual mistakes in both Latin and Arabic,
 - (d) hypothetical reconstruction of the most likely Arabic antigraph of a given, extravagant Latin rendition, or else of other possible conjectural readings (in all cases, hypothetical text not directly witnessed in the tradition – as far as I have consulted it – is preceded by an asterisk *, to mark its conjectural nature),
 - (e) justification or discussion of translative choices,
 - (f) indication of different possible renditions than the one adopted in the text of the Translation;
- (iii) doctrinal explanation of difficult points, including the addition of paraphrases and the expansion of complex or condensed passages, and/or more general conceptual clarifications;

⁸⁷⁰ At this level of the annotation, I have usually normalized the orthography of the Latin text provided by Muckle to a more standard spelling (e.g. converting ‘-ci-’ followed by vowel in ‘-ti-’, like in *sciencia* > *scientia*, ‘f’ in ‘ph’, like in *fantasia* > *phantasia*, and indicating declension diphthongs such as *-ae*). I have by contrast maintained Muckle’s spelling when directly quoting his text between quotation marks.

- (iv) indication of sources different than the *DN* (all the parallels with the Persian *summa* being summarized in the Table of comparison provided in Appendix 1), most notably other Avicennan texts;
- (v) indication of the remote Aristotelian source of the problem at stake;
- (vi) indication of parallel passages in other Ġazālīan (and sometimes non-Ġazālīan) texts, and/or of traces of the possible influence of the *locus* at stake in subsequent Arabic thought;
- (vii) remarks on the Latin aftermath of some passages, based of course on the Latin translation of the text (with its peculiarities, acclimations and misunderstandings);
- (viii) discussion of available scholarship on those very passages of al-Ġazālī's *MF*, or – far more often, due to the current status of scholarship – on the corresponding doctrinal tenets as presented by Avicenna in various works of his.

3.3. Appendices

The work is completed by a series of Appendices, which systematically treat single aspects of the text which would not have fitted in the Introduction, nor in the analytic Commentary to the Translation. In particular, *Appendix 1* presents a comprehensive Table of correspondences between the text of the *MF* and that of the *DN*. The following *Appendix 2* provides an analysis of the illustrations and diagrams of the *MF*, which extends the attention to both the Persian antigraph and the Latin translation of the text. In the direction of a future critical edition of the work, *Appendix 3* offers a list of Arabic and Latin manuscripts of the *MF*, compiled on the basis of available scholarship. Finally, *Appendix 4* registers all the corrections and proposed emendations to the Arabic text of the *MF* and to its Latin translation I was able to propose (each emendation – whenever not trivial – is analytically discussed in the Commentary). Each *Appendix* is preceded by a Note that makes its criteria of construction, and all other element which might facilitate consultation, entirely explicit. The dissertation is concluded by a *Bibliography*, which lists all primary and secondary works cited in the Introduction and the Commentary.

TRANSLATION

ABŪ ḤĀMĪD AL-ĠAZĀLĪ

The Intentions of the Philosophers

مقاصد الفلاسفة

[§1]

[D31]

Prologue

Praise to God who preserved us from error and made us know the slippery place where the steps of the ignorant stumble, and blessing and peace in particular upon the one who is endowed with loftiness, for the acceptance and the responsiveness, Muḥammad the Chosen, the best of His creatures, and upon his family, the best of families!

As for what comes next, you requested [from me] an unequivocal speech about the unveiling of the incoherence of the philosophers, of the mutual contradictions of their opinions, and of the ambushes of their deceit and their enticement. But I have no desire in complying with your wishes before having apprised you of their doctrine and having instructed you about what they firmly believe. The inquiry into the corruption of their doctrines before the full comprehension of their attainments is impossible, or rather it is to throw in blind folly and in error.

I considered, therefore, to give precedence to a concise speech before the clarification of their incoherence, [a speech] containing the account of their intentions concerning their sciences: [(i)] the logical [science], [(ii)] the natural [science] and [(iii)] the divine [science], without distinguishing in them the true from the false. I rather aim to make the limit of their speech comprehensible, without being prolix with the mention of what is analogous to an interpolation and to appendages extraneous to the intentions. I will adduce these examples according to the method of the accurate report and of the account, in connection with what they believe to be proofs [of what they say]. The aim of the book is the account of the *Intentions of the philosophers*, and this is its title.

I will first of all apprise you of the fact that their sciences have four divisions: [(1)] the mathematical [sciences], [(2)] the logical [sciences], [(3)] the natural [sciences] and [(4)] the divine [sciences].

[(1)] As for the mathematical [sciences], they [consist in] a speculation about [(1.1)] arithmetics and [(1.2)] geometry; but in the things required [D32] by geometry and arithmetics there is nothing contrary to the intellect, nor is it possible that they encounter disavowal or rejection. Since that is the case, there is no point for us in occupying [ourselves] with their allegation.

[(4)] As for the divine [sciences], many doctrines concerning them are against the truth, and what is sound in them is the exception.

[(2)] As for the logical [sciences], the majority of them [proceeds] according to the method of correctness, and the error in them is an exception. The Aš'arites are at variance with them only because of the technical terms and the adductions [of proofs], and not [because of] the concepts and the intentions, since their goal is the refinement of the methods of the argumentations, and that is the thing to the sake of which all the speculators collaborate.

[(3)] As for the natural [sciences], what is true in them is mixed with what is false, and what is sound in them is similar to the error, so that in them it is not possible to judge whether the one or the other does prevail.

In the book of the *Incoherence* the falsity of what is necessary to consider false in them will be made clear. Let us now make understand that we adduce this according to the method of the account, without supervision and in freedom, without an inquiry into what is sound and what is corrupt; so that, when we will have completed it, we will recommence with

seriousness and renewed vigour a separate book, which we will call *The Incoherence of the Philosophers*, if God wills.

Let the beginning take place with the instruction about *Logic* and its adduction.

Logic

المنطق

[§2]

[D33] SPEECH ON LOGICPREMISE CONCERNING THE INTRODUCTION TO LOGIC
AND THE CLARIFICATION OF ITS UTILITY AND ITS PARTS

As for the introduction, it is the fact that knowledges, even though their parts branch out, are [in the end] circumscribed to two parts: [(1)] conception and [(2)] judgment.

[(1)] As for conception, it is the perception of the essences referred to through singular expressions, according to the way of instruction and verification, as the perception of the notion intended by the expression «body», «tree», «angel», «demon», «spirit», and the like.

[(2)] As for judgment, it is like your knowledge that the world has an origin, that obedience will be rewarded, and that disobedience will be punished.

Every judgment is necessarily preceded by two conceptions. As a matter of fact, if one does not understand «world» on its own, and «having an origin» on its own, one does not conceptualize from that [proposition] the judgment concerning the fact that it has an origin. Rather, the expression «having an origin», when one does not conceptualize its meaning, becomes for instance like the expression «having an oripin». If someone said: «The world has an oripin», it would not be possible to judge it true, nor to judge it false, since what has not been understood, how could one not ignore it? Or how could one express a [truthful] judgment with regard to it? Likewise, the expression «world», should it be substituted by [another] indeterminate [expression].

[D34] Moreover, each of [(1)] conception and [(2)] judgment subdivides itself into [(a)] what is perceived at first [glance], without research nor careful inquiry, and [(b)] what does not result except through research. [(1.a)] As for what is conceptualized without research, it is like «being», «thing», and the like. [(1.b)] As for what results through research, it is like the knowledge of the true [nature] of the spirit, of the angel and of the demon, and like the conception of the things whose essences are concealed.

[(2.a)] As for the judgment known at first [glance], it is like the judgment related to the fact that two is greater than one, and that things equal to one single thing are equal [to each other]. To this one could add sensible [knowledges], received [knowledges], and the complex of the knowledges that the souls comprehend without having previously [accomplished] a research and a careful inquiry concerning them. They are limited to thirteen kinds, and they will be [explained] at their own place. [(2.b)] As for what is perceived through careful inquiry, it is like the judgment related to the origin of the world, to the resurrection of the bodies, to the rewarding of the acts of obedience and disobedience, and so on.

[(1)] All that whose conception cannot prescind from a research, it is only obtained by mentioning [its] definition; and [(2)] all that whose judgment cannot prescind from a research, it is only obtained by proof. Each one of those two is preceded necessarily, without a doubt, by a knowledge. [(1)] As a matter of fact, when we ignore the meaning of «man», and we ask: «What is it?», and we are answered: «It is a rational animal», **[D35]** it is necessary that «animal» be known to us, and analogously [also] «rational», so that through these

two may result for us the knowledge of «man», which we ignored before. [(2)] When we do not judge true the fact that the world has an origin, and we are told: «The world is formed; but every formed has an origin; therefore the world has an origin», this is not useful as for the knowledge of what we ignored concerning the temporal origin of the world, except if the judgment about the fact that the world is formed, and that what is formed has an origin, had previously come to us. Thereupon, through these two pieces of knowledge, we can then make [also] use of the knowledge of what was unknown to us.

Thanks to this, it is then established that every knowledge [which is] researched only results by virtue of a knowledge that had already come previously. Moreover, [this] does not concatenate *ad infinitum* (endlessly), but it is inevitable that it ends at [certain] first [principles], which result in the natural disposition of the intellect without research nor thought.

This is the introduction of the speech about logic.

[§3]

[D36] As for the utility of logic, it has already been established that the unknown only results through the known. It is apparent that it is not possible to reach every unknown through every known, but rather for each unknown there is a specific known related to it, which is a way for the adduction and the procurement [of it] in the mind, leading to the unveiling of [that] unknown. What leads from it to the disclosure of the concepts, then, is called «definition» or «description», while what leads to the pieces of knowledge having the form of judgments is called «proof», and within it there are the syllogism, [D36] the induction, the exemplification, and so forth. Both the definition and the syllogism are divided in [(a)] what is correct and allows to acquire certainty, and in [(b)] what is wrong and yet resembles what is correct.

The science of logic, therefore, is the rule through which what is sound and what is corrupt in the definition and the syllogism become distinguished, so that certain knowledge is also distinguished from what is not certain. It is as if [the science of logic] was the balance and the standard for every science. In the case of everything which is not weighed by the balance, one cannot distinguish in it the abundance from the lack, nor the profit from the loss.

Now, if someone raised an objection by saying: «If the utility of logic consisted in distinguishing knowledge from ignorance, than what would the utility of knowledge be?», one should answer that every utility is dispensable if compared with the eternal happiness, which is the happiness of the hereafter and depends on the perfecting of the soul. The perfecting is [obtained] through two things: [(i)] the purification [(ii)] and the embellishment. [(i)] The purification is the cleansing [of the soul] from the vices of characters and its sanctification with respect to the blameworthy qualities. [(ii)] As for the embellishment, it consists in impressing [in the soul] the clear picture of the truth, so that the divine truths are revealed to it, and rather the entire existence according to its hierarchical order, by means of a trustworthy disclosure, compliant to the true that has no ignorance nor obscurity within it. The example of these things is the mirror, whose perfection consists in showing within itself the beautiful forms according to what they are in themselves, with no deviation or shift, and that thanks to its being cleansed [D37] from malice and rust, so that it can

reproduce within itself the beautiful forms. The soul, then, is a mirror within which the forms of all existence are impressed, whenever it is purified and polished thanks to the elimination of the vices of characters. It is not possible to distinguish between blameworthy and praiseworthy behaviours except through knowledge, and obtaining the impression of all beings in the soul has no meaning except through knowledge, and there is no way to obtain it except through logic. The utility of logic, therefore, is to make use of the science, and the utility of science is to take possession of the eternal happiness. If, then, the connection of happiness to the perfection of the soul is shown true through [its] purification and [its] embellishment, logic becomes undoubtedly extremely useful.

[§4]

As for the parts of logic and their order, they are explained by the mention of its intent. Its intent is the definition and the syllogism, and the discerning of [those] that are sound among them from the corrupt [ones]. The most important of the two is the syllogism, which is a compound, since a syllogism does not run properly except [when it comes] from two premises, as will be [explained]. Every premise has in itself a subject and a predicate. Every predicate and [every] subject have in themselves an expression, and they undoubtedly indicate a meaning. He who wished to grasp the compound, either in being or in knowledge, would not have [other] way [to do so] than [that consisting] in premising the single [components] and the isolated parts in the first place. As the builder of the house needs to prepare the wood, the bricks and the clay [D38], since he needs to provide in the first place the single [components] and the parts, [in order] to occupy himself in the second place of the building up [of the house], in the same way the knowledge takes after [what is] known – it is, indeed, a conformable image of the known –, so that he who researches the knowledge of the compound needs to obtain the knowledge of the single [components] in the first place. From this, then, it necessarily follows that we speak about [(1)] the expressions and the way in which they signify the concepts; then about [(2)] the concepts and their subdivisions; then about [(3)] the proposition composed of subject and predicate and its subdivisions; then about the syllogism composed of two premises. [(4)] We will speak about the syllogism in two chapters: [(B)] the first of them concerning its matter, and the other [(A)] concerning its form, as will be [explained]. This comprises what we intend to adduce about logic, in [various] chapters.

[§5]

[I]

[D39] FIRST CHAPTER
ON THE SIGNIFICATION OF THE EXPRESSIONS

Their intent will be made clear through five subdivisions.

[(1)] The first [subdivision]. Know that the expressions signify the concepts in three ways. [(i)] The first of them is according to the way of conformity, like the expression «house» signifies its concept. [(ii)] The second is according to the way of inclusion, like the expression «house» signifies the specific wall. The expression «wall» is indeed subject to its name according to conformity, and thus it signifies it. However, the expression «house» as well signifies it, and yet it is distinguished as for the way of signification. [(iii)] The third [way] is according to the way of concomitance, like «roof» signifies «wall». As a matter of fact, [concomitance] differs from the way of conformity and inclusion, and thus it was not possible to do without the invention of a third name [for it]. That which is employed in the sciences and on which one relies in the acts of understanding is the way of conformity and [that of] inclusion. As for the concomitance, it is not [such], since the concomitants have in turn some concomitants, which evoke one another up to things that are not determinate, whose understanding is not reached.

[§6]

[D40] [(2)] The second division. The expression is subdivided into [(a)] simple and [(b)] composed. [(a)] As for the simple [one], it is that with whose parts the parts of the concept are not intended, like [for instance] «human». As a matter of fact, with «hu» and «man» the concept of the parts of the concept of human is not intended, unlike your saying «Zayd's slave» and «Zayd walks», since with «slave», which is a part of speech, one intends a concept, and with «Zayd» [another] concept. When you say «'Abd Allāh», and it is a proper noun, the expression is simple, since you do not intend with it anything but what you intend by saying «Zayd»; but if you mean [instead] a characterization, then it is composed. Since every [person] called 'Abd Allāh is undoubtedly a servant of God, this name is actually like the ambiguous [name]. Sometimes it is applied with the intent of making known, and is then a simple name, and sometimes a descriptive feature is intended with it, and then it is composed.

[§7]

[(3)] The third division. The expression subdivides into [(a)] particular and [(b)] universal. «Particular» is then that whose notion itself prevents the participation in it, like your saying «Zayd» and «this horse» and «this tree». [D41] «Universal» is that whose notion itself does not prevent the occurring of the participation in it, like «horse», «tree» and «man». Even if in the world there were not but a single horse, as a matter of fact, your saying «horse»

[would remain] universal, since participating in it [would remain] possible in potency even if it did not exist in actuality. It would become particular only for your saying «this horse». If then you say: «Sun», it is universal. As a matter of fact, if [many] suns were posited, they would fall under the [same] name, unlike your saying «this sun».

[§8]

[(4)] The fourth division. The expression subdivides into [(a)] verb, [(b)] name and [(c)] particle. The logicians call the verb «word». Each of name and verb differentiates itself from the particle inasmuch as its concept is in itself complete in understanding, unlike the particle. Actually, when you are asked: «Who is the one entering?», and you answer: «Zayd», it is understood, and [your] answer is complete. When it is asked: «What did you do?», and you answer: «I beat», the answer is [also] complete. If [however] it is asked: «Where is Zayd?», and you answer: «In», or you say: «on», [your] answer is not complete until you say: «in the house», or «on the roof». As a matter of fact, the meaning of the particle manifests itself in something else, not [in the particle] itself. Moreover the verb differentiates itself from the name since [the first] means a concept and the time of the occurrence of that concept, like your saying: «He beat», which actually means the beating occurring in the past. The name is like your saying «the horse», as this does not mean a time. [D42] If [someone] then [objected by] saying: «But your saying “yesterday” and “first year” signify the time, therefore they are a verb», [one should] answer: «The verb is what means a concept and the time of that concept, while your saying “yesterday” means a time which is the concept itself, but not the time of the concept. If rather “yesterday” meant the concept of yesterday, and [yet another] time which is not the concept of yesterday, then one would say that it is a verb, and it would follow necessarily, and would be conformable to, the definition of “verb”».

[§9]

[(5)] The fifth division. The expressions of the concepts are according to five classes: [(i)] synonymous; [(ii)] polyonymous, [(iii)] heteronymous; [(iv)] ambiguous; [(v)] homonymous [expressions].

[(i)] As for the synonymous [expressions], they are like your saying: «animal», since it applies to horse, bull and man by virtue of a single concept, without distinction of strength and weakness, nor of anteriority and posteriority – rather, animality belongs to each one [of them]. Likewise, «man» [applies] to Zayd, ‘Amr and Ḥālīd.

[(ii)] As for the polyonymous [expressions], they are the different names that coincide on a single named thing, like *layṭ* and *asad*, and *ḥamr* and *‘uqār*.

[(iii)] The heteronymous [expressions] are different for different things named, like «horse» and «bull» and «sky» for the things they name.

[(iv)] Ambiguous is the one expression applied to different things named, like the expression *‘ayn* for the gold, the sun, the balance and the water-spring.

[(v)] The homonymous [expressions] oscillate between the ambiguous and the synonymous, [D43] like «existence» for the substance and the accident, since it is not like the expression *‘ayn*, as the things named through it do not participate of one single thing, given that the existence results in the accident [just] as it results in the substance. It is not [either]

as the synonymous [expressions], since the animality is established for the horse and for the man in a single way, with no difference. The existence is [rather] established in the substance in the first place, and it is then established through it in the accident [as well] – then, it is established by anteriority and posteriority. Sometimes, this [kind of expressions] is called «modulated» because of its oscillation.

Let us limit ourselves, as regards the expressions, to this chapter.

[§10]

[II]

[D44] SECOND CHAPTER
ON THE UNIVERSAL CONCEPTS, ON THE DIFFERENCE
OF THEIR RELATIONS, AND ON THEIR DIVISIONS

When we say: «This man is an animal and is white», we perceive a separation between the relation that animality has with him, and the relation that whiteness has with him. As a matter of fact, that whose relation to the subjects is [like] the relation of the animality is called «essential», and that whose relation resembles the relation of the whiteness is called «accidental». It is then said that every universal concept which is in relation with a particular under it is either essential or accidental.

[§11]

The concept is not essential unless three things are reunited in it.

[(i)] The first [one] is that whenever you have understood «essential» and «that which has an essential», it is not possible that the subject or its comprehension come to your mind, unless you understand in the first place the occurrence of the essential in it. Nor is it possible that you understand it without that essential, since when you have understood «man» and «animal», you cannot understand «man» without having at first understood «animal»; [D45] and when you have understood «number» and you have understood «four», it is not possible that you establish that the four enters your understanding unless you understand «number» before.

If you replaced «animal» and «number» with «existent» and «white», it would be possible that you understood «four» without the fact that its being existent or not, and white or not, enters your understanding. Rather, one could doubt whether the four is in the world or not, but this does not deny, in your understanding, the essence of the four. Likewise, you understand the quiddity of the man thanks to your intellect without needing the understanding of his being white, or the understanding of his being an existent; but it is not possible [that you understand it] without [the understanding] of its being an animal. If your mind did not assist you in the understanding of this example, because you are an existing man and because of the multiplicity of the existence in «man», then replace it with «crocodile», or what you prefer among the animals and the other things. By this it will be apparent that the existence is accidental to all quiddities. As for «animal» for «man», it is [rather] essential, and likewise «colour» for «black», and «number» for «five».

[§12]

[(ii)] The second [feature] is that you understand that it is inevitable for the universal to be in the first place, so that the particular subject underneath it results either in existence, or in the mind; since you understand that it is inevitable [that there be] an animal in the first place, in order there to be a man or a horse, and it is inevitable [that there be] a number in

the first place, in order there to be a four or a five. [On the other hand,] it is not possible that you say: «It is inevitable [that there be] a laughing [one] in the first place, in order there to be a man», but it is rather inevitable [that there be] a man in the first place, in order there to be a laughing [one]. [D46] Man's being laughing by nature is for him an accidental description that follows from his existence, and it is equivalent to his being an animal, inasmuch as it is an inseparable concomitant. However, the difference between the two [can be] perceived, since it is inevitable [that there be] the conjunction of the spirit with the body of man in the first place, in order there to be a man, while it is not possible to say: «It is inevitable [that there be] a laughing [one] in the first place, in order there to be a man». Rather, one says: «It is inevitable [that there be] a man in the first place, in order there to be a laughing [one]». With this priority we do not mean a temporal ordering, but rather an intellectual ordering, despite its being accompanied in time.

[§13]

[(iii)] The third [feature] is that it is not possible that the essential be caused. It is not possible, then, to ask: «Which thing made man an animal, and black a colour, and four a number?». Rather, man is an animal by virtue of his own essence, not by the action of someone. As a matter of fact, if it were by the action of someone, it would be conceivable that [this one] made him a man while not making him an animal; but that is not possible in estimation, while it is possible in the estimation that [one] be made a man while not being made laughing.

As for the accidental, it is caused, since one says: «What made man existent?», and the question is correct, [whereas] it is not correct to ask: «What made him an animal?». Rather, your saying: «What made man an animal?» is like your saying: «What made man a man?». As a matter of fact one says: «He is a man because of his essence», and likewise: «He is an animal because of his essence», since the concept of «man» is «rational animal». Therefore there is no distinction between his saying: «What made the rational animal a rational animal?» and his saying: «What made man an animal?», [D47] except the fact that he bounds himself, in one of the two questions, to the mention of one of the two essences without the other.

In sum, whenever the predicate is not different from the subject and totally extraneous to its essence, it is not possible to research for it a cause. As a matter of fact, one does not ask: «Why is the possible possible?» and «[Why is] the necessary necessary?», but [rather] one asks: «Why is the possible existent?».

[§14]

ANOTHER DIVISION
SPECIFICALLY CONCERNING THE ACCIDENTAL

The accidental subdivides into [(a)] [separable concomitant and] [(b)] absolutely inseparable concomitant, like «laughing» for man, «even» for four, and like being equivalent to two right [angles] for the angles of the triangle, since that does not separate itself from the triangle, and it is a non-accidental concomitant. [(a)] The separable one subdivides into

[(aa)] that whose separation is slow, like his being a youth and [his being] an adult, and [(ab)] that whose separation is quick, like the pallor of fear and the blush of shame. [(b)] The inseparable [one] subdivides itself into [(ba)] that which separates itself in estimation, but not in existence, like blackness for the Black person, and into [(bb)] that which is not conceivable to separate in estimation either, like the oneness for the point, and the evenness for the four.

[§15]

Sometimes [an accidental predicate] separates itself in estimation but not in existence, like being equivalent to two right [angles] for the angles of the triangle, since he who does not understand that sometimes understands [nonetheless the expression] «triangle». [D48] It is not possible to understand «four» without the comprehension of evenness being annexed to it, even though [that still] belongs to the concomitants. Since then the example of this [kind of] concomitant is near to the essential and can be mistaken for it, we gathered those three notions, in order to take into consideration their complex, so that a thing's being essential be known thanks to their reunion, and one does not lean [instead] to [only] one of them. The accidental subdivides itself into that which singles out a subject, like «laughing» for man, which is called «proper [accident]», and into that which encompasses what is different from itself, like «eating» for man, which is called «absolute accidental» and «common accident».

[§16]

ANOTHER DIVISION
CONCERNING THE ESSENTIAL

In consideration of commonality and specificity, the essential subdivides itself into [(a)] that which does not have [anything] more common above itself, and is called «genus»; into [(b)] that which does not have [anything] more specific underneath itself, and is called «species»; and into [(c)] that which is intermediate, and is called «species» in relation to that which is above itself, and «genus» in relation to that which is underneath itself. That which has no [other] species underneath itself is called «species of the species», and that which has no [other] genus above itself [is called] «genus of the genera».

The highest genera that have no genus above themselves are ten, as will be [explained]: one substance, and nine accidents. The substance, then, is the genus of the genera, since there is nothing more common than it with the exception of existence, but that is accidental and not essential, [D49] [while] «genus» is an expression referring to the most common essential.

[§17]

[The substance] then subdivides itself into [(a)] body and [(b)] non body. [(a)] The body subdivides itself into [(aa)] what grows, and into [(ab)] what does not grow. [(aa)] What grows subdivides itself into [(aaa)] animal and [(aab)] plant. [(aaa)] The animal subdivides

itself into [(aaaa)] man and [(aaab)] what is not [man]. Therefore, the substance is the genus of the genera, and the man is the species of the species. What is between the two of them, like plant and animal, is called species and genus relatively. The man is called species of the species only because it does not subdivide itself except in accidental concepts, like «youth» and «middle-aged», «tall» and «short», and «wise» and «ignorant». These are accidental [features] that are not essential. As a matter of fact, man distinguishes himself from the horse for his essence, and blackness distinguishes itself from whiteness for its essence, but this blackness does not distinguish itself from that blackness for its essence and for its nature, but rather [because] this [one] is in the ink, and that [one] is in the raven – and its relation to the raven is accidental to it. Zayd does not distinguish himself from ‘Amr in humanity, nor in an essential thing, but rather in his being son of another individual, and from another country, or of another colour; and another occupation or another character may be found in him. All this [is among] the accidental [features] for man, as was mentioned before in teaching the accidental.

[§18]

[D50] ANOTHER DIVISION

According to another consideration, the essential subdivides itself into [(a)] what is said in the answer to the [question:] «What is it?», whenever the thing researched by the one who asks with his asking «What is it?» is the truth of the essence, and into [(b)] what is said in the answer to the [question:] «Which thing is it?». [(a)] The first one, then, is called «genus» or «species», and [(b)] the other is called «differentia». [(a)] The example of the first is «animal» given as an answer to one who asks, having pointed to a horse, a bull and a man, «What is it?»; and analogously «man» said in answer to him who points to Zayd, ‘Amr and Ḥālid and asks: «What are they?». [(b)] The example of the second is «rational», since, when he points to a man and asks: «What is it?», and you answer: «An animal», the question is not stopped. «Animal», as a matter of fact, encompasses in itself what is other from man, too. Rather, there is a need to specifically differentiate his essence in relation to what is different from him, asking then: «Which animal is it?», whose answer is: «Rational». «Rational», then, is an essential differentia said in answer [to the question]: «Which thing is it?».

[§19]

The complex of «animal» and «rational» is a true definition, since «definition» is an expression referring to what represents the core of the quiddity of the thing in the soul of the one who asks. If you replace «rational» with an accidental [feature], you differentiate it from the rest of the animals, like your saying: «An upright standing animal, with wide nails and laughing by nature». This, as matter of fact, distinguishes and specifically differentiates [it] from the rest of the animals, and yet it is called «description», and its utility is only the discerning. [D51] As for the definition, through it the truth of the essence of the thing is researched, and thus it does not result except by mentioning the essential differentiae. As for the discerning, it results depending from them. Sometimes the discerning can result by

virtue of only one differentia, and sometimes the true [nature of the thing] is not conceivable unless by mentioning [more] differentiae. As a matter of fact, many things have [further] differentiae adding on the one, so that about the thing the conception of whose quiddity is sought for in the soul it is necessary to mention [all] those differentiae. He who said, in the definition of «animal», that it is a body, endowed with soul and sensitive, would have already provided essential, distinctive, unvarying, convertible things, but it is yet necessary to add to them «voluntarily movable» in order for the mention of the essential differentiae to be complete thanks to that, and thanks to that the conception of the true [nature of the thing] be complete, as well.

[§20]

After having set forth the speech concerning definition, let us briefly inform about the reasons that trigger error concerning it. After the gathering of the proximate genus and of all the essential differentiae according to [their] ordering, [the reasons] lead back to making the thing known by means of that which is not clearer than it: either [(a)] because of the fact that the knowledge of the thing [occurs] through [the thing] itself, or [(b)] through what is similarly obscure, or [(c)] through that which is more obscure than it, or [(d)] through that which is not known unless through it.

[(a)] The example of the first [reason for error] is saying, in the definition of time, that it is the interval of the movement, since time is [precisely] the interval of the movement. Who doubts on the time, does not doubt [on anything] except the interval of the movement, and on what the meaning of «interval» is.

[§21]

[(b)] The example of the second [reason for error] is that you say, in the definition of whiteness: «Whiteness is what is contrary to blackness». Thus, as a matter of fact, the thing is made known by means of its contrary, [but] whenever one doubts [D52] on the thing, one doubts of its contrary [as well], so that its contrary is similarly concealed. Making whiteness known through blackness is not, then, more appropriate than its opposite.

[(c)] The example of the third [reason for error] is [the fact that] some of them say, regarding the definition of fire, that it is: «The element resembling the soul». But it is known that the soul is more obscure than the fire, and how then could one make [the latter] known by means of [the former]?

[(d)] The example of the fourth [reason for error] – that the thing be made known through that which is not known unless through it – [is] like your saying, regarding the definition of the sun, that it is: «The bright star rising during daytime». [Here,] as a matter of fact, one mentions «daytime» in the definition of «sun», but the daytime is not known except after having known the sun, so that its correct definition is that you say: «[«Daytime»] is the time in which the sun is above earth».

These, then, are important things concerning the definition, against which it is necessary to beware.

From what preceded it has already resulted that the essential [has] three parts – [(i)] genus, [(ii)] species and [(iii)] differentia –, [whereas] the accident has two parts – [(iv)]

proper characteristic and [(v)] common accident. It has been established, therefore, that the divisions of universals are five, which are called the five predicables, and they are: [(i)] the genus, [(ii)] the species, [(iii)] the differentia, [(v)] the common accident and [(iv)] the proper characteristic.

[§22]

[III]

[D53] THIRD CHAPTER

ON THE COMPOSITION OF THE PREDICABLES

AND THE DIVISIONS OF THE PROPOSITIONS

When the simple concepts are compounded, from them some divisions result. We [however] do not aim to any one of them except one single division, namely the notification called «proposition» and «definitive speech». That is the one admitting judgments of truth and falsity. As a matter of fact, when you say: «The world has an origin», it is possible that [you] are answered that you tell the truth, [while] when you say: «Man is a stone», it is [well] possible that you lie. When you say: «If the sun rises, then the stars are hidden», you said [something] true, but if you say [instead]: «...then the stars appear», you said [something] false. If you say: «Either the world has an origin, or it is eternal», you said [something] true, and if you say: «Zayd is either in ʿIrāq or in Ḥiḡāz» [D54] you said [something] false, as he might [as well] be, [for instance,] in Syria. These are the divisions of the propositions. As for when you say: «Teach me a question», or [when] you say: «Would you agree if we went out toward Mecca?», it is not possible that you tell [something] true or false. This is the concept of the proposition, and we shall now expound it in [its] subdivisions.

[§23]

[(1)] The first division is that the proposition subdivides itself into [(1.1)] categorical, like your saying: «The world has an origin», into [(1.2)] conjunctive hypothetical, like your saying: «If the sun rises, then the daytime exists», and into [(1.3)] disjunctive hypothetical, like your saying: «The world is either eternal, or it has an origin».

[(1.1)] As for the first one, the categorical, it consists in two parts, [(1.1.1)] one of which is called «subject», and it is that of which it is predicated, like «the world» in your speech: «The world has an origin». [(1.1.2)] The second one is called «predicate» and it is that which is predicated, like «has an origin» in your speech: «The world has an origin». Each one of subject and predicate is sometimes a simple expression, as we have mentioned, and sometimes a composite expression, which might however be pointed at by means of a simple expression, as your speech: [D55] «The rational animal changes his place with his feet changing place». As a matter of fact, «rational animal» is a subject which replaces the expression «man», which is simple, [while] your saying: «changes his place with his feet changing place» is a predicate which replaces your saying: «walks».

[§24]

[(1.2)] As for the conjunctive hypothetical, it also has two parts, each of which consists, however, in a proposition. [(1.2.1)] As for the first part – which is your saying: «If the sun rises» –, it is called «antecedent». If the particle of the hypothesis, which is your saying: «if», were removed from it, there would then remain your saying: «The sun rises», which is a

proposition. Therefore, it is as if the particle of the hypothesis extracted it from its being a proposition susceptible of judgments of truth and falsity. [(1.2.2)] As for the second part – which is your saying: «then the stars are hidden» –, it is called «consequent». If the particle of the conclusion, which is «then», were removed from it, it would then remain your saying: «The stars are hidden», which is a proposition.

The distinction between this [kind of proposition] and the categorical is according to two ways. [(i)] The first [one] of them is that the conjunctive hypothetical is organised in two parts, none of which can be pointed at through a simple expression, as opposed to the categorical [proposition]. [(ii)] The second [one] is that it is possible to ask, about the subject, whether it is the predicate. As a matter of fact, you say: «Man is an animal», and it is possible to ask saying: «Is man the animal?». As for the antecedent, [on the contrary,] it is not the consequent. Rather, the consequent may be other than it, and yet be conjoined to it, concomitant and consequent in its existence to the existence of it.

[§25]

[D56] [(1.3)] The conjunctive hypothetical differs from the disjunctive in two respects. [(i)] The first [one] of them is that the disjunctive consists in two parts, each [of which] is [also] a proposition if the word of the hypothesis is removed from it. However, there is no order between its parts except inasmuch as they are uttered, since you say: «The world either has an origin, or it is eternal», and if you inverted [the two clauses] by saying: «either it is eternal, or it has an origin», the meaning would not change. As for the consequent, when it is made the antecedent the meaning in the conjunctive hypothetical changes, and one of the two [clauses] may be false while the other is true.

[(ii)] The second [respect] is that [in the conjunctive hypothetical] the consequent is conformable to the antecedent in a notion that is conjoined to it, concomitant to it and not opposed to it, [while] one of the two parts of the disjunctive [hypothetical] is opposed to the other, and disjoined with respect to it – it is indeed necessary that the existence of one of the two cancels the other.

[§26]

[D57] ANOTHER DIVISION

[(2)] In consideration of its predicate, the proposition subdivides itself into [(2.1)] affirmative, like your saying: «The world has an origin» and into [(2.2)] negative, like your saying: «The world does not have an origin». «Not» is the particle of the negation. Negation in the conjunctive hypothetical occurs by denying the conjunction, namely by saying: «It is not [that] if the sun rises, then it is night». Negation in the disjunctive [hypothetical] occurs by denying the disjunction, namely by saying: «The donkey is not either male or black», but rather: «Either it is male or female»; and «The world is not either eternal or a body», but rather: «Either it is eternal, or it has an origin». Sometimes the antecedent is negative and the consequent is [also] negative, but the hypothetical composed of the two is affirmative, like your saying: «If the sun does not rise, then it is not day». As a matter of fact, this [clause] is affirmative, since you made it necessary that the denial of day be concomitant with the

denial of rising, i.e. [exactly] the concept of the affirmation in this proposition. This is the place where the step slips.

[§27]

Likewise, sometimes one errs in the categorical and believes that your saying, in Persian, «Zayd is not seeing» [D58] is a negative [proposition], [when] it [actually] is affirmative, since its concept is that he is blind. In Arabic, one may say: «Zayd is non-seeing», [this being an] affirmative [proposition]. «Non-seeing» is an expression referring to the blind [person], and its complex is a predicate that it is possible to establish and to deny, by saying: «Zayd is not non-seeing». [Here,] as a matter of fact, «non-seeing» is denied of Zayd. This proposition is called «transformed», namely what is truly an affirmation was transformed in the wording of the negation. The sign of that is that the negation is true about the non-existing, so that it is possible to say: «The companion of God is not seeing», since the impossible is not a specific individual, [while] it is not possible to say: «The companion of God is non-seeing», as it is not [possible] to say [that he is] «blind». This is more apparent in the language of the Persians.

[§28]

ANOTHER DIVISION

[(3)] The proposition, considering its subject, subdivides itself into [(3.1)] singular, like your saying: «Zayd is knowledgeable», and into [(3.2)] non-singular, which [in turn] subdivides itself into [(3.2.1)] «indefinite» and [(3.2.2)] «definite».

[D59] [(3.2.1)] The indefinite [proposition], then, is [the one] which has not been delimited through a delimitation which makes clear, about it, that the judgment is a predicate relative to all the subject, or [just] to some of it, like your saying: «Man is in loss», as it is predicated of [any] individual you want. [(3.2.2)] The definite [proposition, on the contrary,] is the one regarding which that [delimitation] is mentioned. It can be four things: [(3.2.2.1)] either it is universal affirmative, like your saying: «Every man is an animal», [(3.2.2.2)] or it is particular affirmative, like your saying: «Some man is a scribe», [(3.2.2.3)] or it is universal negative, like your saying: «No man is a stone», [(3.2.2.4)] or it is particular negative, like your saying: «Not every man is a scribe», or else: «Some man is not a scribe».

The propositions, according to this [way] of considering [them], are then eight: [(3.1.1)] singular negative and [(3.1.2)] singular affirmative; [(3.2.1.1)] indefinite negative and [(3.2.1.2)] indefinite affirmative, but there is no dealing with these [latter] four in the sciences.

[§29]

As for the singular individual, one does not look for a judgment [about it] in the sciences. As a matter of fact, one does not research a judgment about Zayd, but one rather researches the judgment about man.

As for the indefinite [proposition], it is in the potency of the particular [proposition], since it undoubtedly expresses a judgment about the part. As for the commonality, it is

doubted in this regard, and because of its oscillation it is necessary that one abandons [this kind of proposition] in the teachings. [D6o] There remain, then, the four definite [ones]: universal affirmative, particular affirmative, universal negative, particular negative.

[(a)] The conjunctive hypothetical as well subdivides itself into [(aa)] universal, like your saying: «Every time the sun rises, it is day», and [(ab)] particular, like your saying: «Sometimes, if the sun rises, there are clouds». [(b)] As for the disjunctive, [(ba)] the universal in it is that one says: «Every body is either in motion or in rest», and [(bb)] the particular is that you say: «The man is either on the ship or he drowns». Actually, this division and this heterogeneity are established for the man, and yet [just] in some states – [namely] when he is in the sea, and not on the mainland.

It remains on you that you provide the example of the particular and universal negative concerning the conjunctive and disjunctive hypothetical.

[§30]

ANOTHER DIVISION

[(4)] It is the fourth [division]. The proposition, in consideration of the relation of its predicate to its subject, subdivides itself into [(4.1)] possible, like your saying: «The man is a scribe» [D6i] [and] «The man is not a scribe»; [(4.2)] impossible, like your saying: «Man is a stone» [and] «Man is not an animal»; and [(4.3)] necessary, like your saying: «Man is an animal», and «Man is not a stone».

[(4.1)] Indeed, the relation of writing to the man is the relation of the possibility. One must not pay attention to the difference of negation and affirmation in the expression, as actually what is denied is predicated through the negation, and what is affirmed is predicated through the affirmation.

[(4.2)] The relation of the stone to the man is the relation of the impossibility, and [(4.3)] the relation of the animal to him is the relation of the necessity.

[(4.1)] «Possible» is an expression ambiguous [between] two meanings, since sometimes one intends with it [(4.1.1)] what is not impossible, and [in this sense] it encompasses the necessary. By virtue of this [way of] considering, things have [then just] two parts: possible and impossible.

[(4.1.2)] Sometimes one [rather] intends with it that whose existence is possible, and whose non-existence is also possible, and this is the specific use [of the term]. By virtue of this consideration, things have [then] three [parts]: necessary, possible, and impossible, since the necessary is not encompassed by the possible according to this meaning, while it is encompassed by the possible according to the first meaning.

[(4.1.1)] According to the first meaning, it is not necessary that the «possible» is possibly non-existing. Rather, sometimes it is impossibly non-existing, like the necessary, since it is not impossible. According to that meaning, «possible» is an expression only referring to what is not impossible.

[§31]

[D62] ANOTHER DIVISION

[(5)] This is the fifth [division]. Every proposition seems to have a contrary which differs from it as for affirmation and negation. However, if [propositions] differ from [each other] as for truth and falsity, they are called contradictory, and it is said that one of them is contrary to the other. With this, we mean that it is false when the [first] proposition is true, and it is true when the [first] proposition is false. This contradictoriness does not verify unless at some conditions.

[(i)] The first one is that the subject be one in reality, as well as one in the name; otherwise, they are not contradictory. As a matter of fact, if you say: «The ram is sacrificed and roasted» and «The ram is neither sacrificed nor roasted», and you intend by one the sign of the Ram, and by the other the known animal, then they are not contradictory.

[(ii)] The second [condition] is that the predicate be one, otherwise they are not contradictory, like your saying: «Who is forced is free to choose», namely he has the power to refuse, and «Who is forced is not free to choose», namely if his desire were removed [from him], as well. Since then the being of the noun «free to choose» is common, contradiction is prevented, like the noun «ram» in [the case of the] subject.

[(iii)] The third [condition] is that [the two propositions] do not differ as for particularity and universality, since if you said: «Someone's eye is black», meaning with that the pupil, it would not be contradictory with it to say: «His eye is not black», if you meant [by this] the denial of the blackness of the whole eye.

[§32]

[D63] [(iv)] The fourth [condition] is that they do not differ in potency and actuality, since if you said: «The wine in the earthen jug is intoxicating», and you meant that it intoxicates in potency, it would not be contradictory with it to say: «The wine in the earthen jug is not intoxicating», if you meant by this the denial of [its] ability to intoxicate in actuality.

[(v)] The fifth [condition] is that they are equivalent in the relation in which all the correlated fall, since if you say: «Ten is the half», it is not contradictory with it to say: «Ten is not the half», unless in relation to «twenty», [but not] to another number. And if you say: «Zayd is a parent», and: «Zayd is not a parent», both are true in relation to two [different] individuals.

[(vi)] The sixth [condition] is that they are equivalent in time and place, and in sum it is necessary that one of the two propositions does not differ at all from the other with respect to anything, except in the negation and the affirmation. Therefore, one of the two propositions denies the same thing that the other affirms of that subject, in that respect, without variation.

[(vii)] If, then, the subject were universal, and if it were not an individual, a seventh condition would be added, namely that they differ as for quantity, being one universal and the other particular. As a matter of fact, if both were particular, it would be possible that both were true in the matter of possibility, like your saying: «Some people write», and: «Some people do not write». [D64] If [on the contrary] both were universal, it would be

possible that both were false in the matter of possibility, like your saying: «Every man writes», and: «No man writes».

[§33]

ANOTHER DIVISION

[(6)] It is the sixth [division]. Every proposition has a conversion, as it is manifest, and yet it subdivides itself into [(6.1)] that whose truth follows from the truth of the proposition and into [(6.2)] that [whose truth] does not follow [from it]. With «conversion» we mean that the predicate be made a subject, and the subject a predicate. If, then, the same truth remains, it is said that it is a convertible proposition, while if [the truth] does not follow, it is said that it does not convert. We have already mentioned that the definite propositions are four: [(i)] the universal negative, which converts in a universal negative similar to itself. As a matter of fact, when our saying: «No man is a stone» is true, it is also true [to say]: «No stone is a man», since if [this] were not true, its contradictory – which is our saying: «Some stones are men» – would be true, and then some would be men and stones [at once]. In that case, our saying: «No man is a stone», which is the proposition that we posited in the first place as true, would be false. [D65] This is then a sign of the fact that the universal negative converts into a universal negative.

[(ii)] As for the particular negative, it does not convert. As a matter of fact, when our saying: «Some people do not write» is true, it does not follow that our saying: «Some writers are not men» is also true.

[(iii)] As for the universal affirmative, it converts in a particular affirmative, not in a universal. As a matter of fact, when our saying: «Every man is an animal» is true, it is [also] undoubtedly true to say: «Some animals are men», while our saying: «Every animal is a man» is not true.

[(iv)] As for the particular affirmative, it also converts in a [proposition] similar to itself, since when our saying: «Some animals are men» is true, it is [also] undoubtedly true to say: «Some men are animals».

This, then, is the inquiry concerning the division of the propositions.

[§34]

[IV]

[D66] FOURTH CHAPTER

ON THE COMPOSITION OF THE PROPOSITIONS TO SET IN A SYLLOGISM

This is the intent, and yet the first in thought is the last in action. The speculation about it is limited to two pillars, the first of which is the form [(1)], [while] the other is the matter [(2)].

[(1)]

FIRST PILLAR

ON THE FORM OF THE SYLLOGISM

We have already mentioned the fact that the science is either conception or judgment, and that the conception is only obtained through the definition, and the judgment through the proof. The proof is either the syllogism, or the induction, or the exemplification. The consideration of the unknown through the presently witnessed is called «example», and it falls within it. The [direction of the] dependence is from all these [things] to the syllogism, and from the whole of the syllogism to the demonstrative syllogism. It is however inevitable to mention the definition of the syllogism in its entirety, so that, after it, one can subdivide it in demonstrative and non[demonstrative].

[§35]

[D67] «Syllogism» is an expression referring to speeches which form a composition from the concession of which in the essence another speech necessarily follows. The example of that is: «The world is formed, but every formed has an origin». As a matter of fact, from the concession of the two compound speeches follows by necessity a third speech, namely that the world has an origin. Likewise, if you said: «If the world is formed, then it has an origin; but it is formed», from the concession of these speeches it would follow that the world has an origin. Likewise, if you said: «The world either has an origin or it is eternal; but it is not eternal», from it it would follow that it has an origin.

The syllogism subdivides itself into [(a)] what is called connective and into [(b)] what is called repetitive.

[§36]

[(a)] As for the connective [syllogism], it is [the one] connecting two propositions having a single term in common – as every proposition undoubtedly contains a predicate and a subject, and two propositions consist of four things. If on the contrary they do not have any of the notions in common, the coupling and the occurrence of the conclusion do not result, since a syllogism from your saying: «The world is formed», and your saying: [D68] «The soul is a substance» is not well established. Rather, it is inevitable that the second proposition

shares with the first [one] in one of its terms, for instance that you say: «The world is formed», and: «What is formed has an origin». Therefore, all the parts of the two propositions are reduced to three parts, which are called terms, and the pivot of the syllogism is about them, which are like «world», «formed», and «having an origin» in our example. That which occurs twice in the two propositions and is in common is called «middle term». That which becomes subject in the conclusion that follows, namely the intended [thing] of which it is predicated, is called «minor term», like «world». That which becomes predicate in the conclusion, namely the judgment, is called «major term», like «having an origin» in our saying: «The world has an origin», which is the conclusion following from the syllogism. The proposition, when it is made part of a syllogism, is called «premise». The proposition within which there is the minor term is called «minor premise», while that within which there is the major term is called «major premise». The name for the two premises was not derived from the middle term, since it is found in both [of them]. As for the minor [term], it is not found unless in one of them, and likewise the major [term]. That which follows from the syllogism is called, after its having followed, «conclusion», while before its having followed [is called] «problem».

[§37]

[D69] The composition of the two premises is called combination. The appearance of the combination of the two premises is called «figure». From this, then, three figures result, since the middle term is either predicate in one of the two premises and subject in the other, and it is [then] called «first figure» [(1)]; or it is predicate in both [premises], and it is [then] called «second figure» [(2)]; or it is subject in both [premises], and it is [then] called «third figure» [(3)].

The judgment [concerning] the antecedent and the consequent in the conjunctive hypothetical is [the same as] the judgment [concerning] the subject and the predicate in the subdivision of their combination with respect to these figures. The three figures have in common the fact that [in none of them] a conclusive syllogism stems either from two negative [premises], or from two particular [premises], or from a negative minor [premise] and a particular major [premise]. Every figure is [however] specified by [some] properties, which we are going to mention.

[§38]

[D70] [(1)]

THE FIRST FIGURE

This figure distinguishes itself from the other two by virtue of two differentiae. [(a)] The first one of them is that it does not need, for the following of its conclusion, to be traced back to another figure, while the remaining figures are traced back to this figure in order for the following of the conclusion to be manifest – and this is why it is called «first». [(b)] The second [differentia] is that it concludes to four definite [propositions], namely the universal and particular affirmatives, and the universal and particular negatives. As for the second figure, it does not conclude to an affirmative at all, while the third figure does not conclude

to a universal at all.

The condition of the occurrence of the conclusion [in] this figure, and I mean with this [in] the first figure, [consists in] two things. The first one of them is that the minor [premise] be affirmative, and the other one is that the major [premise] be universal. As a matter of fact, if the two [aforementioned] conclusions are missing, sometimes the premises are true, and [yet] with their truth the conclusion does not follow at all. The gist of this figure is that when you have posited a true affirmative proposition, then the judgment about its entire predicate is undoubtedly the judgment about its subject, [as well]. It is not possible for it to be but like this, regardless of the fact that the judgment about the predicate be a negation or an affirmation, and regardless of the fact that the subject be universal or particular. From that, then, four conclusive moods stem. The following of this conclusion is apparent, since whenever our saying: «Man is an animal» is true, everything that is true about the animal, which is a predicate – for example, its being sensitive, or its not being a stone –, [D71] is inevitably true about man [as well], because «man» is undoubtedly encompassed by «animal». But if the judgment is already verified about the entire [predicate] «animal», [then also the one] about some part of it will undoubtedly be true. This, then, is the gist of the first figure.

[§39]

The detailing of its four moods is what we will mention [now]. [(1.1)] The first mood is from two affirmative universal [premises]. The example of it is: «Every body is composed; but every composed has an origin; therefore every body undoubtedly has an origin». [(1.2)] The second mood [is from] two universal [premises], the major of them being negative. It is the first itself, but replacing your saying «having an origin» with «not eternal», in order for it to become negative. Therefore, you say: «Every body is composed, but no composed [item] is eternal», and from this it follows, indeed, that «no body is eternal». [(1.3)] The third mood is identical to the first, but the subject of the first premise is made particular. This does not necessitate a variation in the judgment, since every particular is universal in relation to itself, so that the judgment about the entire predicate of the particular is a judgment on that particular. The example of it is that you say: «Some existents are composed; but every composed has an origin; therefore, it undoubtedly follows that [D72] some existents have an origin». This [mood] runs properly from two affirmative [premises], the minor of which particular and the major universal. [(1.4)] The fourth mood is identical to the third, but the major [premise] is made negative, and the wording of the affirmation is replaced by the negation. You say: «Some existents are composed; but no composed is eternal». From this, then, it follows that: «Not every existent is eternal». This [mood] runs properly [from] a particular affirmative minor [premise] and a universal negative major [premise].

[§40]

Apart from this as for the combinations, there remain twelve combinations which do not conclude, since in each figure sixteen combinations are ordered. Indeed, it is allowed that the minor [premise] be affirmative, universal or particular, and negative, universal or particular – and thus they are four. One [must] then add to each one also four major [premises],

so that from four minors, by four, sixteen result. When we have posited as a condition that the minor [premise] be affirmative, the two negatives and what is built upon them [D73] as for the occurrence of the conclusion are excluded. Therefore, by virtue of this, eight [propositions] are hampered, and there remain two affirmatives. However, to the minor universal affirmative four major are added, two of which without a doubt particular, so that by virtue of this too two [propositions] are hampered, as we have posited as a condition, concerning the major [premise] of this figure, that it be universal. One is then traced back to six [propositions]. As for the particular affirmative minor [premise], a particular major [premise] is not annexed to it, neither negative nor affirmative, since there is no syllogism from two particular [premises]. Therefore, two more combinations of the remaining six are let fall, and there remain [then] four. If you want a representation and a figuration of this, this is its form.

[§41]

[D74] *Moods of the first figure, conclusive and ineffectual*

Minor	example	Major	example	Conclusion
Universal affirmative	Every A is B	Universal affirmative	Every B is C	It concludes to a universal affirmative, which is «Every A is C»
Universal affirmative	Every A is B	Universal negative	No thing belonging to B is C [No B is C]	It concludes to a universal negative, which is «No thing belonging to A is C» [«No A is C»]
Universal affirmative	Every A is B	Particular affirmative	Something of what is B is C	This mood is ineffectual because the major [premise] is particular
Universal affirmative	Every A is B	Particular negative	Something of what is B is not C	This [mood] as well is ineffectual for what precedes
Particular affirmative	Some A is B	Universal affirmative	Every B is C	It concludes to a particular affirmative, which is: «Something of what is A is

Minor	example	Major	example	Conclusion
				C»
Particular affirmative	Some A is B	Particular affirmative	Something of what is B is C	This is ineffectual because the two premises are particular
Particular affirmative	Some A is B	Particular negative	Not every B is C	This is ineffectual for what precedes
Particular affirmative	Some A is B	Universal negative	No thing belonging to B is C [No B is C]	It concludes to a particular negative, which is: «Not every A is C»
Universal negative	No thing belonging to A is B [No A is B]	Universal affirmative	Every B is C	Ineffectual
Universal negative	No thing belonging to A is B [No A is B]	Particular affirmative	Some B is C	Ineffectual
Universal negative	No thing belonging to A is B [No A is B]	Universal negative	No thing belonging to B is C [No B is C]	Ineffectual
Universal negative	No thing belonging to A is B [No A is B]	Particular negative	Not every B is C	Ineffectual
Particular negative	Not every A is B	Universal affirmative	Every B is C	Ineffectual
Particular negative	Not every A is B	Particular affirmative	Some B is C	Ineffectual
Particular negative	Not every A is B	Universal negative	No thing belonging to B is C [No B is C]	Ineffectual
Particular negative	Not every A is B	Particular negative	Not every B is C	Ineffectual

[§42]

[D75] Therefore, the universal affirmative minor together with the universal affirmative major is conclusive, and likewise together with the universal negative major. It is not [conclusive], instead, together with the two particular major [premises]. The particular affirmative minor together with the universal affirmative major and the universal negative major is also conclusive, but it does not conclude with the two particular major [premises], either.

[D76.4] We have already assembled on each one of the universal affirmative minor and the particular affirmative minor four major [premises], the total being eight. Among them four become invalid, since they are particular – I mean the major [ones] –, since we have already posited as a condition that the major be universal, in order for the judgment to extend and comprise the subject. There remain, then, two negative minor [premises], particular and universal, to each of which four major [premises] among the four definite [propositions] are annexed. None of them is conclusive because of the flaw in the minor [premise], since we have already posited as a condition that the minor be affirmative, as the judgment established for the predicate is the one extending to comprise the subject [as well]. As for the negative predicate, then, it is detached with respect to the subject; therefore, the judgment concerning it does not extend to comprise the detached subject. Therefore, when you say: «Man is not a stone», and then you express a judgment concerning the stone, either through negation or through affirmation, that does not extend to comprise man. Indeed, you have already brought about the detachment of stone and man through the negation. This is, then, the justification of these conditions, and the justification for the jurisdiction of the conclusion by virtue of four moods [in particular] among all the sixteen [possible] moods.

[§43]

[(2)]

THE SECOND FIGURE

Its gist reverts to the fact that every proposition which can connect with its predicate that which does not exist in its subject is a negative, not an affirmative, proposition. Indeed, if it were affirmative, the judgment concerning its predicate would [also] be a judgment concerning its subject, as it has been [explained] before about [D77] the first figure. As a matter of fact, when we have said: «The judgment concerning the entire predicate of the affirmative proposition is a judgment concerning [its] subject», and we have then found what is judged about a predicate, while it is not judged of the subject [as well], then we know, by virtue of that, that the proposition is negative. Indeed, if it were affirmative, the judgment on the predicate would [also] exist about the subject.

The condition of this figure is that the two premises be distinguished in the quality, being one negative and the other affirmative, and that the major be in any case universal. These two conditions put back the conclusive moods of [this figure] to four moods among the total of sixteen moods, as we have mentioned about the first figure.

[(2.1)] The first mood [derives] from a universal affirmative minor and a universal negative major [premise], like your saying: «Every body is divisible; but no soul is divisible»,

which concludes: «Therefore no body is a soul». The following of this conclusion is made clear thanks to the tracing back to the first figure through the conversion of the major [premise]. Indeed, it is a universal negative, which converts in itself, and it is that you say: «Nothing of what is divisible is a soul». Therefore, «divisible» becomes a subject for the major, while it already was a predicate for the minor; therefore, it has been traced back to the first figure.

[(2.2)] The second mood [is from] two universal [premises], but [with] the minor negative, like your saying: «No eternal thing is composed; [D78] but every body is composed». From that it follows indeed that: «No eternal thing is a body». As a matter of fact, we convert the minor, and we make it major, so that we say: «No composed is eternal; but every body is composed», so that it results from this that: «No body is eternal», like in the first figure. Then we convert this conclusion, since it is a universal negative, so that it results what we have mentioned, namely that: «No eternal thing is a body».

[(2.3)] The third mood [derives] from an affirmative particular minor and a negative universal major [premise]. It is [like] the first mood of this figure, except [for the fact] that the minor is made particular. Indeed, we say: «Some existent is divisible; but no soul is divisible; therefore, some existent is not a soul». As a matter of fact, when you convert the major, one reverts to the first figure.

[D79] [(2.4)] The fourth mood [derives] from a negative particular minor and an affirmative universal major [premise], like your saying: «Not every existent is composed; but every body is composed; therefore, not every existent is a body». It is not possible to trace this back to the first figure through conversion, since the negative which it contains is particular, and it does not convert. If the affirmative major converted, it would not convert unless in a particular [proposition], and there is no syllogism from two particular [premises].

[§44]

It can only be ascertained as correct through two ways, one of which is called [(2.4.1)] «ekthesis», and the other one [(2.4.2)] «absurdity».

[(2.4.1)] As for the ekthesis, it is that you say: «Some existent is not composed». Indeed, that «some» in itself is a whole. Let us suppose then it as a whole, and let us wrap it up in whatever name you want: it will then fall in the second mood of this figure. [(2.4.2)] As for the absurdity, it is that we say: «If our saying: “Not every existent is a body” were not true, its contradictory would be true, namely that we say: “Every existent is a body”; [D80] but it is known that every body is composed, therefore it follows that every existent is composed. But we had already established, concerning the minor premise: “Not every existent is composed”, that it is true; how, then, could its contradictory be true? This is an antithesis, therefore what leads to it is absurd; but only the assumption as true of the allegation that is the contradictory of the conclusion led to it. Therefore, it is not true.

[§45]

[(3)]

THE THIRD FIGURE

It [consists in the fact] that the middle [term] is subject in the two premises, and its gist reverts to the fact that the judgment concerning the subject of every affirmative proposition is a judgment concerning one predicate of its, regardless of the fact that the judgment be a negation or an affirmation, and regardless of the fact that the proposition be a particular or universal affirmative. This is crystal-clear and it has two conditions, one of which is that the minor [premise] be affirmative, while the other is that one of the two [propositions] be universal, either the minor or the major [premise]. Whichever of them be universal, it is sufficient. [D81] In this figure, one concludes in six moods.

[(3.1)] The first mood [derives] from two affirmative universal [premises], like your saying: «Every man is an animal; but every man is rational». It follows, then, that: «Some animal is rational», given that the minor [premise] converts into a particular [proposition], so that it becomes like the fact that you say: «Some animal is man; but every man is rational; therefore, some animal is rational», *i.e.* the third mood of the first figure.

[(3.2)] The second mood [derives] from two universal [premises], the major negative, like your saying: «Every man is an animal; but no man is a horse; therefore, not every animal is a horse». This because of the fact that when you convert the minor [premise], it becomes an affirmative particular, and it is traced back to the fourth [mood] of the first figure.

[(3.3)] The third mood [derives] from two affirmative [premises], the minor particular, like your saying: «Some man is white; but every man is an animal; therefore, some white [thing] is an animal». As a matter of fact, you [can] convert the minor [premise] in affirmative particular, and it is traced back to the third [mood] of the first figure.

[D82] [(3.4)] The fourth mood [derives] from two affirmative [premises], the major particular, like your saying: «Every man is an animal; but some man writes; therefore some animal writes», since when you have converted the major [premise] in particular, and you made it minor, it becomes as if you said: «A certain writer is a man; but every man is an animal». It follows, then: «A certain writer is an animal». The conclusion converts and it becomes: «A certain animal writes».

[(3.5)] The fifth mood [derives] from an affirmative universal minor [premise] and a negative particular major [premise], like your saying: «Every man is rational; but not every man writes», from which it follows: «Not every rational writes». This is made clear through the way of ekthesis, as [if] you said, for instance: «Every man is rational; but something of what is man is illiterate; therefore, something of what is rational is illiterate», and then you said: [D83] «Something of what is rational is illiterate; but nothing of what is illiterate writes; therefore not every rational writes».

[(3.6)] The sixth mood [derives] from an affirmative particular minor and a universal negative major [premise], like your saying: «Some animal is white; but no animal is snow; therefore, some white [thing] is not snow». It is apparent through the conversion of the minor; it is indeed traced back to the fourth [mood] of the first figure.

This is the detailed explanation of the predicative syllogisms.

[§46]

[D84] SPEECH ON THE REPETITIVE SYLLOGISMS

The repetitive syllogism is of two species: [(a)] conjunctive hypothetical and disjunctive hypothetical [(b)].

[(a)] As for the conjunctive hypothetical, the example of it is your saying: «If the world has an origin, then it has an originator». This is indeed a premise [such] that, [(a.1)] when you have repeated its antecedent itself, its consequent itself follows; *i.e.* [it is such that] if you say: «And it is known that the world has an origin» – namely, its antecedent itself –, then from it its consequent itself follows, namely that: «it has an originator». [(a.2)] If [then] you posited the contradictory of the consequent, from it the contradictory of the antecedent would follow; *i.e.* from [the fact] that you say: «And it is known that it does not have an originator», it would follow that it does not have an origin. [(a.3)] As for when you have posited the contradictory of the antecedent, from that neither the consequent itself, nor its contradictory follow. Indeed, if you said: «However, it does not have an origin», this does not conclude [to anything]. Likewise, if you said: «If this is a man, then it is an animal; however, it is not a man», [D85] from that it would not follow that it is an animal, nor that it is not an animal. [(a.4)] Analogously, when you have posited the consequent itself, it does not conclude [to anything]. Indeed, if you say: «And it is known that the world has an originator», it does not follow a conclusion from this, since when you say: «If this prayer is legally valid, then the place of prayer is pure; but it is pure», from that it does not follow that the prayer be legally valid, nor that it is vain.

These four, then, are repetitive [syllogisms], from which it cannot be concluded except [in] two [cases], namely [(a.1)] the antecedent itself, which concludes to the consequent itself; and [(a.2)] the contradictory of the consequent, which concludes to the contradictory of the antecedent. As for [(a.3)] the contradictory of the antecedent and [(a.4)] the consequent itself, they do not conclude except when it has been established that the consequent is equivalent to the antecedent, and it is not more common than it. In that case, as a matter of fact, the four repetitive [syllogisms] [all] conclude. You say indeed: [(a.1)] «If this is a body, then it is composed; but it is a body, therefore it is composed»; or [(a.4)] «but it is composed, therefore it is a body»; or: [(a.3)] «but it is not a body, therefore it is not composed»; or: [(a.2)] «but it is not composed, [D86] therefore it is not a body».

As for when the consequent is more common than the antecedent, like «animal» with respect to «man», then in the denial of the more common, there is the denial of the more specific – indeed, in the denial of «animal» there is the denial of «man» –, while in the denial of the more specific there is not the denial of the more common – indeed, in the denial of «man» there is not the denial of «animal». Surely, [on the other hand,] in the establishing of the more specific there is the establishing of the more common – indeed, in the establishing of «man» there is the establishing of «animal» –, while in the establishing of «animal» there is not the establishing of «man».

[§47]

[(b)] The second species is the disjunctive hypothetical. It is that you say: «The world either

has an origin, or it is eternal». From this it is indeed concluded to four repetitive [syllogisms]. As a matter of fact, you say: [(b.1)] «but it has an origin, therefore it is not eternal»; or: [(b.2)] «but it does not have an origin, therefore it is eternal»; or: [(b.3)] «but it is eternal, therefore it does not have an origin»; or: [(b.4)] «but it is not eternal, therefore it has an origin». Therefore, positing each [of the two disjuncts] concludes to the contradictory of the other, and positing the contradictory of each [of the two] concludes to the other itself. This is its condition [when it is] circumscribed to two parts, but should it be [subdivided] into three [parts], then positing each [one of the three] would conclude to the contradictory of the other two, like your saying: «This number is either greater than, or less than, or equal to [this other number]; [D87] but it is greater than [it]; therefore it is false that it is less than [it] or equal to [it]». As for positing the contradictory of one [of the three], this makes necessary one of the two remaining [parts], not one of them in specific; like your saying: «but it is not equal [to it]» makes it necessary that it is either less [than it], or greater [than it].

If the parts were not circumscribed, like your saying: «Zayd is either in Ḥiğāz or in ʿIrāq», or: «This number is either five, or ten, or this, or that», positing one [of the parts] conclude to the falsity of the others. As for positing the contradictory of one [of them], it does not conclude unless to the delimitation in the remaining, which [are in themselves] not limited.

These, then, are the principles of the syllogisms. We will complete the speech by mentioning four things: [(1)] the syllogism [that concludes by way] of absurdity, [(2)] the induction, [(3)] the exemplification and [(4)] the composed syllogisms.

[§48]

[D88] [(1)]

THE SYLLOGISM [THAT CONCLUDES BY WAY] OF ABSURDITY

As for the syllogism [that concludes by way] of absurdity, its form is that you establish your opinion thanks to the falsification of its contradictory, by virtue of the fact that from it absurd [conclusions] follow, because of the fact that a manifestly true premise is annexed to it, and it is concluded from that a manifestly false conclusion.

Then you say: «The false conclusion does not result unless from false premises; but one of the two premises is manifestly true; therefore the falsity is limited to the second premise, which is the opponent's opinion». The example of it is that somebody says: «Every soul is a body». Then you say: «Every soul is a body; but every body is divisible; therefore, every soul is divisible», and this is manifestly false in [the case of] the soul of man. Therefore, it is inevitable that in the premises concluding to this there must be a false speech; but our saying: «Every body is divisible» is manifestly true, and then the falsity remains [to be found] in our speech: «Every soul is a body». As a matter of fact, when that is falsified, it remains that the soul is not a body.

[§49]

[D89] [(2)]

THE INDUCTION

As for the induction, it [consists in the fact] that you judge, from many particulars, about the universal that encompasses those particulars, like your saying: «Every animal is either a man, or it is a horse, or it is something else. Every man moves his lower jaw during the mastication, and every horse moves its lower jaw during the mastication, and every such and such among the other [animals] different from them moves its lower jaw during the mastication». One concludes, then, that every animal moves its lower jaw during the mastication, since we see the horse, the man, the cat, and the rest of the animals [doing] in the same way. This, indeed, would be true if the induction of all the particulars were possible, so that there were no exception. In that [case] one can indeed set up a syllogism of the first figure, namely: «Every animal is horse and man and so on; but every horse and man and so on moves its lower jaw [while chewing]; therefore it follows that every animal moves its lower jaw [while chewing]». However, if one allows there to be an exception, one does not get to the certainty – like the crocodile, which moves the upper jaw. It is not unlikely that a judgment concerning a thousand be dismissed concerning just one. [D90] Relying on the induction is correct in juridical [matters], not in matters of certainty. In the juridical matters, the more accurate in examination is the induction, and the closer to exhaustion it is, the surer to triumph is the opinion.

[§50]

[(3)]

THE EXEMPLIFICATION

As for the exemplification, it is that which the jurists and the theologians call «analogy», namely the transferral of the judgment from a particular to another particular, since it resembles a certain thing. This is like the one who speculates about the house, and he sees that it has an origin and it is formed. Then he speculates about the sky, he sees that it is formed, and then he transfers to it the judgment, thus saying: «The sky is a formed body, therefore it has an origin», by analogy with the house. This does not bring advantage to the certainty, but it is legitimate for the soothing of the heart and for persuading the soul in the disputes. Often [exemplification] is what is employed in the rhetoric, and we mean with «rhetoric» the running disputes in the lawsuits, in the grievances and in the pleas about the blame and the praise, the glorification and the humiliation of something, and so forth. Indeed, when you say to a sick person: «This drink will be useful for you», [D91] and he asks: «Why?», and you reply: «Because a certain other sick person drank it, and it was useful to him», when then you tell him so his soul is inclined to take [it]. It is not sought for, about it, that it is useful to every sick person, or that it is verified that the sickness of one be like the sickness [of the other], or that his condition – as for age, strength, weakness and the rest – be like the condition [of the other]. Hence, the most sensible among the dialecticians, because of the weakness of this kind [of argumentation], have brought forth [other] ways.

They said, namely: «We will clarify that the judgment about the principle [of the exemplification] is justified by this concept», and they proceeded in establishing the concept and the cause [according to] two ways.

[§51]

[(3.1)] The first one of them is the evaluation from all sides, and that is that they said: «We have speculated about the fact that all that is formed has an origin, and all that is not formed does not have an origin». This is traced back to the induction, and it is not useful for certainty because of two aspects. [(3.1.1)] The first one of them is that the exhaustion of all the individuals is not possible, because maybe one makes exception with respect to this.

[(3.1.2)] The other is whether, in the induction, one has scrutinized the sky. If one has not scrutinized it, then one has not scrutinized everything: rather, one has scrutinized for instance two thousand things, except one; and it is not unlikely that the judgment concerning that one differs from [the one concerning] the thousand [others], as we have mentioned about the crocodile. If [on the other hand] one did scrutinize the sky [as well], and one knows that it has an origin for its being formed, that is then the solution of the controversy, [D92] and it was already clear before [having established] the validity of the premise of the syllogism, namely before its uninterrupted sequence. What need was there of a syllogism, then, if that was [already] established?

[§52]

[(3.2)] The other way is the probing and the subdivision, and it is the fact that they said: «We probe the characteristics of the house, for instance, and we say that it is an existent, it is a body, it is self-subsisting, and it is formed. But it is false that it has an origin for its being existent, or self-subsisting, or such or such, because it would [then] follow that every self-subsisting existent should have an origin. It has been established, rather, that this [happens] because it is formed». This reasoning is corrupted in four aspects. [(3.2.1)] The first one is that it is tenable to say: «The judgment about [the house's] being caused is not really by virtue of a cause among these which are more common causes [than the house itself], but [it is] rather by virtue of a cause restrained to its essence and not exceeding it, like for instance its being a house. If one establishes that something other than the house has an origin, [that something] will be caused by virtue of what it has in common with the house, and that thing is a property not extending [D93] to the sky».

[(3.2.2)] The second is that this is only valid when one has thoroughly examined all the features of the principle, so that none makes exception. But the encompassment and the careful examination are not trivial: therefore, a feature might escape the probing, and [that one precisely] will be the cause. Most dialecticians do not attach importance to the encompassment, but they rather say: «If within it there is another cause, [it is up to] you [to] make it apparent», or else they say: «If there were, we would notice [and so would] you, just like we would notice should there be an elephant in front of us; but since we did not notice, we judged that there were not». This is a weak [reasoning], because the enemies' incapability to notice [a certain thing] in the present state and for the duration of the incapability is not also a sign of the inexistence [of that thing]. This is not like the elephant, since you were

never acquainted with an elephant at our presence, and we have never witnessed it in time???. And how many concepts we have already sought without discovering them at once, but then we have discovered them?

[§53]

[(3.2.3)] The third one is that [even] if the examination concerning them were complete, and the features were [for instance] four, the falsification of three would not necessitate the establishment of the fourth [one], since the subdivisions, as for the composition, exceed [the number of] four. It is tenable, as a matter of fact, that it has an origin for its being existent and body, or for its being existent and self-subsisting, or for its being [D94] existent and formed, <or formed and house, or for its being house and existing body, or house and formed, or house and self-subsisting, or house and existent, or body and formed, or body and existent, or self-subsisting and existent>; and it is tenable that it has an origin for its being body and self-subsisting, <or for its being body and formed; and it is tenable that it has an origin for its being existent, body and self-subsisting, and it is tenable that it has an origin for its being existent, self-subsisting and formed>, and so forth for what concerns the compositions, in twos or in threes. Indeed, how many judgments are not established unless [various] things have been reunited, like the blackness in the ink encompasses in itself the gallnuts, the vitriol, and the soak in water! And [even] more judgments are caused by composite things, so that how [could] the falsification of the particulars be sufficient?

[§54]

[(3.2.4)] The fourth [one] is that if the examination were safe and sound, [D95] and it were safe and sound that when three [things] are falsified and just a fourth one remains, then this would be [merely] a sign of the fact that the judgment is not in the three, and that it does not leave out the fourth [one]. It is not, however, a sign that it is undoubtedly entrusted to the fourth one, but it is rather tenable that the fourth concept is subdivided in two parts, and that the judgment is relative to only one of the two parts, without the other. Therefore, the falsification of three [things] is a sign of the fact that the concept does not leave out the fourth one, while it is not a sign of the fact that it is the cause. This is the place where the step slips. Indeed, if it had been divided in the first place, and its description said that it is existent, self-subsisting, body, and formed, by virtue of an attribute such or such, the falsification of three [things] would [in any case] not necessitate that the judgment should depend from «formed» [for instance], universally taken. It [could] rather [depend] from one of the two parts of «formed».

This is, then, the unveiling of these dialectical signs. This does not become a demonstration until you have said: «Every formed has an origin, but the sky is formed; therefore, it has an origin». Its establishment, then, is unavoidable, but that is not established by virtue of the fact that one sees another formed thing which has an origin, nor a thousand formed things having an origin. Rather, this premise becomes a problem, whose establishment is then necessary through two conceded premises, or through one of the aforementioned ways, without a doubt. This, then, is the judgment concerning the exemplification.

[§55]

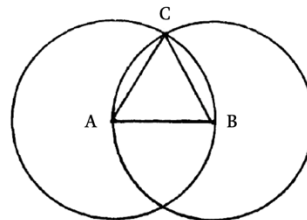
[D96] [(4)]

THE COMPOSED SYLLOGISMS

Know then that, in the didactic books, it is not usual to order the syllogism according to the method with which we have ordered them. Rather, in the books they are listed randomly, or together with the addition of the superfluous, or together with the omission of one of the two premises, either for its superfluosity in virtue of its being apparent, or [else] for an [actual] intent to conceal [it]. That is dealt with according to a confused ordering, but it is possible that what is not according to a given ordering be traced back to it, so that it is a concluding syllogism. That which is seemingly according to a given ordering, and yet its conditions are not [entirely] with it, does not conclude.

[§56]

The example of hierarchical ordering is the first figure by Euclid, namely the fact that when you have a line AB, and you want to build on it an equilateral triangle and establish the proof of its being equilateral, you say: «Whenever we make point A a centre, and we posit on it the spike of the compass, we open it to the point B, and we complete the circle around the centre A; and then we make point B a centre, we posit on it the spike of the compass, we open it to the point A, and we complete the circle around the centre B, [D97] the two circles are identical, since they have one [and the same] radius and they undoubtedly intersect in C. You draw therefore a straight line to the point A – which is line CA – and we [also] draw another straight line from point C to point B, which is line CB».



[FIGURE 1]

We say, then: «This triangle, resulting from the points A, B, and C, is an equilateral triangle». Its demonstration is that lines AC and AB are equivalent, because they are both drawn from the centre of one circle to its circumference. Likewise, lines BC and AB are equivalent for a cause analogous to this, and the two lines AC and B[D98]C are [also] equivalent because they are equivalent to one and the same line, which is the line AB. The conclusion is then that the triangle is equilateral.

[§57]

In this way it used to apply the premises here. If you wanted, [however,] to return to the

truth and to the hierarchical ordering, the conclusion would not result except from four syllogisms, each syllogism [composed] of two premises.

The first one is that the two lines AB and AC originate from the centre of a circle to its circumference; but all straight lines originating from the centre to the circumference are equivalent; the two are therefore equivalent.

The second one is that the two lines AB and BC are also equivalent for a syllogism analogous to this.

The third one is that the two lines AC and BC are equivalent to the line AB; but all the lines which are equivalent to only one and the same thing are equivalent; therefore the two are equivalent.

The fourth one. The figure ABC is circumscribed by three equivalent lines; but every figure circumscribed by three equivalent lines is an equilateral triangle; therefore the figure ABC, which [D99] is [built] on the line AB, is an equilateral triangle.

This is its true hierarchical ordering, and yet one is indulgent with respect to the omission of some premises, because of their clarity in relation to this.

This is the speech concerning the form of the syllogism.

[§58]

[D100] [(B)]

SECOND PILLAR

ON THE MATTER OF THE SYLLOGISM

The matter of the syllogism are the premises. If they are true and certain, the conclusions are true and certain. If they are false, it does not conclude to the truth; if they are opinable, it does not conclude to the certainty. Just like gold is the matter of the dinar and the roundness is its form, and the forgery of the dinar is possible sometimes by virtue of the deviation of its form, and [then] of the negation of its roundness, because it is stretched so that it is not called dinar [anymore]; and sometimes for the corruption of its matter, for its being [made] of copper or iron – thus in the same way the syllogism is corrupt sometimes for the corruption of its form, namely because it is not according to one of the preceding figures; and sometimes for the corruption of its matter, if, namely, its form is valid, but the premise is opinable or false.

[§59]

And just like gold has five degrees: [(i)] the first one, which is pure gold, not adulterated [and] verified; [(ii)] the second, which is not at that level [of purity], but it has in itself some adulteration, which does not appear at all except to the perspicacious expert; [(iii)] the third, which has in itself an adulteration apparent to any expert, [D101] which might be perceived by who is not expert, as well, provided that one's attention is called to it; [(iv)] the fourth, which is a copper counterfeit, and yet it plates itself in a plating that almost misleads the expert, albeit there is no gold in it at all; [(v)] and the fifth, which plates itself in such a plating that it is apparent to anyone that it is plated – thus in the same way the

premises have five states: [(i)] the first one is that they are certain and true, without any doubt and speciousness, and then the syllogism set up from them is called «demonstrative»; [(ii)] the second one is that they are near the certainty, so that it is difficult to perceive in them the possibility of the error, but the possibility has access to them, if he who speculates about them is meticulous; and the syllogism composed by them is called «dialectic»; [(iii)] the third one is that the premises are opinable according to a persuasive opinion, and yet the soul perceives their contrary, and it can surmise the error in them; and the syllogism composed by them is called «rhetoric»; [(iv)] the fourth [one] is what is formed according to the forms of [things] certain as for the plating, but is neither opinable nor certain; what results from it is called «misleading» or «sophistic»; [(v)] the fifth is what we know that it is false, and yet the soul inclines to it for a sort of imagination; and the syllogism resulting from it is called «poetic».

[§60]

[D102] It is inevitable to expound these premises. Each premise from which a syllogism is set up, even though that premise is not sustained by a proof but is rather taken according to its being received and conceded, does not exceed one of thirteen divisions: [(1)] the primary, [(2)] the sensible, [(3)] the experimental, [(4)] the transmitted, [(5)] the propositions of whose middle terms and whose syllogisms the mind is not devoid, [(6)] the estimative, [(7)] the famous, [(8)] the accepted, [(9)] the conceded, [(10)] the similar, [(11)] the seemingly famous, [(12)] the opinable, and [(13)] the imaginative.

[§61]

[(1)] As for the primary [propositions], they are those which force the natural disposition of the intellect, absolutely taken, to give assent to them, like your saying: «Two is greater than one», «The whole is greater than the part», and «The things equivalent to a [same] thing are equivalent [to each other]». As a matter of fact, if someone was posited in himself to be intelligent, without any learning unless through the absolute intellect, and without any teaching imparted to him, provided that he is not prevented by nature to change, but rather [that he is such] to have been suddenly created intelligent, and these propositions are made known to him, and their concept is established in his soul – I mean when he conceives the notion of «whole», the notion of «part» and the notion of «greater» –, then it is not possible unless he gives assent to the fact the whole is greater than the part, and this in every whole, anyhow it might be. This does not come from the sense, since the sense does not perceive unless one or two [things], or [anyway] limited things. This is a judgment established in the intellect as universal, and it is not possible to posit that the intellect detaches itself from it in any way.

[§62]

[D103] [(2)] The sensible [propositions] are for instance our saying: «The sun is bright», and: «The brightness of the moon increases and decreases».

[(3)] The experimental [propositions] are that which results from the combination of

the intellect and the sense, like our knowledge of the fact that: «The fire burns», «Scammony purges the yellow bile», and «The wine intoxicates». As a matter of fact, the sense perceives the intoxication following the act of drinking wine, time after time [and] frequently; then the intellect becomes conscious of the fact that it [intoxication] is necessitated by it [wine], since were it random, it would not follow in most [cases]. Therefore, a trustworthy knowledge of that becomes engraved in the mind.

[§63]

[(4)] The transmitted [ones] are that which is known by virtue of the notification of a community, like our knowledge of the existence of Egypt and Mecca, even though we never saw them. Every time that the doubt about it is absurd, [the proposition] is called «transmitted». It is not permitted to draw analogous conclusions for one and the other [transmitted proposition]. As a matter of fact, one says: «He who doubts of the existence of miracles [accomplished] by a prophet, it is necessary that he believes it, since the transportation concerning them is transmitted just like [the one] concerning the existence of the prophet. However, one says: “I cannot doubt at all of the existence of the prophet because of my direct testimony of it, while I can doubt of this”. If then this were like that, there would not be the possibility to doubt [it]. Therefore, it is inevitable that he neglects [it] until it is transmitted to him with such a transmission that it is impossible to have with you any doubt [about] whether it is transmitted [or not].

[§64]

[(5)] As for the propositions whose syllogisms are by nature together with them, they are the propositions which are not established in the soul unless by virtue of their middle terms, and yet the middle term escapes the mind, so that one believes that it is a primary premise, [D104] known without a middle, while actually it is known through a middle. «Syllogism» has no meaning unless the research of the middle term, while major and minor [term] are to be found in the researched question itself. For instance, the fact that you spontaneously know that two is the half of four, even though this is known through a middle [term], namely: «The half is one of the two parts completely equivalent to the other; but two with respect to four is one of the two equivalent parts; therefore it is a half». The sign about this is that if one told him: «How much is seventeen with respect to thirty-four?», maybe it would not happen that he judged spontaneously that it is its half, until he has not divided the thirty-four in two equivalent parts, he has then considered each part, and he has seen then that it is seventeen, so that he know that it is the half. If this is also [promptly] present to the mind, consider this about a big number, or replace the half with the tenth [part], the sixth [part], and so on, since the intent [here] is the example. In sum, it is not farfetched that something be known through a middle [term], and yet the mind does not get conscious of its being known through a middle [term] and a syllogism. Therefore, not of everything that is established according to a [certain] way, man is conscious according to that way. The establishment of the thing for the mind is one thing, while the comprehension of the way of its establishment and its notification are another thing.

[§65]

[(6)] The estimative [ones] are the false premises, which are however strong in the soul with a strength which is not hampered by the possibility of the doubt concerning them, and this because of the influence [D105] of the state of the estimation about things extraneous to the sensible [ones]. Estimation, as a matter of fact, is not susceptible of anything unless in conformity with the sensible things with which it is acquainted, like the state of the estimation concerning the impossibility of an existent whose direction cannot be pointed at, and [of a being] which is neither internal nor external to the world; and like its state concerning the fact that the world will terminate either in the void, or in fullness – I mean after the world –, and like its state about the fact that the body does not increase nor does it grow by itself, unless because one annexes to it an addition from outside.

The cause of the state of the estimation about this is only the fact that these things are not conformable to the sense, therefore they do not fall under the estimation. The state of its falsity is only inasmuch as, if all that does not fall under the estimation were false, the estimation itself would be false, since the estimation does not fall under the estimation. Rather, knowledge and power, and every attribute that the five senses do not perceive, are not perceived by the estimation either. Its error is only known in the things similar to these specific questions, inasmuch as they follow from syllogisms which are composed of primary [premises] to the reception of which the estimation gives assent, and it concedes that the conclusion of the syllogism, when it is composed of the primary [premises], is true, [but] then, when the conclusion is obtained, it gets away from the acceptance of the conclusion. By this, then, one knows that its being hampered with respect to the reception takes place in its nature, and indeed it is in contrast with the reception of that which is not according to the species of the sensible things.

[§66]

[D106] [(7)] As for the famous [ones], they are the propositions concerning which one does not rely unless upon the mere fame. The common people and the so-called men of science speculate that they are primary [propositions] which follow from the natural disposition of the intellect, like your saying: «Lying is shameful», and: «It is necessary that the prophet is not afflicted», and: «One does not go into the bath without an apron, in order to veil [one's] genitals [with it]», and: «Justice is necessary», and: «Injustice is shameful», and the like. These things are often repeated to the hearing, since the youth, and the people of the country agree on them for the affairs of their life [in common]. The souls, then, hurry up to their acceptance, for the abundance of the acquaintance [with them]. Needs of the [individual] costumes, like the delicateness, the cowardice, and the bashfulness, may corroborate them. [But] if man posited himself and were created already intelligent, and he was not educated through exercise, and did not cling [to them] by nature, and was not used [to them] by a habit, and these propositions were presented to his intellect, it would be possible for him to be prevented from their reception – not like your saying: «Two is greater than one».

Some of these premises sometimes are true, but for a subtle condition or for a demonstration, while it is believed that they are absolutely true, like we believe the speech of the one who says: «God is powerful upon everything» to be true. This is a famous [proposition],

whose denial is counterintuitive, but which is not true, since He is not powerful upon the fact of creating the like of Himself. Rather, it is necessary to say: «He is powerful upon everything that is possible in itself». One [also] says: «He knows everything», but he does not know the existence of the like of Himself. [D107] These famous [propositions] differ sometimes as for strength and weakness, in accordance with the difference of [their] famousness, and the difference of the costumes and the habits. Sometimes they [also] differ in relation to the countries, and to the experts of the various disciplines: indeed, a famous [proposition] among the physicians is not famous among the carpenters, nor vice versa. The famous [proposition] is not contradictory with the false [one], but rather the contradictory of the famous one is the counterintuitive, while the contradictory of the false is the true one. Many true [propositions] are counterintuitive, and many false [propositions] are disguised as famous. There is no doubt concerning the fact that the primary [propositions], some of the sensible [ones], the transmitted [ones] and the experimented [ones] are [also] famous; and yet what we [specifically] intend by this is that which has in itself nothing else than the sole fame.

[§67]

[(8)] As for the accepted [propositions], they are that which is accepted by the most virtuous men, by the greatest learned men, and by the venerable masters of the past, since the transportation of that [kind of propositions] is often repeated by them according to that way and in their books. To that, the good opinion about them is annexed, and therefore, that is established in the soul with a certain firmness.

[(9)] As for the conceded [propositions], they are those that the opponent concedes, or those that are only known between the two opponents. They are employed by one to the detriment of the other. Indeed, it does not differ from the famous [one] unless in commonality and specificity, since the famous [one] is conceded by the mass, while this is conceded by the opponent alone.

[(10)] As for the similar [propositions], they are those that one tends to assimilate to the first [ones], to the experimental [ones] and to the famous [ones], even though they are not really like those [ones], and yet they seem to approach each other.

[§68]

[(11)] As for the seemingly famous, they are those that, whenever they are uttered, everybody listening to them accepts them altogether [D108] at the beginning of the observation and at first glance; but when he considers them attentively and follows them one after another, he finds that they are not to be accepted, since he perceives their being corrupt, like the speech of the one who says: «Help your brother, whether he is an oppressor or an oppressed one». Indeed, the soul spontaneously moves to its acceptance, [but] it is then led to consider attentively, and she knows, then, that supporting the oppressor is not necessary.

[D109] [(12)] As for the opinable [propositions], they are that which helps the victory of the opinion, despite the intuitive understanding of the possibility of its contradictory, like the fact that he who goes out at night, is said to be a traitor, because if he were not a traitor, he would not go out at night; and like [the fact that] one says: «So-and-so takes the

enemy into his confidence, therefore he is also an enemy like him», even though it is tenable that the confidence with him is an imposture against him, or that it is a ruse against him in favour of the friend.

[(13)] As for the imaginative [propositions], they are premises known to be false, and yet they bear an influence on the soul because of the awakening of desires and [their] repulsions, like the confectionery is assimilated to the dung, so that the soul is repelled from it, notwithstanding the knowledge that it is false.

These, then, are the premises. We will mention now, therefore, the circumstances in which it is more likely to employ them.

[§69]

[D110]

SPEECH ON THE COURSES OF THESE PREMISES

As for the five first [kinds of premises], they are fitting for the demonstrative syllogisms, and they are the primary [proposition], the sensible, the experimental, the transmitted, and [that] whose syllogism is together with it by nature. The utility of the demonstration is the manifestation of the truth and the obtainment of certainty.

[§70]

As for the famous and the conceded [propositions], they are the premises of the dialectical syllogism. As for the primary [ones] and that which accompanies them, should they occur in the dialectic they would be stronger, and yet they are employed in the dialectic only inasmuch as they are conceded by virtue of the fame, since a technique does not need more than that.

Dialectic has [many] utilities. [(i)] The first one is the silencing with arguments of any busybody and innovator who travels the road of the true, and whose understanding yet falls short of the knowledge of the true in the demonstration. With this, then, he is turned away toward the famous [propositions], which he believes are necessarily to be accepted, and on this basis his corrupt opinion is falsified.

[(ii)] The second [utility] is that he who wanted to receive the belief of the true, and were elevated above the level of the mass, and were not satisfied of the rhetorical or the paraenetic speech, but had [however] not attained the culmination of the verification, so to master the comprehension of the conditions of the demonstration, then it would be possible to implant in his soul the belief by means of the dialectical syllogisms. This is the condition of the greatest part of the jurists and of the researchers of the science.

[D111] [(iii)] The third [utility] is that the apprentices in the particular sciences, such as medicine, geometry, and so on, do not yield themselves to know the premises of those sciences, and their principles, first and foremost by virtue of the demonstration. If they were urged to them [before time], their souls would not allow to concede them. Their souls are rather sweetened thanks to the reception [of the principles] through dialectical syllogisms from famous premises, until it is possible to make them known through demonstration.

[(iv)] The fourth [utility] is that from the natures of the dialectical syllogisms [derives] the fact that it is possible to conclude, moving from them, the two extremes of the contradictory concerning the [given] question. When then one has done this and has considered the place of the error moving from these two, maybe the face of the truth will be revealed to him, by virtue of this scrutiny.

This much about the discipline of the dialectic is sufficient; and otherwise [there is] an autonomous book. There is no need, therefore, to occupy ourselves [here] with a detailed account of that.

[§71]

As for the estimative and the similar [propositions], they are the premises of the misleading syllogisms, and they do not have utility at all, except that they inform you so that you beware and you defend yourself. Sometimes through them one tests the understanding of one about whom it is not known whether he is limited in the knowledge or perfect, in order to observe how he gets rid of them, and that is called indeed «testing syllogism». Sometimes, [rather,] they are employed in the disclosure of he who makes the common people believe that he is knowing, [thus] seducing them. Then it will be disputed of that with him at their presence, and we will make apparent his weakness about that. After they will have really known the looks of the error, so that they have known through this his insufficiency, they will then abandon him. In that circumstance, it is called «syllogism of the resistance».

[§72]

As for the seemingly famous, the opinable and the accepted, they are fitting to make premises for the rhetorical and juridical syllogism, and for all that through which certainty is not researched. Indeed, the utility of the rhetoric [lies] in winning the souls, in making them desire the true, and in repelling them from the false. [D112] Such is [also] the utility of the law. About rhetoric there is an autonomous book, and there is [thus] no need of a detailed account [here].

[§73]

As for the imaginative [propositions], they are the premises of the poetical syllogisms. If the primary [propositions] and what accompanies them were employed in rhetoric or in poetry, their usage would only be because of fame, imagination and what is behind them; therefore, [this] is not a condition for them. There is no need except of the demonstrative clarification in order to be sought for, and of the misleading [one] in order to protect oneself [from it]. Let us limit ourselves, then, to the account concerning them.

[§74]

[D113]

EPILOGUE OF THE SPEECH ON THE SYLLOGISM

We will [now] mention the reasons that trigger error [in it], in order to beware [them]. They

are ten.

[(1)] The first one is that the argumentations generally flow confusedly, and within them an abundant error rises. Therefore, it is necessary that the speculator gets accustomed to trace them back to the aforementioned hierarchical ordering, so that he knows if it is a syllogism or not. If it is, then of which species, and which figure, and which mood, until the place of the garbing [of the error] is revealed.

[(2)] The second one is that one pays attention to the middle term, and scrutinizes it with an unequivocal examination, in order [to verify] that its occurrence within the two premises is in only one way. If, as a matter of fact, it is touched with the slightest variation as for addition or reduction, the syllogism becomes corrupted, and it concludes to an error. The example of this is that we have mentioned that the universal negative converts into a [proposition] similar to itself. If [then] one said: «There is no jug in the drink», it would be true; but its converse is: «There is no drink in the jug», which is not true. This is the cause [of the error], that the condition of the conversion is not kept in mind. Rather, it is necessary to say: «No jug is a drink, [D114] therefore no drink is a jug», and this is true. As for when «in» is added, and one says: «No jug is *in* a drink», its converse is: «Nothing of what is in the drink is a jug», and this is also true. The place of error is that the predicate in these propositions is your saying: «in a drink», not the simple «drink». Therefore, it is necessary that it becomes entirely a subject in the converse. When this is kept in mind, the conversion is valid.

[(3)] The third one is that the minor term and the major term are to be kept in mind, so that there is no variation at all between the two of them and the two extremes of the contradictory. As a matter of fact, the syllogism necessitates the union of the two terms without [any] variation, and this is made known by virtue of what we have mentioned about the conditions of the contradictory.

[(4)] The fourth one is that the three terms and the two extremes of the conclusion are carefully examined, so that there is no ambiguous name among them. As a matter of fact, sometimes the name is unique but the meaning is manifold, and then the syllogism is not valid. This also is made known from the conditions of the contradictory.

[§75]

[(5)] The fifth one is that the particles of the personal pronoun are kept in mind with verifying care. As a matter of fact, [D115] the directions of its [possible] usage differ, and from it an error rises, like if one said: «All that the intelligent knows, [it] is as he knows it». His saying «is» sometimes return to the known [‘it’], and sometimes to the knower [‘he’], as sometimes one says: «He has already known the stone, then he is a stone».

[(6)] The sixth one is that the indefinite [propositions] are not accepted, since they transform the truth. If the indefinite is defined, the intellect perceives intuitively its being false. As a matter of fact, when one says: «Man is in loss», the soul accepts it and gives her assent to it. But if it were defined and one said: «Every man is undoubtedly in loss», the intellect will perceive intuitively that this is not necessary in the generality [of cases]. When one says: «The friend of your enemy is your enemy», the soul accepts it; but when it is defined and one says: «Everyone who is a friend of your enemy is inevitably your enemy», the intellect perceives intuitively that that is not absolutely necessary in the generality [of

cases].

[(7)] The seventh one is that sometimes you give your assent to the premise of the syllogism, the cause of the assent being that you have sought for a contradictory for it in your mind, but you have not found it. This does not make the assent necessary; rather, it is true when you have known that it does not have a contradiction in itself, not [when] you have not found [the contradiction]. As a matter of fact, it happens sometimes that you too do not find it at the moment, as [for instance] your assent to the speech of the one who says: «God is powerful upon everything», since it does not occur to you anything upon which He is not powerful, until it occurs to you that He [D116] cannot create one similar to Himself. Then you get your mistake in giving assent, because the true thing is that He is powerful upon everything that is possible in itself – and this [proposition] has no contradiction in itself at all.

[§76]

[(8)] The eighth [one] is that one pays attention to the fact that the question is not made a premise in the syllogism. [In that case,] indeed, it would already be seized before the problem itself, like what is said: «The sign of the fact that every motion needs a motor is that the moved does not move by itself». This is indeed the doctrine itself [that one wishes to demonstrate], but its formulation has been altered, and it has been made a sign [for the demonstration of itself].

[(9)] The ninth one is that one does not verify the thing by means of another thing, which [in turn] is not verified unless by means of the [first] thing, like what is said: «The soul does not die, since she acts eternally». [As a matter of fact,] one does not know that she acts eternally until it is not known that she does not die; and it is by virtue of this that the eternity of her action is established.

[(10)] The tenth one is that one beware the estimative [propositions], the famous [ones], and the like. Indeed, one must not give assent to them except [when they are conjoined] with the first [propositions], the sensible [ones], and what accompanies them.

[D117] Then, when you keep in mind these conditions, your syllogism will undoubtedly conclude the truth, and from it a certainty devoid of any doubt within it will result, such that even if you wanted to doubt [about it], your soul could not [do] so.

[§77]

[V]

[D118] FIFTH CHAPTER OF THE BOOK,
CONCERNING THE APPENDICES OF THE SYLLOGISM AND OF THE DEMONSTRATION

[V.1]

FIRST SECTION
ON THE SCIENTIFIC PROBLEMS AND THEIR DIVISIONS

With them, we intend the questions that occur in the sciences, which are four. [(i)] The search for the «if» is the question concerning the existence of the thing. [(ii)] The search for the «what» is the question concerning the quiddity of the thing. [(iii)] The search for the «which» is the question concerning the differentia of the thing, which differentiates it from a thing with which it shares the genus. [(iv)] The search for the «why» is the research of the cause.

[(i)] As for the search for the «if», it is according to two respects. [(i.a)] The first one of them [asks] about the principle of the existence, like your asking if God is existent, and if the void is existent. [(i.b)] The second one [asks] about the state of the thing, like your asking if God is willing, and if the world has an origin.

[(ii)] The search for the «what» is [also] according to two respects. [(ii.a)] The first one of them is that one wants to know what is intended [D119] by the speaker with a certain expression that has not been explained, like when one says *‘uqār* and he is then asked what he intends with [that], and he answers: «Wine». [(ii.b)] The second one is that one researches the truth of the thing in itself, like when one asks: «What is ‘wine’?», and one answers: «It is the intoxicating drink obtained from grapes». The search for the «what» according to the first meaning precedes the search for the «if», since he who does not understand the thing does not ask about its existence. In the second meaning it follows the search for the «if», because one does not research the quiddity of that whose existence is not known.

[(iii)] As for the search for the «which», it is a question concerning the differentia and the proper characteristic.

[(iv)] The search for the «why» is according to two respects. [(iv.a)] The first one of them is a question concerning the cause of the existence, like your asking: «Why does this garment burn?», to which we answer: «Because it fell in the fire». [(iv.b)] The other one is a question concerning the cause of the claim, and [it consists in] the fact that one asks: «Why did you say: “The garment fell in the fire”?», to which you answer: «Because I have seen it and I have found it burnt».

The question «what it is» and [the question] «which one it is» [pertain] to the conception; the question «if it is» and [the question] «why it is» [pertain] to the judgment.

[§78]

[V.2]

[D120] SECOND SECTION

[The second section] is about the fact that the demonstrative syllogism subdivides itself into [(a)] that which conveys the cause of the existence of the conclusion, and into [(b)] that which conveys the cause of the judgment about the existence. [(a)] The first one is called demonstration of the why, and [(b)] the other is called demonstration of the that.

[(a)] Their example is that he who claims that in a place there is smoke, to the one who asks him: «Why did you say [so]?» answers: «Because there is fire, and where there is fire, there is smoke; therefore there is smoke». He conveyed, then, the demonstration of the why, namely the cause of the judgment about the fact that there is smoke, and the cause of the existence of the smoke [as well].

[(b)] As for when he said instead: «There is fire», so that one has asked him: «Why?», and he has answered: «Because there is smoke, and where there is smoke, there is fire», he has already conveyed the cause of the judgment about the existence of the fire, while he has not conveyed the cause of the existence of the fire, nor [has he explained] by virtue of which cause [the fire] resulted in that place. In sum: the caused is a sign of the cause, and also the cause is a sign of the caused. However, the caused does not necessitate the cause, [D121] while the cause necessitates it. This, then, is the intent in distinguishing between the demonstration of the that and the demonstration of the why.

[§79]

Rather, one of the two caused is sometimes a sign of the other caused, if their inseparability has been established by virtue of the fact that they are, jointly, the two caused of a single cause. It is not a condition of the demonstration of the why that it is an absolute cause for the existence of the major term. Rather, it is sufficient if it is a cause for the characterization of the minor term by means of the major term; I mean that it is a cause for its being in the other. You say then: «Man is an animal; but every animal is a body; therefore, man is a body». This is then a demonstration of the why, since the middle term is the cause of the existence of the major in the minor [term]. Indeed, man is a body, since he is an animal – namely, corporeality is an essential attribute of the animal, which is predicated of it inasmuch as it is an animal, neither for a more common notion, like its being existent, nor for a more specific notion, like its being writing, or tall.

[§80]

[V.3]

[D122] THIRD SECTION

ON THE MATTERS AROUND WHICH THE DEMONSTRATIVE SCIENCES REVOLVE

They are four: [(i)] the subject-matters, [(ii)] the essential accidents; [(iii)] the questions

and [(iv)] the principles.

[(i)] The first one are the subject-matters. With them, we intend that every science has undoubtedly a subject-matter about which it speculates, and whose states are researched within that science, like the human body for medicine, the measure for geometry, the number for arithmetics, the sound for music, and the actions of those who are obliged to observe the precepts of religion for the law. None of these sciences is necessitated to guarantee that the existence of these subject-matters be established within it. Indeed, it is not upon the jurispudent to establish that to a man [pertains] a [certain] action, nor is it upon the geometer to establish that measure is an accident of the existent, but it is rather another science to be responsible for the establishing of that. Surely, [however,] it is upon him to understand these subject-matters, by means of their definitions, according to the way of the conception.

[§81]

[(ii)] The second one are the essential accidents. With them, we intend the properties which occur in the subject-matter of that science and do not occur outside it, like the triangle and the square for some measures, and like the curvature and the straightness for other [measures] [D123], which are essential accidents for the subject-matter of geometry; like evenness and oddness for the number; like the concordance and the discordance for the sounds, I mean the harmony; and like the illness and the health for the animal.

It is inevitable, at the beginning of every science, to understand these essential accidents, by virtue of their definitions, according to the way of the conception. As for their existence in the subject-matters, it is only deduced from the completion of that science, since the intent of the science is that they be demonstrated within it.

[§82]

[(iii)] The third are the questions, which is an expression referring to the gathering of these essential accidents with the subject-matters. They are that which is sought for by every science, and about which one asks within [each of the sciences]. As a matter of fact, inasmuch as one asks about them within [a science], they are called «questions» of that science; inasmuch as they are searched, they are called «researches»; and inasmuch as they are the conclusion of the demonstration, they are called «conclusions». The thing called is just one, but these names and expressions differ because of the difference in the ways of considering [the thing]. The subject-matter of every demonstrative question in a science [(a)] either is the subject-matter of that science, [(b)] or [one of] the essential accidents of the subject-matter in that science.

[§83]

[(a)] If then it is the subject-matter, [(aa)] either it is the subject-matter itself, [D124] like what is said in geometry: «Every measure participates in another measure which has the same genus and does not differ from it», and like what is said in arithmetics: «Every number is the half [of the sum] of its two extremes [at the same distance] after [and before] it, like

five is the half of the sum of six and four, of the sum of three and seven, of the sum of two and eight, and of the sum of one and nine». [(ab)] Or, it is the subject-matter with an essential mark, I mean the essential accident, like what is said in geometry: «The measure [which is] different from a [certain] thing is different from every measure which participates in [that thing]» – one has already assumed, indeed, the measure [which is] different, not the simple measure, and «different» is an essential accident for the measure –; and like what is said in arithmetics: «[In the case of] every number divided in two, [the result of] the multiplication of the half by the half is the fourth part of [the result of] the multiplication of the integer by the integer» – as a matter of fact, the number divided in two was assumed, not the number itself. [(ac)] Or it is a species of the subject-matter of the science, like one says: «Six is a perfect number»; six is indeed a species of the number. [(ad)] Or [else] it is a species [of the subject-matter], which accompanies itself to an essential accident, like what is said in geometry: «From every straight line which stands straight upon another straight line result two angles equal to two right [angles]». As a matter of fact, «line» is a species of the measure, which is the subject-matter [of geometry], [D125] and «straight» is an essential accident within it. [(b)] Or [else] it is an accident, like your saying in geometry: «The sum of the [internal] angles of every triangle is equal to two right [angles]»; indeed, the triangle is among the essential accidents of some measures.

The subject-matters of the demonstrative questions in the sciences, then, are not devoid of these five parts. As for their predicate, it is among the essential accidents specific of that subject-matter.

[§84]

[(iv)] The fourth one are the principles. With them, we intend the premises conceded in that science, by means of which the questions of that science are established, while those are not established in that science. However, they are either [(a)] primary, and they are [then] called axioms, like their speech in the first [book] of Euclid: «When equal [quantities] are taken from equal [quantities], the remainder will be equal; and when equal [quantities] are added, [the resulting quantities] will be equal». [(b)] Or they are not primary, and yet they are conceded by the apprentice. If then they are conceded willingly, they are called [(b.1)] subject principles. If [rather] a resistance remains in his soul, they are called [(b.2)] postulates, on the basis of which one begins, as it is said in the first [book] of Euclid: «It is inevitable that we concede that every point can be a centre; it is indeed possible that around it a circle be drawn». Among the people there is who ignores the concept of the circle in the respect according to which the lines from the centre to the circumference are equal, and yet it is proposed to them at the beginning of the science.

[§85]

[V.4]

[D126] FOURTH SECTION
ON THE CLARIFICATION OF ALL THE CONDITIONS
OF THE PREMISES OF THE DEMONSTRATION

They are four, [namely that the premises] be [(i)] true, [(ii)] necessary, [(iii)] primary, and [(iv)] essential.

[(i)] As for «true», we mean by that «certain», like the primary [propositions], the sensible [ones] and what accompanies them. This condition has already [been explained] before.

[(ii)] As for «necessary», we mean by that that they are like «animal» for «man», not like «writing» for «man». This [is a condition] if a necessary conclusion is researched [starting] from them. As a matter of fact, when the premise is not necessary, according to the intellect the judgment about the necessity of the conclusion does not follow necessarily from it.

[§86]

[(iii)] As for «primary», we mean by that that the predicate in the premise is established for the subject qua subject, like your saying: «Every animal is a body, therefore it is a body, because it is an animal», not for a more common notion than that; not like your saying: «Man is a body». [D127] Indeed, it is not a body because it is a man, but rather because it is an animal. Then, for its being animal it is a body, given that corporeality [pertains] first of all to the animal, and [only] afterwards, through it, [it pertains] to man as well. And neither for a more specific notion than that, like «writing» for «man», since that does not belong to him because of the animality, but rather because of the humanity, which is more specific. Therefore, «primary» is that which does not have between itself and the subject any intermediary, such that [it belongs] to that intermediary in the first place, and then in the second place to [the subject], through [the intermediary]. This is a condition concerning the primary premises. As for premises which have been the conclusion of syllogisms, and have then been made premises in another syllogism, this is indeed not posited as a condition in them, but rather necessity and essentiality are posited as a condition.

[§87]

[(iv)] As for «essential», it is the alert against the extrinsic accidents. In the sciences there is indeed no speculation concerning the extrinsic accidents. The geometer, as a matter of fact, does not speculate about whether the straight line or the curve [line] is more beautiful, nor about whether the circle is the contrary of the straight line, since beauty and contrariety are extrinsic with respect to the subject-matter of his science, which is measure. Indeed, they befall the measure not for the fact that it is measure, but rather by virtue of a more common descriptive feature than that, like its being existent, or something else. The

physician does not speculate about the fact that the wounds are or not round, since roundness does not befall the wound for the fact that it is a wound, but rather for a more common thing than that. [D128] When the physician says: «This wound heals slowly, since it is round, and circles are the most extended figures», what he mentioned is not a medical knowledge, and neither is it a sign of his knowledge of medicine, but rather of geometry.

[§88]

It is then inevitable, indeed, that the predicate of the question is essential in the sciences, and it is essential in the premises. However, there is a certain distinction among the two, and namely that «essential» is applied here to two notions. [(a)] The first one of them is that [the predicate] enters in the definition of the subject, like «animal» for «man»; as a matter of fact, it is essential in him, since it enters in him. Indeed, the notion of man is that he is a determined animal. [(b)] The second one is that the subject enters in its definition, not that it enters in the definition of the subject, like being snub for the nose, and being straight for the line. As a matter of fact, «snub-nosed» is an expression referring to him who has a nose with a specific attribute concerning the nose; therefore, [the nose] undoubtedly enters in its definition.

[§89]

[(a)] It is impossible that the essential according to the first concept is a predicate in the questions researched in the sciences, since the subject is not known unless by means of it. Therefore, its knowledge precedes the knowledge of the subject, and then how could its resulting in the subject be researched? If, indeed, one does not understand the triangle thanks to its definition according to the way of the conception, he will not research its states. Therefore, it is possible that he researches if its angles are equal to to right angles, or not; [D129] but as for the fact that he researches if it is a figure or not, this is impossible, since the figure is understood in the first place, and afterwards one understands its subdivision into what is circumscribed by three sides, namely the triangle, or by four [sides], namely the square. The knowledge of that, then, precedes.

[§90]

As for the premises, it is necessary that their predicates are essential. It is possible that the two predicates of the two premises are essential by virtue of the other notion, but it is not possible that they are both essential by virtue of the first notion, since [in that case] the conclusion would be known before the premise, because the essence of the essential according to that notion is essential. It is not possible that one says: «Every man is an animal; but every animal is a body; therefore, every man is a body», according to the fact that it is a problem, since the knowledge concerning corporeality precedes the knowledge concerning man. Therefore, when the subject of the question is man, it is inevitable that he is conceptualized in the first place, in order to research his state, since he who conceptualizes man, he undoubtedly conceptualizes the animal and the body in the first place, because he understands the body, and [he understands] that it subdivides itself into what is animal and

what is not; and that the animal, in turn, subdivides itself into what is rational and what is not.

However, it is possible that the predicate of the minor premise is essential by virtue of the first notion, and the predicate of the major premise is essential by virtue of the second notion; and likewise, vice versa.

This is what we wanted to make understand, and of which [we wanted] to provide an account, as for what regards the logic. Then we will mention, after this science, the *Metaphysics* according to them, if God Most High will want.

The Divine Things
[Metaphysics]

إلهيات

[§91]

SECOND SECTION
THE DIVINE [THINGS]

[D133] In the name of God, the Beneficent, the Merciful.

Know that their current habit was to make the natural [science] precede. However, we preferred to make this [science] precede, since it is more important, and the variety within it is greater, because it is the goal of the sciences and their aim. Is is [usually] postponed only because of its obscurity, since it is hard to inquire about it before having inquired about the natural [science]. We, however, will adduce during the speech [those parts] of the natural [science] from which the understanding of our intent depends.

We will present in detail the account of the intentions of this science in two premises and five treatises. [(1)] The first treatise, on the divisions of the existence and on its states; [(2)] the second [treatise], on the cause of the entire existence, which is God Most High; [(3)] the third [treatise], on His attributes; [(4)] the fourth [treatise], on His actions and on the relationship of the existents to Him; [(5)] and the fifth [treatise], on the modality of their existence from Him, according to their school of thought.

[§92]

[D134] FIRST PREMISE
ON THE SUBDIVISION OF THE SCIENCES

There is no doubt that every science has a subject-matter. The states of that subject are inquired within [that science]. The existing things about which there can be speculation within the sciences are divided into [(a)] that whose existence [depends] on our actions, like the human works such as the policies, the governments, the acts of devotion, the exercises, the battles, and so on, and into [(b)] that whose existence does not [depend] on our actions, like the sky, the earth, the plants, the animals, the minerals, the essences of the angels, of the demons, of the devils, and so forth.

[§93]

Surely, then, the philosophical science is divided into two parts. [(a)] The first one of them is that by virtue of which the states of our actions are known, and it is called practical science. Its utility is that the ways of the works through which our affairs are regulated in this world are revealed by means of it, and through it our hope in the hereafter is corroborated. [(b)] The second is that within which we know the states of the existents, in order to acquire in our souls the appearance of all the existence according to its hierarchical ordering, just like the visible form is acquired in the mirror. Now, the acquisition of that [appearance] in our souls is a perfection for our souls, because the predisposition of the soul to its reception is a property of the soul. Indeed, it is a virtue in the present state, while in the hereafter it will be a cause for happiness, as it will be [explained]. [This] is called speculative science.

[§94]

Each of these two sciences subdivides itself into three parts. [D135] [(a)] As for the practical [science], it subdivides itself into three parts. [(a.1)] The first one of them is the science of the government of the cooperation of man with people, [taken] collectively. Man, as a matter of fact, is a creature in need of the company of mankind. That is not ordained in such a way that it leads to obtain what is required in this world, and salvation in the hereafter, unless according to a specific way. This is a science whose principle are the sciences of the revealed law, but whose perfection are the political sciences referred to the government of cities and to the hierarchical ordering of their inhabitants. [(a.2)] The second one is the science of the government of the household, through which one knows the way of living, together with the wife, the son, and the servant, as this is comprised by the household. [(a.3)] The third one is the science of manners, and it is necessary that it comprises man, in order for him to be good and virtuous in his manners, and his attributes.

Since man is undoubtedly either alone, or in the company of others, and the company is [D136] either specific, with the inhabitants of the household, or general, with the inhabitants of the country, the [practical] science undoubtedly subdivides itself, on the basis of the government of these three states, in three parts.

[§95]

[(b)] As for the speculative science, here are its three [parts]. [(b.1)] The first one of them is called «divine [science]» and «first philosophy». [(b.2)] The second one is called «mathematical [science]», «disciplinary [science]», and «middle science». [(b.3)] The third one is called «natural science» and «lowest science».

[§96]

[The speculative science] subdivides itself in only three parts because the things known intellectually, with no exception, are either [(b.1)] free from matter and from the dependence on changing and mobile bodies, like the essence of God Most High, the essence of the intellect, the unity, the cause and the caused, the conformity and the contrariety, the existence and the non-existence, and the things analogous to these. As a matter of fact, the permanence of some of these things is impossible within matter, like the essence of the intellect; as for others, it is not necessary that they have matter, even though sometimes it accidentally inheres to them, like unity and the cause. The body as well, as a matter of fact, is described by being cause and one, just like the intellect is described; and yet it is not from their [own] necessity that [these things] are found in matter. Or [the things known] are dependent from matter, and these, with no exception, either [(b.3)] are inasmuch as they need a specified matter, like man, the plants, [D137] the minerals, the sky, the earth and the other species of the bodies; or [(b.2)] it is possible to obtain them in estimation without a specified matter, like the triangle, the square, the long and the circular. As a matter of fact, these things, even though their existence does not subsist unless in a determinate matter, are not determined into existence according to the way of the necessity of a specific matter, since sometimes they accidentally inhere in iron, and [sometimes] in wood, in dust, and so

forth – not like man, whose notion cannot be obtained unless in a matter determined by flesh, bones, and so forth. As a matter of fact, a wooden carving is not a man, while the square is a square, [be it made] of flesh, of clay or of wood, and it is possible that these things are obtained in the estimation without regard to matter.

[(b.1)] The science that occupies itself with the speculation about that which is totally free from matter is the divine [science]; [(b.2)] the science that occupies itself with the speculation about that which is free from matter in estimation, [but] not in existence is the mathematical [science]; while [(b.3)] [the science] which occupies itself with the speculation about that which needs specified matters is the natural [science]. This, then, is the cause of the subdivision of these sciences in three parts; and the speculation of philosophy is in these three sciences.

[§97]

[D138] SECOND PREMISE

ON THE CLARIFICATION OF THE SUBJECT-MATTERS OF THESE THREE SCIENCES,
IN ORDER TO EXTRACT FROM THEM THE SUBJECT-MATTER OF THE DIVINE SCIENCE,
WITH WHICH WE ARE CURRENTLY DEALING

As for the natural science, its subject are the bodies of the world, inasmuch as movement, rest and change occur to them, not concerning their surface and their measure, nor concerning their figure and their roundness, nor concerning the relation of certain parts of them with certain other [parts], and not even concerning [D139] their being an act of God Most High. As a matter of fact, the speculation on the body is possible from all these respects, but the natural [science] does not speculate about it unless only inasmuch as it changes and transforms itself.

As for the mathematical [science], its subject is globally quantity, and minutely measure and number.

[§98]

The natural science has several branches, like medicine, the [art of] talismans, the [art of] spells, the [art of] magic, and so forth. The mathematical [science] as well has several branches. Its roots are the science of geometry, of arithmetics, of astronomy – I mean the appearance of the world – and of music. Its branches are the science of perspectives, the science of the traction of weights, the science of the mobile spheres, the science of algebra, and so forth.

[§99]

As for the divine science, its subject-matter is the most common of things, *i.e.* absolute existence. What is inquired in it are the appendages of existence *qua* existence, inasmuch as it is only existence, like its being substance and accident, universal and particular, one and manifold, cause and caused, in potency and in actuality, conformable and contrary, necessary and possible, and the things similar to these. These [things], indeed, are appended to

existence *qua* existence, not like being triangular or being square, since they are appended to existence after it has become measure, [D140] nor like being even or being odd, since [these] are appended to it after it has become number, nor like whiteness and blackness, since [these] are appended to it after it has become natural body. In sum, the speculation on any characteristic that is not appended to existence except after it has become subject-matter of one of the two [aforementioned] sciences – mathematics and physics –, does not belong to this science.

[§100]

In this science there fall [on the contrary] the speculation on the cause of the entire existence, because the existent subdivides itself into cause and caused, and the speculation on the oneness of the cause and on its being the Necessary Existent, on His attributes, on the dependence on Him of the remaining existents and on the way of their deriving from Him. The speculation concerning the oneness of God within this science is properly called divine science, and it is also called science of sovereignty.

The farthest of the three sciences from confusion is the mathematical [science]. As for the physical [science], within it the confusion is greater, because the natural things are in the proximity of change, and thus far from stability, as opposed to the mathematical [things].

These, then, are the premises.

[§101]

[I]

[FIRST TREATISE]

As for the treatises, the first treatise is about the divisions of existence, its states and its essential accidents. This will be made apparent in the [following] subdivisions.

FIRST DIVISION

The first division of existence is into substance and accident, which is comparable to the subdivision through the differentiae and the species. [D141] The way of making understandable this subdivision is that the intellect undoubtedly perceives existence according to the way of conceptualization, and [in so doing] it does not lack the description nor the definition, since existence does not have description, nor definition. As for definition, it is actually an expression referring to the combination of genus and differentia, and existence does not have a thing more common than itself, such that its differentia can be annexed to it, and from this [combination] the definition «existence» can derive. As for description, it is an expression referring to making known what is obscure by means of that which is manifest; but there is nothing more manifest than existence, nor better known or more notorious than it, thanks to which existence might become known.

[§102]

Surely, if one has pronounced [the word] «existence» in Arabic, and it was not understood, sometimes one shifts to Persian, so that it is understood what is meant with [that] expression. As for definition and description, they are [however] prevented, since your end in describing and making known is that you say [for instance]: «Existence is that thing which subdivides itself into temporally originated and eternal», but this is wrong, since it consists in making a thing known through that which is [only] known through [that thing itself], since the temporally originated is [only] known after having known existence, and likewise the eternal. As a matter of fact, «temporally originated» is an expression referring to an existent after a non-existence, [while] «eternal» is an expression referring to an existent not preceded by a non-existence. Thus, when it has become manifest that the conceptualization of the existence is primarily obtained in the intellect, and not through the search for a definition or a description, it will not be concealed that in the intellect it subdivides itself into [(a)] an existent that needs a receptacle in which to subsist, like the accidents, and into [(b)] that which does not need [such a receptacle].

[§103]

[(a)] That which needs a receptacle subdivides itself into [(a.1)] that which inheres in a receptacle while that receptacle subsists in itself without that accident, and does not need the accident for its subsisting. The inherence of the accident does not replace its true nature

and does not change the answer to the question about its quiddity, like [in the case of] blackness for the garment and the man; [D142] and into [(a.2)] that which inheres in a receptacle in such a way that the true nature of the receptacle subsists thanks to it, and because of its inherence the true nature and the answer about the quiddity do change, like [in the case of] the form of man in the semen, and the form of the mouse in the dust. As a matter of fact, if someone points to a garment and asks: «What is this?», the answer [will be]: «It is a garment»; and if it then became black or hot, and one asked [again: «What is this?»,] the answer would [always] be: «It is a garment», since blackness and heat do not fall within its being a garment, and do not suppress its true nature. When [rather] the semen transformed itself in a man, it is not possible to say: «Semen», as an answer to [the question]: «What is this?», nor, when the dust became a mouse and a question is asked about that, is it possible to answer: «It is dust». As a matter of fact, heat and colour are a description annexed to the garment, but together with which the garment remains a garment, while the dust does not remain dust together with the form of the mouse, nor does the semen remain semen when it has become a man.

[§104]

[The two things] – I mean the colour and the form of humanity – are equivalent inasmuch as they both need a receptacle, and yet between the two receptacles and the two things inhering in them there is a distinction. Therefore, one cannot avoid the technical usage of two distinct expressions. They have already technically adopted the specification of the term «accident» for that which behaves like the colour and the heat for the garment, and the name of «subject» has been given to the receptacle of the accident. Therefore, the notion of «accident», according to this technical usage, [indicates] that which inheres in the «subject», [while] the notion of «subject» [indicates] that which subsists by itself, without the notion of what inheres. As for that which behaves like humanity, it is called «form», and its receptacle is called «matter». The wood is then subject for the form of the bed, and matter for the form of the ash, since it remains wood together with the form of the bed, but it does not remain wood together with the form of the ash. [D143] The form is [also] called «substance», since they have characterized «substance» as an expression referring to every existent which is not in a subject, and the form – as it was said before – is not in a subject. Matter is also a substance.

[§105]

The substance, then, subdivides itself into four species: [(i)] the matter, [(ii)] the form, [(iii)] the body, and [(iv)] the abstract intellect. It is what is self-subsisting. In every body there are three first substances: water, for instance, is a body composed by the form of waterness, and by the matter sustaining the form. As a matter of fact, the matter taken absolutely is a substance, the form taken absolutely is [also] a substance, and the combination of the two is [again] a substance. This is then the exposition of these subdivisions in the intellect, together with the explanation of these technical terms. As for establishing the three substances, [it will be] by means of the demonstration, according to what will be abundantly expounded [later on], with the exception of the body [(iii)], because it is established by

means of the direct testimony of the senses. As for the intellect [(iv)], the form [(ii)] and the matter [(i)], that which is looked for is undoubtedly [looked for] by means of the sign. It derives from this that they have applied the name of substance to that which is a receptacle and also to that which inheres [in that receptacle], and in this they have been in disagreement with the theologians, since the form is – according to the theologians – an accident following the existence of the receptacle.

They have excluded [this], and have said: «How [is it possible] that the form be not a substance, since through it the essence of the substance subsists, and its true nature and its quiddity subsist [as well]? And how could it be an accident, since the accident follows the receptacle after the autonomous subsistence of the receptacle itself? Matter follows form in subsistence, and how could then the root of substance not be a substance?».

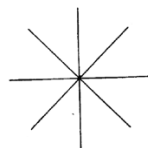
[§106]

[D144] SPEECH ABOUT THE TRUE NATURE OF THE BODY

When the intellect has divided the substance in body and non-body, and the existence of the body, among all the substances, is perceived through the sense, without the need of the demonstration, it is necessary to start with the clarification of its definition and of its true nature. «Body», then, is every substance in which it is possible to determine three extensions intersecting at right angles: as a matter of fact, when you consider the essence of the intellect, or the essence of the Creator Most High, you cannot determine at all a dimension or an extension within Him. When [rather] you look at the sky, the earth, and all the other bodies, it is possible for you to determine a continuous extension, which is susceptible of being divided and of being disjoined. The extension in only one direction is called length, and this is only found in the line. The extension in two directions is called breadth and length, and this is only found in the plane, since it is divided in two directions, while the line is not divided except in only one direction. There is nothing that is divided in three directions except the body; therefore, all that in which it is possible to determine, through the estimation, three extensions intersecting at right angles is the body.

[§107]

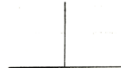
We have specifically pointed at the right angles, since if that were not posited as a condition, it would be possible to determine within every body many extensions not intersecting at right angles [D145], like this.



[FIGURE 2]

Rather, once you have determined the right angles, they do not add up to be more than three, namely length, breadth, and depth. The right angle is that which results from the

standing of a line put in a vertical position in the middle of another [line], so that it is not inclined towards one of the two sides, in such a way that the two resulting angles on the two sides are equivalent. As a matter of fact, when the two are equivalent, each one is called «right», like this.



[FIGURE 3]

When it rather has an inclination towards one side, for instance the right one, [the situation] is like this.



[FIGURE 4]

The angle of the side towards which there is the inclination becomes narrower than its opposite, so that it is called «acute», while the wide opposite [one] is called «obtuse».

[§108]

Concerning the definition of body, it has already been said that it is long, broad and deep; but in this there is a kind of negligence, since the body is not body in consideration of what is in it as for length, [D146] breadth, and depth in actuality, but [it is such] by virtue of its reception of length, breadth and depth, *i.e.* of the three dimensions. With the proof [of that being] that if you took some wax and molded it with the length of a span, the breadth of two fingers, and the thickness of one finger, it would be a body not for what is in it as for length, breadth and depth, since if you made it circular or another shape, that specific length extension and that specific length would cease, and there would be two other extensions replacing the [first] two, but the bodily form would not be replaced at all. Therefore, the measures existing in the body are extrinsic accidents with respect to the essence of corporeality, although sometimes they are concomitants that do not separate, like the shape of the sky. However, the accidental is [only] sometimes an [inseparable] concomitant, and as [is] breadth [for the body], likewise also blackness for the Ethiopian [man].

[§109]

Therefore, the being of the essential for the body, which is the bodily form, is inasmuch as it receives the determination of the dimensions, not the existence of the dimensions in actuality; rather, the measure present in actuality is an accident. It is allowed, then, that a body receives a greater or a smaller measure: as a matter of fact some time it grows and some other time it diminishes with no addition from outside, but by itself, inasmuch as measure is an accident in it, and there is not a measure specified for it thanks to its essence. The sign that measure is not the true nature of the body is that the bodies are equivalent in

the bodily form, [so that] it is not conceivable a distinction among them [with respect to this], whereas they are undoubtedly different as for measures.

[§110]

[D147] SPEECH ABOUT THE DIFFERENCE [OF OPINIONS]
CONCERNING THE COMPOSITION OF THE BODY

People have disagreed about the composition of the body. The cognizance about the true nature of the body is not obtained except through the clarification of what is sound in the [various] schools of thought about this. They have disagreed according to three schools of thought.

[(a)] Someone said that [the body] is composed of unities not dividing into parts, neither in the estimation nor in actuality; each of those unities is called «individual substance», and the body is composed of those substances.

[(b)] Someone said that it is not composed at all, but it rather is only one existent for the true nature and the definition, in whose essence there is no multiplicity.

[(c)] Someone said that it is composed of form and matter.

[§111]

[(a)] As for the sign of the falsity of the first school of thought, it [consists in] the invalidation of the atom. The clarification of its impossibility [occurs] thanks to six facts.

[(a.1)] The first one is that if two substances were presupposed, would each one of the two extremes encounter in the middle that which the other encounters, or not? If not, a subdivision has already resulted, since what this extreme fills by tangency is not that which the other [extreme] fills. If [rather the point of encounter] were the same, then undoubtedly it would be impossible, since from that it would follow that each one of the two extremes would totally interpenetrate the middle [one]. Since it would encounter it all, but it does not have an 'all' [composed of parts] and rather it is one, and [since] it has already encountered something of it, then it has already encountered all of it, and the other [extreme] has encountered all of it. Therefore, it follows that the place of the whole and the place of the middle are one [and the same]. Otherwise, the middle would become an obstacle between the two extremes, and it would become a place of encounter for each one of the two extremes without that the other [extreme] encounters [the first one] [D148]; whereas it is not possible that it encounters [the middle one] in the same [place where] the other encounters [it] unless by means of a reciprocal interpenetration. Moreover, if a third and a fourth [substance] should arrive, likewise it would follow that the bulk of one thousand parts would not exceed one part [alone] – and there is no doubt about the impossibility of this.

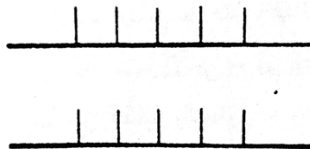
[§112]

[(a.2)] Second proof. It consists in the fact that we presuppose five parts, disposed in a series like if it were a line, and we fix two parts at the two extremes of the line, so that the intellect might evaluate beforehand the movement of the two parts, until they inevitably encounter

[each other], and might [also] evaluate beforehand the point of their meeting, by virtue of an even movement of the two parts. Now, when that is presupposed, it happens that each one of the two parts cuts a part of the middle, so that the middle is already divided. Otherwise, it would follow to say: «It is not in the power of God Most High to conjoin one of those two to the other by means of an even movement. Rather, when he began to set the two in motion, and one of the two got eventually to the second, the power of His setting into motion, so that the other may move towards the third one, has come to a stop». I wish I knew! The stopping of the power [of setting in motion] regards the right substance, or the left one? And why should that be impossible for the power regarding one of the two in particular, and not the other, since that other is similar to [the first] as for the reception of the movement?

[§113]

[(a.3)] Third proof. It consists in the fact that we presuppose two lines, each one of the two [composed] of six parts. One of the two is the line AB, and the other one is the line CD, according to this picture.



[FIGURE 5]

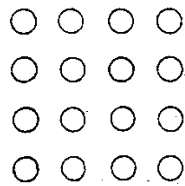
We have already presupposed two parts. One of them wants to move from A to B, and the other one from D to C, in such a way that they come to face each other. There is no doubt, then, that the two will at first face each other and be opposite to each other; then, one of the two will leave the other behind. It is possible that we suppose that by virtue of an even movement of the two parts. [D149] Now, if the single substance were established, that would be impossible, because their being opposite to each other is not possible unless in three ways. [(a.3.1)] The first one of them is that [the opposition] happens in correspondence of the two points E and G, so that one of the two [single substances, *i.e.* the one originally in D] passed through four parts, and the other one [*i.e.* the one originally in A] through two parts. [(a.3.2)] The second one of them is that [the opposition] happens in correspondence of the two points F and H, so that again one of the two [single substances, *i.e.* the one originally in D] passed through two parts, and the other one [*i.e.* the one originally in A] through four. [(a.3.3)] The third one is that one of the two is on the point G, and the other one on the point F, and each one of the two has [thus] passed through two parts. However, the two points G and F are not opposite to each other, and therefore the state of being opposite [associated] with the evenness of the motion is impossible, because an overstepping [of the two substances] is impossible.

There is no doubt, [however,] that that is [actually] possible, as it would become impossible only because of the assumption of the substance as indivisible substance. Rather,

[the two substances] will be opposite to each other in the middle, since every length is susceptible [D150] of being divided in equivalent halves, so that the point of bisection is the middle, and the two are opposite to each other [right there].

[§114]

[D151] [(a.4)] Fourth proof. It consists in the fact that we presuppose sixteen single substances placed as to be adjacent to one another [D152], in the form of a four-by-four square, in this way.



[FIGURE 6]

We have already presupposed [the case] that they are separate: let us [now] presuppose, then, that they stick together without any gap among them. There is no doubt, then, that their sides are equivalent, because every side is composed of four parts; but its diagonal is also composed of four parts. Therefore, it is necessary that its diagonal is equal to its side, which is impossible because the diagonal, which always cuts the square in two equivalent triangles, is greater than the side. That [D153] is known by the testimony of the senses in all squares, and the geometrical demonstration [also] proves it – but in association with the single substance it becomes impossible.

[§115]

[(a.5)] Fifth proof. When we have presupposed a [stick of] wood standing upright in the sun, a shadow undoubtedly befalls to it, and from the sunbeams a straight line extends itself from the end of the shadow which belongs to the top of the wood towards the sun. It is necessary that it moves whenever the sun moves, since the sunbeams do not fall unless in a straight [line]. Therefore, if the sun moves but the shadow does not move, a straight line will have two extremes: one extreme [directed] toward the end where the sun was in the first place, and [another] extreme [directed] toward the end where the sun descended in a second [moment], which is impossible. [D154] Therefore, if we have presupposed the movement of the sun of a single part, the shadow [should] then move of less than a part, which [supposes] however that the part gets divided. If it moved of the same [distance] the sun moved, this would be impossible, since the Sun passes through [several] parasangs, while the shadow does not move except for the measure of a hair.

[§116]

[(a.6)] Sixth proof. When the iron or the stone quern rotates, there is no doubt that

whenever its external part moves, the middle parts move less than it, since the circumferences of the middle are smaller than the circumferences of the extreme. When [then] the extreme moves of a part, either the middle part moves less than [the extreme], but then the part gets divided; or it does not move, from which it follows however that all the parts of the quern get disjoined, so that some may move and others stand still – but this is impossible in the sense, since the parts of iron do not get disjoined at all.

[§117]

[(b)] As for the inductive proof of the falsity of the second school of thought, namely of the speech of the one who says that the body is not composed at all, but it is rather only one existent for the true nature and the definition, it consists in the fact that it is not conceivable that one should refer to a thing [which is] one under every respect by means of two expressions regarding one of which it is true what is false regarding the other. We shall clarify [however] that the intellect establishes, about every body, two things regarding one of which it reveals to be true what is not [true] regarding the other. As a matter of fact, «bodily form» is an expression referring undoubtedly to the continuity, this continuous body being undoubtedly susceptible of being disjoined. [D155] That which is susceptible [of being disjoined] is either one of two things: either it is itself in continuity, or it is not. But if it is in continuity, this is impossible, since that which is susceptible is that which remains together with that which has been received, since it is not said [for instance] «not existent» before [the reception] of the existence. But the continuity is not susceptible of disjoinment, therefore it is inevitable [to presuppose] another thing as susceptible of the continuity and the disjoinment together, and that susceptible [thing] is called, with a technical term, «matter». The received continuity is called «form», and it is not conceivable a body within which there is no continuity, and a continuity is not conceivable except in a continuous [thing], nor [is] an extension [conceivable] except in an extended [thing].

[§118]

Now, the continuous is different from the continuity for the definition and the true nature, but they do not differ for the place, and it is not possible that one of the two distinguishes itself from the other by the indication of the sense. However, they can be distinguished from one another by the indication of the intellect, since the intellect judges one of the two precisely on that on the basis of which it does not judge the other, namely the reception of the disjoinment, which is the judgment concerning its impossibility with respect to the continuity. However, the intellect has already judged about its establishment in a thing, therefore that thing is not the continuity. The intellect, then, has undoubtedly already perceived a differentiation; but nothing is ever different with respect to itself, and this is, then, the demonstration of the establishment of matter and form within every body.

As for the essence of the god, the essence of the intellect, and the essence of the accident, it is not possible to presuppose within them continuity or disjoinment, therefore it does not follow that there is composition within them. Only the bodies are composed, [D156] necessarily and undoubtedly, of form and matter.

[§119]

[(c)] From the complex of what has been explained before, it results therefore that the true one is the third opinion, namely that the body is not composed of separable parts, neither finite nor infinite. As a matter of fact, if the parts were infinite, it would not be possible to cut the body at some interval from an extreme toward [another] extreme, since it does not reach the half that which did not reach the half of the half, and likewise the half of the half of the half, and there would be infinite halves, so that it would not be possible to cut them. The body, then, does not have parts in actuality, but [only] in potency. It gets a part only when it has been partitioned, and a cut results in it [only] when it has been cut, and a division [only] when it has been divided. The speech of one who says: «The body is divisible», if he does not mean by that that [the body] is predisposed to [the fact] that the subdivision takes place in it, is wrong, just like his saying that it can be cut or disjoined. As a matter of fact, how could the body, one and continuous, be cut and disjoined? Certainly, [however,] it is predisposed to it.

[§120]

«Subdivision», «cut», and «partition» are polyonymous expressions, and all are established with regard to the one body, in potency and not in actuality. They pass into actuality only for one of these three reasons: [(a)] either a cut, by means of the severance of the parts; [(b)] or because of the fact that the accident varies within it, like the coloured wood, so that the white is different from the black; [(c)] or because of the estimation, namely the free behaviour of your estimation with regard to an extreme [of the body] leaving the other aside, so that that to which your estimative power turns is different from that from which the estimation averts itself. Putting the estimation on it is like putting the finger. Whenever you put your finger on an extreme, what you touched with your finger is different from the opposite [extreme], [D157] so that a subdivision occurs in [the body]. Likewise, that which depends on your estimation distinguishes itself from that which does not depend on it.

From this [it follows], then, that it is difficult for the estimation to conceive that the body is one, devoid of parts, since it turns spontaneously to the individuation of the extremes and to the specification of some parts by means of [its] evaluations. In the presence of that, the body is then subdivided with a subdivision resulting from the estimation. It does not have a subdivision in its own definition, but it rather occurs to it by virtue of the action of the estimation. Yes, it was predisposed to the act of the estimation and to the manifestation of this predisposition, and the easiness of getting predisposed to it and the absence of the detachment of the imagination from it would hardly let the estimation assuage itself in the affirmation that the one body [composed of] similar parts, like one water, is one. Rather, we say: «Know that the water that is at the bottom of the mug is not the water that is on the surface of the mug». This is true, since the subdivision already resulted because of the differentiation in the accidental occurring of the contiguity [of the water with different parts of the mug]. We further say: «The estimation determines two non-contiguous parts in the mug. Therefore, that which is on the right side is necessarily different from that which is on the left side». This is also true, since the subdivision already resulted by means of the differentiation in the accidental occurring of the equal distance with respect to the right and left,

or with respect to the proximity to the surface of the mug, or to its middle part. All this necessitates a subdivision. However, when all these differentiations are dismissed, and a single body, homogeneous under all respects, is considered, the intellect judges that it is one, without any parts in actuality, despite being susceptible of partitioning.

This, then, is the unveiling of the integument about it.

[§121]

[D158] SPEECH ABOUT THE INSEPARABILITY OF MATTER AND FORM

Matter, in itself, has no actual existence at all without the form. Rather, its existence is always associated with the form; and likewise, form does not subsist in itself without matter. The inductive proof of the fact that matter is [never] devoid of form is twofold.

[(a)] The first [reason] is that if it existed, then one of the two: either one could point at it and at its direction with the hand, with a sensible pointer [(a.1)], or one could not [(a.2)]. [(a.1)] If it could be pointed at, it would then have two directions. Therefore, that which reaches it from a [certain] direction of encounter with it would be different from that which encounters what reaches it from the other direction, and it would then be subdivided. In it, then, there would be the form of corporeality, since there is no meaning for «bodily form» and its true nature, except the reception of the division. [(a.2)] If [on the contrary] it could not be pointed at, it would be absurd, inasmuch as, when the form inheres in it, [(a.2.1)] either it is in every place, [(a.2.2)] or it is not in a place at all, [(a.2.3)] or [else] it is in a place with the exclusion of [another] place. But [these] three divisions are absurd: therefore what leads to them is absurd. [D159] [(a.2.1)] As for the falsity of its being in every place, before [being] in a [single] place, it is apparent. [(a.2.3)] As for the falsity of its specific jurisdiction in a place with the exclusion of another, it [emerges] inasmuch as the bodily form, inasmuch as it is bodily, does not require a determined place; rather, all the places are one and the same in relation to it. The specific jurisdiction, then, is by virtue of a thing additional with respect to corporeality, namely by the fact that one says: «Matter was in a place which could be pointed at, then the form encountered it within it, and it is [thus] specified by means of it». When matter cannot be pointed at, it is impossible that the specification of a place with the exclusion of [another] place happens by means of it.

[§122]

Now, if someone [objected by] saying: «But this would follow from the beginning for the body [itself], since it [should] not assume a specific jurisdiction on a place with the exclusion of [another] place, since inasmuch as it is body, it is in the same relation with all places, in one and the same manner», one [should] answer: «Certainly we will say: “Just like the existence of a matter subsisting in actuality without the addition of a form inhering in it is inconceivable, likewise the existence of an absolute body, having nothing else than the form of corporeality, is not conceivable until a thing additional to the form of corporeality is annexed to it, perfecting [its] species. Likewise, an absolute animal, without it being either horse, or man, or other than that, is not conceivable, and rather one cannot avoid to annex

the differentia to the genus, so that the species is perfected, and the existence results”». Therefore, an absolute body is not in the existence at all, but a specific body [will be], like a sky and a star, a body, an air, a earth, a water, and what is composed of these. Their claiming of some places rather than others [depends] then on their form, like the earth – by virtue of the form of earthiness – claims the centre, and the fire – by virtue of the form of fireness – claims the proximity of the circumference, and likewise for all the species.

[§123]

[D160] Now, if someone [objected] by saying: «The coercion concerning the [fact that] the parts of a place [must be] of one single species [however still] remains, despite the fact that one can point at a part of the water in the sea, saying: “This, inasmuch as it is water, does not claim this part of the place, but rather if it were towards the centre of the sea, farther or closer, it would [still] be possible. What is, then, that which specifies it in [this particular place]?”», [one should] answer that the form of waterness, which is in that water, encountered the matter in which it inheres in that place, since, for instance, the air is that which transforms into water, and it already existed, at that moment, that air that later, having the cooling cause which transformed it into water come [to it], remains, at that moment, water. Matter, [however,] was not there without a form, but rather with the form of the airness. It then slipped it off, and wore [instead] the form of the waterness.

This, then, is one of the causes. Among the causes [there is also the fact that] it is transferred to it by virtue of a moving cause, or of something else. Now, as for pure waterness, it does not require a specific part among the parts of the domain of the water, but it is rather a thing that is added to it, of the kind we have mentioned. It is clear, then, that matter does not subsist in itself without the form.

[§124]

[(b)] The second inductive proof is that when matter is considered as absolute with respect to the form, then one of the two: [(b.1)] either it subdivides itself, [(b.2)] or it does not subdivide itself. [(b.1)] Now, if it subdivided itself, then it would have the bodily form within itself, [while] [(b.2)] if it did not subdivide itself, then one of the two: that which opposes itself in it to the reception of the division would be in it [(b.2.1)] either [as something] natural and essential, [(b.2.2)] or [as] an extrinsic accident opposing to it. [(b.2.1)] Now, if it were essential it would be impossible for it to receive the subdivision, just like it is impossible that [D161] the accident and the intellect receive a body. [(b.2.2)] If [rather] that [thing] were in it [as] an extrinsic accident, then a form [would be] in it, and [matter] would thus not be devoid of the form. That form, however, would oppose itself to the bodily form, and this despite the fact that the bodily form does not have a contrary, as will be explained while mentioning the contrariety.

[§125]

Now, if someone [objected] by saying: «On what [basis], then, do you disavow [the one] who admits that the bodily form is inseparable from matter, saying however that [the form]

is accident within it and an inseparable concomitant of its?», [one should] answer: «This is impossible, since the subject subsists by itself in the intellect without the accident, even though it never separates itself from it in the existence, given that the intellect has a way to evaluate the essence of that subject, by saying: “Can it be pointed at, or not?”, or “Is it divisible, or not?». The two aforementioned inductive proofs would [then] return, in themselves and with an additional doubt, namely that matter in itself, when it cannot be pointed at, is [in itself] the pointing at the form, which is an accident [under this hypothesis], and the accident subsists in the essence of the subject. Therefore, if the subject could not be pointed at, it would be necessary for it to be clarified thanks to the accident which can be pointed at; but there would not be a receptacle for it, and the accident would not subsist in itself, but rather it would subsist in its essence, since it would become possible to point at it. But all that is impossible.

[§126]

It appears, then, that matter is not found without form, and that bodily form, and matter as well, are not found without the differentia, which perfects the species of that body, annexing to them. As a matter of fact, every body – when it is free [to behave according to] its own nature – looks for a place where it could come to rest, [D162] and that does not belong to it for its being a body, but for [something] additional. Every body is [(i)] either quick to the disjoinder, [(ii)] or hard to it, [(iii)] or [else] it is inaccessible to it, and all that not by virtue of the pure corporeality, but rather by virtue of [something] that adds to it. [Something] additional is then inevitable in order for existence to perfect itself. From that it results that the body is a substance, and that it is composed of two substances, a form and a matter, whose composition does not [occur] by virtue of the conjunction between two separate [entities], which exist without the fabrication. Rather, it is an intellectual composition, along the [lines] of the indication that was presented.

[§127]

[D163] SPEECH ON THE ACCIDENTS

After the division of the substances, it is inevitable [to also deal with] the division of the accidents, which subdivide themselves, in the first place, into two parts. [(1)] The first one of them is that for conceiving whose essence there is no need of conceiving a thing external to it; [(2)] the second one is that [for conceiving whose essence] there is [such a] need.

[(1)] As for the first one, it [has] two species: [(1.1)] quantity and [(1.2)] quality.

[(1.1)] As for quantity, it is the accident that attaches itself to the substance because of the measuring, the increase, the diminishing, and the equivalence; for instance the length, the breadth, the depth, and the time. This as a matter of fact does not need, for its being conceived, to turn the attention to a thing external with respect to it.

[(1.2)] The second species is quality, whose conceiving [as well] does not need to turn the attention to an external thing, even though a division in the substances does not occur because of it. Examples of it are among [(1.2.1)] the sensible things and the [things] perceived by the sense, like colours, flavours, smells, the roughness and the smoothness, the

softness and the hardness, the wetness and the dryness, the heat and the coldness; [others are] among [(1.2.2)] the non-sensible things, which are [either] [(1.2.2.1)] a predisposition to a perfection or to its opposite, like the power [D164] to fight and to maintain health and, [at the opposite,] like weakness and sickness, [or] [(1.2.2.2)] a perfection, like knowledge.

[§128]

[(2)] As for the other division, [namely] that which does need to turn the attention to another thing, it consists of seven things: [(2.1)] the relation, [(2.2)] the where, [(2.3)] the when, [(2.4)] the position, [(2.5)] the having, [(2.6)] the acting, and [(2.7)] the being acted upon.

[(2.1)] As for the relation, it is a condition of the substance that accidentally occurs because something other than it exists in opposition to it, like paternity, filiality, fraternity, friendship, contiguity, equidistance, and being at the right and at the left. The father, as a matter of fact, does not have the paternity except inasmuch as the son exists in opposition to him.

[(2.2)] As for the where, it is the being of the thing in the place, for example its being over or under.

[(2.3)] As for the when, it is the being of the thing in the time, like its being yesterday, last year, and today.

[(2.4)] As for the position, it is a relation of the parts of the body with one another, like its being sitting, laying, and standing: as a matter of fact, being standing and being sitting differentiate thanks to the differentiation of the position of the shanks with respect to the thighs.

[(2.5)] As for the having, which is also called possession, it is the being of the thing inasmuch as it comprises that which is transferred with its transferral, like its being wrapped in a *ṭaylasān* or in a turban, dressed in a shirt, shod, and [like] the being bridled or saddled of the horse. As a matter of fact, if it did not comprise [the thing] and were [yet] transferred with its transferral, it would not pertain to [this category] – and indeed, he who wears the shirt around his head is not wearing a shirt. If it did comprise [the thing], [but] it were not transferred with its transferral, [D165] it would not belong to the [category of] having [either], since the house comprises the individual, and the vessel the water, yet they are not transferred with the transferral of that which they respectively comprise.

[(2.6)] As for the acting, it is the being agent of the thing, in the condition of its influencing something else in actuality, like the burning of the fire in the moment of the reception of the burning in actuality, or [like] its being heating.

[(2.7)] As for the being acted upon, which is that which opposes itself to it, it is the continuous reception of an influence of [something] else by the thing, like the being heated of the water and its being cooled, or like its blackening or its whitening, and [in general] the being heated of what is not heat, and the blackening of what is not blackness. As a matter of fact, heat and blackness belong to the [category of] quality, whose conceiving does not need to turn the attention to [something] other [than itself]. With «being acted upon» we only mean the reception of an influence, the change and the being transferred from a state to [another] state, when [for instance] the heat increases or diminishes. As a matter of fact, if it came to rest, it would assume the quality of the heat, and it would not be an acted upon anymore. Let then this distinction be understood.

[§129]

[D166] SPEECH ABOUT THE DIVISIONS OF EACH ONE OF THESE ACCIDENTS
AND SETTING UP OF THE INDUCTIVE PROOF REGARDING THE FACT THAT THEY ARE ACCIDENTS

[(1.1)] As for the quantity, it is of two species: [(1.1.1)] continuous and [(1.1.2)] discrete.

[(1.1.1)] Continuous [quantity] has four parts: [(1.1.1.1)] the line, [(1.1.1.2)] the surface, [(1.1.1.3)] the body, and [(1.1.1.4)] the time.

[(1.1.1.1)] As for the line, it is the length, namely that in which the extension and the measure are not found except in only one direction. It is found in the body in potentiality, and when it passes into actuality is precisely called «line».

[(1.1.1.2)] The second [part, namely the surface,] is that which extends itself in two directions, namely length and breadth. It is found in the body in potentiality, it results in actuality only by virtue of the cutting of the body, and it is [then] called «surface». With «surface» one means the apparent aspect of the body, namely the product of a cut performed upon it.

[(1.1.1.3)] The third [part is that] which has three dimensions, namely the body. The aspect [of the body] encountered by he who touches [it], should one not consider anything in the body with the exception of it, is the surface, which is an accident, since it were not there for the [mere] fact that the body was existent, but when the body was cut, it appeared in the body. This is [precisely] the meaning of «accident». As «surface» is an expression referring to the product of a cut performed upon the body, likewise «line» is an expression referring to the extreme of the surface, and to the product of a cut performed upon it. [D167] «Point» is an expression referring to the extreme of the line, and to the product of a cut performed upon it. Since the surface is an accident, it is obvious that the line and the point are even more suited for the accidentality. Moreover, the point has no dimension, since if it had only one measure and one dimension it would become a line, [while] if it had two dimensions it would become a surface, and if it had a measure in three directions it would become a body.

It is possible to conceive the line, the surface and the body by means of the estimation of the movement. As a matter of fact, when the point moves, the line results; when the line moves, not in the direction of its extension, the surface results; and when the surface moves, not in the direction of its extension, the body results. This is perhaps believed to be a verification, but this is impossible. Rather, it is an estimative matter, since the point does not move until there is a place, and there is no place until there is a body. The body, as a matter of fact, is prior in getting [into existence] with respect to the surface, and the surface [is prior] with respect to the line, and the line with respect to the point, and the point with respect to the movement of the point.

[(1.1.1.4)] As for «time», it is an expression referring to the measure of the movement, and it will be [explained] in the physics.

[§130]

[(1.1.2)] As for the discrete quantity, by it one means the number. It is an accident as well,

since the number derives from the repetition of the units. If, then, the one and the unity are an accident, the number deriving from them would be even more suited for the accidental-ity. The discrete quantity differs from the continuous quantity only in one thing, namely in the fact that between the parts of the discrete [quantity] no common part conjoining one of the extremes with the other can be found, so that between the second and the third one there is no continuity, nor is there between them a common part among the extremes that may conjoin the one with the other, in the same way in which [D168] the common point estimated in the middle of the line conjoins the two extremes of the line, the estimated line conjoins the two extremes of the surface, the estimated surface conjoins the two extremes of the body, and the now conjoins the two extremes of the past and future time.

A sign that the unity is an accident is the fact that it is either in a water, or in a man, or in a horse. The notion of the wateriness is a thing, and the notion of the unit [another] thing. Thus, the one water can become two through the division, and one [again] through the gathering. Therefore, unity and duality [both] come upon it, as [water] is indeed a subject, while this [unity] is an accidental. Certainly, the one man does not become two, because this is an accident accompanying him inseparably, but that does not deny its being an accident. Therefore, unity is a notion existing in a subject. That subject subsists in its own essence by virtue of its own true nature, without the determination of the unity: and this is [precisely] what is meant by «accident».

[§131]

[(1.2)] As for the quality, we will adduce two examples concerning it: [(1.2.1)] the colours and [(1.2.2)] the shapes.

[(1.2.1)] We say, then, that blackness is an accident, since if it were presupposed not in a subject, then one of the two: either [(1.2.1.1)] it could be pointed at and divided, or [(1.2.1.2)] it could not be pointed at, nor be divided. [(1.2.1.1)] Now, if it were not susceptible of the pointing at and the division, it would not be susceptible of the opposition [either], and [therefore] one could not perceive [it] thanks to the sight. «Blackness», [however,] is an expression referring to nothing else than an appearance which follows from the viewer in a specific direction and is perceived thanks to the sight, being susceptible of the subdivision.

[(1.2.1.2)] If it were divisible, then its being blackness would be different from its being divisible, since being divisible is a thing that whiteness and blackness have in common, while the two differ from one another [precisely] in being blackness and being whiteness. With «body» we do not intend except that which is divisible. Therefore it is [(1.2.1.2.1)] either [such] that it is said in a divisible, and [then] it is the accident, [(1.2.1.2.2)] or it is [such] that one says: «It is the divisible itself», but this is absurd, since the true nature of the subdivision is [D169] the true nature of the corporeality. With «corporeality», as a matter of fact, one does not intend unless this, [while] the true nature of the blackness is different from the true nature of the subdivision, not the same. Certainly, blackness does not distinguish itself from its receptacle thanks to the sensible pointing, but it distinguishes itself from it thanks to the pointing of the intellect, like we have mentioned. Therefore, it is an accident.

[§132]

[(1.2.2)] As for the shapes, they are accidents as well, since the shapes pass over the wax successively, while it continues existing. Therefore, being made circular, square, triangular – all that is from the quality, and [these] are accidents. Sometimes the existence of the circle is challenged by saying: «A determinate figure in whose centre there is [such] a point [that] all the lines departing from it towards the circumference are equivalent is not conceivable». But a sign for establishing it[s existence] is that the existence of the body is perceived through the sense. It is either composed or simple, but the composed is not unless from a simple, and therefore it is inevitable to establish [the existence of] the simple. «Simple» is that which has not different natures in itself, but rather one homogeneous nature, like the nature of the air and the water. When from this a measure in itself has been removed, then, [the simple] either has a shape for its essence, or it has not. It is false that it has not a shape, since [otherwise] it would be infinite, while we have already presupposed a finite measure for it. Therefore when a shape occurs to it, it is either a sphere, or a square, or something else. But it is impossible for it to be other than the sphere, since the homogeneous nature in a homogeneous receptacle cannot find a different form, such as to require in [D170] a part of it a line, and an angle in another part. Among the shapes, there is no homogeneous [shape] except the sphere, therefore it is necessary that its shape be spherical. Whenever the sphere is cut with a straight cut, the [resulting] section is necessarily a circle. Therefore it is already established the possibility of the circle, which is the principle of the shapes.

It results then [as] already established that [(1.1)] the quantity and [(1.2)] the quality are two accidents.

[§133]

[(2)] As for the remaining seven, their accidentality is not concealed.

[(2.1)] One cannot do without the relation of a thing towards [another] thing, therefore it is inevitable [to posit] a thing that [makes] possible their relation.

[(2.6)] The acting, indeed, is the relation of a thing to [another] thing by virtue of the influencing, therefore it is inevitable [to posit] a previously existing thing, so that it may exert [that] influence.

[(2.7)] The being acted upon is the relation of a thing to another by virtue of the reception of an influence, therefore it is inevitable [to posit] a thing in the first place, so that it may be acted upon.

[(2.2-5)] As for the remaining four, it is necessary that they also are in the subject, since they are relations [(2.3)] either to a time, [(2.2)] or to a place, [(2.5)] or to a comprising [thing], [(2.4)] or to a part, therefore it is inevitable [to posit] a thing in the first place, so that it may be acted upon, and it is inevitable [to posit] a thing so that it is either in a time [(2.3)], or in a place [(2.2)], or according to a position [(2.4)] or an appearance.

These nine, therefore, are accidents. Existence, therefore, applies to ten things, which are the highest genera: one is substance, and nine are accidents. It is not possible to make them known through the definition, since there is no genus common to them, while in the definition, the genus and the differentia unite. They are therefore equivalent in the existence, inasmuch as they are not susceptible of the definition; yet they are susceptible of the

description, unlike the existence. As a matter of fact, there is no thing more known than the existence, so that it may be made known through [that]. As for these things, [however,] they are obscure, and it is then possible that they are described by means of that which is more known than them. These ten [things] are called the ten categories.

[§134]

[D171] If someone asked: «[Does] the name of “existence” [apply] to these ten [categories] [(a)] by ambiguity or [(b)] by synonymy?», we would answer that it does [not apply] ambiguously, nor synonymously. Some people have believed that it was [applied] ambiguously, and that the accident did not participate in the existence with the substance, and rather that there was no meaning in the existence of the substance except the substance itself, and [that there was no meaning] in the existence of the quantity except quantity itself. «Existence» would then be only one name including different things which do not participate together in the [same] meaning at all, like the expression *ayn* for the things that it names. This is false for two reasons.

[(a.1)] The first one of them is that our saying: «The substance is existent» is a profitable speech, [which can be] understood. But if the existence of the substance were the substance itself, our saying: «The substance is existent» would be like saying: «The substance is substance». When we say: «The acting and the being acted upon», [this] could be true in some circumstances, but our saying: «The acting and the being acted upon are not acting and being acted upon» could not ever be true. But if saying «existent» were the same as saying «acting», our saying: «The acting is not existent» would be like saying: «The acting is not acting».

[§135]

[(a.2)] The second [reason] is that the intellect demolishes [ambiguous predication] by the fact that the division does not exceed the two [alternatives] in anything, since one says: «The thing is either existent, or non-existent». Now if the existence did not have a further meaning than these ten [categories], the division would not be limited to two [alternatives], and rather this speech would not be understood. It would rather be necessary to say: «The thing is either substance, or quality, or quantity», and so on for the remaining [categories] of the ten. The division would then be in ten [alternatives], not in two. This is made apparent by virtue of what we have previously mentioned concerning the concrete existence, which is an expression referring to the existent other than the quiddity, and because of that one needs to ask: «Is that which produces the heat existent?» and «Is that which produces the blackness in the ink existent?», [D172] while there is no need to ask: «Is that which produces the blackness a colour?» and «Is that which produces it a blackness?». The distinction between concrete existence and quiddity is known by virtue of the indication of the intellect, and not by virtue of the indication of the sense, just like the distinction between form and matter is known.

[§136]

[(b)] If [then] someone [objected by] saying that, should this be correct, then it would be synonymous – I mean, the name of «existence» [applied] to the ten [categories] –, one [should] answer: «The name of “synonymous” only applies to that which includes the things that it names with one [single] inclusion, [(b.1)] without variation and [(b.2)] without anteriority and posteriority, like animality for the man and the horse, and humanity for Zayd and ‘Amr. As a matter of fact, it is [(b.1)] neither that one of the two is worthier than the other, [(b.2)] nor that one of the two is anterior to the other.

[(b.2)] Existence, [on the contrary,] is primarily established with respect to the substance, and by means of it with respect to quantity and quality, and by means of these two with respect to the remaining [categories] of the accidents, [as well]. Anteriority and posteriority may then befall it.

[(b.1)] As for the variation, it is the fact that the existence of blackness, which is a permanent appearance, is not like the existence of motion, of change and of time, since they have neither any stability, nor any permanence. Rather, the existence of motion, time and matter is weaker than the existence of the other things.

[§137]

These ten [categories], therefore, agree in the existence in one sense, and differ in another sense, so that they are between the synonymous and the ambiguous. Because of that, then, this kind of name is called «modulated name», or it is called «homonymous».

[D173] It has already been established, therefore, that the existence is accidental for all things, and that the existence accidentally inheres to the quiddities for an [external] cause, since they do not have the existence by their [own] essence, and all that which does not derive from the essence of the thing belongs to it for a cause. And because of that the First Cause is an existence with no added quiddity, as will be [explained]. Therefore, existence is not a genus for anything among the quiddities.

[§138]

«Accident» as well, in relation to the nine [accidental categories], [behaves] in the same way, since each one of them has a quiddity in its essence, while it has its accidentality by virtue of the relation to its receptacle. They have the name of accidentality, then, in the face of their relation to their receptacle, not in the face of their quiddities. It is possible, thus, that we conceive some of them and doubt on the fact that they are accidents or not. [By contrast,] it is not possible that we conceive the species and raise doubts about the existence of the genus [which refers] to it, since man cannot conceive the blackness and raise doubts about its being a colour, or [conceive] the horse and raise doubts about its being a body, or an animal.

Likewise, the expression «one», although it has a commonality like the expression «existence», is not essential for anything among the quiddities. Then, the existence, the accident, and the unity are not at all a genus, nor a differentia, for anything among the ten quiddities. Therefore, we have already divided the existent into substance and accident, the substance in four parts [D174] and the accident in nine parts. We have divided some of the

units of [these] nine, and we have given signs that they are accidents. Let us return, then, to other divisions of the existent.

[§139]

SECOND DIVISION

The existent subdivides itself into universal and particular. As for the true nature of both, we have already mentioned it in the first [chapter] of the *Logic*. Let us mention now their states and their appendages. They are four.

[(1)] The first one is that the existence of the notion called «universal» is in the minds, not in the individual instances. When a group has heard us saying that every man is one in the humanity, and that every blackness is one in being blackness, they have believed the universal blackness [to be] a single existing notion, and the universal man [to be] one existing notion, [D175] and the universal soul to be a single notion for the number, existing in manifold individuals like the one father is for a number of children, and the one sun is for a number of sites [on earth]. This is a sheer error, since if the soul were one in number, it would be in itself in Zayd, and it [D176] would [also] be in itself in ‘Amr. But Zayd is knowledgeable, and ‘Amr is ignorant: it follows [then] that the one soul is knowledgeable and ignorant as for one thing in one circumstance, which is impossible. If the universal animal were one existent in [various] individuals, that would then be one in itself, [be it] walking or flying, and bipedal or quadrupedal, which is impossible.

The existence of the universal is rather in the minds, and its notion is that the mind undoubtedly receives the form and the true nature of the man by virtue of the sensible direct testimony of [whatever] single individual presents itself as first to [the mind], so that, if it sees another man after that one, an impression does not crop up anew in it, but rather it remains in the way it was, and likewise when it sees a third [man], and a fourth one. Then, the picture resulting in the mind in the first place is [that of] Zayd, whose relationship to every man in the world of God Most High is only one: as a matter of fact, the individual instances of the man do not differ at all in the definition of the humanity. If one saw, after that, a predatory animal, it would result in [the mind] another quiddity, and a picture different from the first one. That, then, which results from the individual «Zayd» is an individual form in the mind. The notion of its being universal is that its relationship to every single person that is, will be, and was, is only one [relationship], and that this picture results from anything that presents itself as first to the mind, while the others after it do not add upon it.

[§140]

An example of that: when [various] signet rings have been notched according to one [and a single] picture, and one [of them] is put down on the wax, then a form results from it. If then the second and the third [one] are put down on that very same place, the first picture does not change, and the receptacle is not [otherwise] impressed. [D177] Then it is said: «The picture that is in the wax is a universal picture, namely a picture of all the signet rings by virtue of the notion that they all correlate with a single correlation, and therefore one

does not distinguish, in relation to [that universal picture] from the others». This is known thanks to the intellect.

As for the fact that one presupposes one single picture in itself, that is in the golden signet ring, in the silver signet ring, and in the iron signet ring, this is impossible, unless one says: «It is one by species», given that – as for what concerns [the unity] by number –, the picture of every signet ring is different from the picture of the others. Yes, their impressions in the wax are a single impression, and the picture resulting from them all in the wax is only one. Likewise, it is necessary to understand the received impression of the definitions of the things in the mind, and the notion of their universality. Therefore, the universal, inasmuch as it is universal, exists in the mind, not in the individual instances: there is no universal man, then, in the external existence. As for the true nature of the humanity, it is existent in the individual instances and in the minds altogether.

[§141]

[D178] [(2)] The second state. It is not possible that the universal has many particulars until every particular has been distinguished from the others by virtue of a differentia or an accident. As a matter of fact, if one should not presuppose anything but the mere universal abstract from every additional thing annexing to it, it would not be possible to conceive within it multiplicity and individualization.

Therefore, two blacknesses in one receptacle, in one circumstance, are impossible; but the absolute blackness undoubtedly becomes two by virtue of a differentiation existing between the two, either in the receptacle – like two blacknesses in two [different] receptacles –, or in time – like two blacknesses in a single receptacle, in two [different] times. As for when, on the contrary, the receptacle and the time are united, multiplicity is not conceivable. Likewise, two men are not conceivable unless [by the fact that] one of them is separated from the other by virtue of a notion adding to the mere universal humanity, abstracted from place, or attribute, or else. As a matter of fact, if there were not a dissimilarity between the two under some respect, and [yet] they were two, it would be possible to say of every man that he is two men, [or] rather five, [or] rather ten, and there would be no way to distinguish a number from [another] number; and likewise in every blackness. But this is manifestly absurd.

[§142]

Let the demonstration of it be the fact that when two blacknesses are presupposed in a single receptacle, in order for one to say: «That blackness» and: «This blackness», and to distinguish each one of the two from the other, our speech [must be] for that [D179] blackness in itself: «Indeed it is blackness», and: «Indeed it is that blackness in itself». [Then,] are these two one [(a)], or not [(b)]?

[(a)] If they were one, so that the meaning of our saying: «It is that blackness in itself» [were equivalent to our saying: «It is blackness»], [it would] then [follow] that of everything of which we have said: «It is blackness», we [actually] said: «It is that blackness in itself». Therefore, also the blackness that was presupposed as other would be that blackness in itself, and then there would not be [any] multiplicity.

[(b)] If under our saying: «It is that blackness in itself» [there was] a notion adding upon that which is under our saying: «Blackness», then a further thing would undoubtedly be already annexed to being blackness, so that it would become different from the other [blackness] by virtue of a dissimilarity in that notion annexing to it. It is apparent, [then,] that it is impossible that the particulars of a single universal multiply, except by virtue of the fact that a further thing annexes itself to the universal. [This further thing] is either a differentia, or an accident.

If the First Cause is one and separate, with no composition in It due to a differentia or an accident, a duality is not conceivable in It at all.

[§143]

[D180] [(3)] The third state. The differentia does not enter at all in the true nature of the genus and in the quiddity of the common universal concept, while it enters in its existence, and the existence is different from the quiddity. The clarification of [this] is the fact that humanity has no access in the true nature of animality, and rather the true nature of animality, in its perfection, is established in the intellect without humanity, horseness, and the remaining differentiae – not like corporeality, since if it withdrew from the mind, the quiddity of the animality would be cancelled from the mind. Now, if humanity were a condition for animality's being animality, like the corporeality is a condition for it, the animality would not be established for the horse, since it is not man, just like the animality is not established for that which is not body; but the animality is perfect in the horse like in the man. The differentiae, then, do not enter in the quiddities of the universal concepts. Certainly, they have an access in making the universal concept an actual existent, since the animal is not existent except inasmuch as it is horse, or man, or something else, while the animal is animal without horseness and humanity. Other is the existence, and other the quiddity, as it was said before. If this has been established as for the differentia, it is undoubtedly even more manifest that it [is valid] in the [case of the] accident, since, if humanity does not enter in the true nature of the animality, by virtue of this length and whiteness do not enter [within it] all the more.

[§144]

[D181] [(4)] The fourth state is that all that which is accidental for something is caused. Its cause is [(a)] either the essence of the subject, like the downward movement for the stone, or the cooling for the water; [(b)] or it is external to its essence, like the warmth for the water, or the upward movement for the stone.

We have only said that because this accident for the essence [of the subject in which it inheres] is [(i)] either caused [(ii)] or it is not caused. [(ii)] If it is not caused, then it is an existent by virtue of its own essence; but every existent by virtue of its own essence does not cease to exist for the ceasing of the existence of something else, nor the existence of something else is a condition for its existence. The accident, [rather,] undoubtedly needs that of which it is accident in order to exist; therefore it is not an existent by virtue of its own essence, and then it is caused [(i)].

[§145]

Moreover, as for its cause, one of the two: [(a)] either it is in the essence of the subject, [(b)] or it is external with respect to it. This is undoubtedly an exhaustive subdivision, and therefore it is a demonstration. As a matter of fact, whichever way the cause is, either internal to the subject or external with respect to it, it is inevitable that its existence results before its being cause for something else. Hence, it is impossible that the quiddity is cause for the existence of itself. Every quiddity, then, has an existence additional with respect to itself, whose cause is then other than the quiddity, since it is inevitable that the cause be existent in order for it to necessitate an existence for something other than it, while the quiddity before the existence is not existence – how, then, could it be a cause for the existence?

[D182] From this, then, it necessarily follows that if there is something in the existence which is not caused, its concrete existence will not be different from its quiddity, and rather its concrete existence will be its quiddity. If it were something else, it would be an accident for it, and it would be caused by a thing other than the quiddity; therefore, it would be caused. Given however that we had presupposed it to be not caused, this is impossible.

[§146]

Now, if someone asked: «The notion of the universal for the particulars is sometimes specific, like “man” applies to Zayd and ‘Amr, and sometimes generic, like “animal” [applies] to the man and the horse. On which basis, then, can one appreciate the distinction? And on which basis can one know that this universal is the specific [universal], which is not susceptible of subdivision unless through the accidents, or that it is [rather] the generic [universal], which is susceptible of subdivision through the essential differentiae?», [one should] answer: «Every universal that lays before you, that you want to determine as a specified existing being and that needs, for its determination, to be connected to that whose concept is not accidental is a generic [universal]. If [rather] it does not need [anything] except the accidental, then it is specific». Therefore, the perception of the discrimination between the specific and the generic depends on the perception of the discrimination between the essential and the accidental, as it was said before.

[§147]

An example of it is the fact that when it is said to you: «Four», or: «Five», there is no need for the determination of the existence of the four, unless if it connects to its being nut, or horse, or man. These things are accidental for the four, and rather for [all] the numbers, and do not [appear] in them as essential. We mentioned, indeed, that the notion of the essential is that whose notion is not perfected in the understanding unless through the understanding of the essential in the first place. In understanding «four», you do not need the nut, the horse, and other countable things to come to your mind. When a number is said to you, it is not possible for you to presuppose the number [D183] as an actual existent, but rather the nature demands to know what number is that, being it existent as five, or ten, or something else. If then it is five, it does not need, after that, another thing that specifies what is numbered by means of it, as this is accidental with respect to number – not like its being

five, since [being five] is not [something] further with respect to numberness, a supervening accident with respect to it, but it is rather the result of the numberness of this number.

These concepts are apparent in the soul, but their research might be hard [moving] from the expressions employed in their explanation, which are such that they necessitate an intricacy concerning them. Be then the attention turned towards the concept, not the verbal expression. This is, then, the judgment [about] the universal.

[§148]

THIRD DIVISION OF THE EXISTENT

The existent subdivides itself into [(a)] one and [(b)] manifold. Let us mention, then, the divisions of the one [(a)] and of the manifold [(b)], and their appendages [(c)].

[(a)] As for the one, it applies either [(a.1)] in proper sense, or [(a.2)] figuratively.

[(a.1)] The one in the proper sense is the specified particular, and yet it is, in turn, according to three degrees.

[(a.1.1)] The first degree, which is the truest nature, is the one particular that has no multiplicity within it, neither in potency nor in actuality. That is like the point and like the essence of the Creator – let His power be exalted –, since it does not subdivide itself in actuality, and it is not susceptible of it. Indeed, in the existence He is devoid of the multiplicity, of the possibility, of the potency and of the actuality, and He is then the True One.

[(a.1.2)] The second [degree] is the one by conjunction, and it is that which has no multiplicity in actuality in itself, and yet there is a multiplicity in potency within it. Namely, it is susceptible of the multiplicity, like when we have said: «This line is one», or «two», and: «This body is one», or: «two bodies», since if there was a cut within it, we would judge that there is a duality. If rather it is one by conjunction along the way of homogeneity, we would say: «It is one line», «It is one body» and «[It is] one water», since within it there is no multiplicity and separation in actuality, unless because of the fact that it is susceptible of the multiplicity. Then, for [D184] this respect one may believe that it is not a true one, since the potency proximate to the actuality is believed to be in actuality. But really it is truly one, as the multiplicity is in it only in potency.

[(a.1.3)] The third [degree] is that it is one by a sort of cohesion. In it, multiplicity is in actuality, like the one bed, and the one individual composed of different parts, like the composition of the parts of the man from the flesh, the bone, and the veins. As a matter of fact, it is one, as it [can] be said: «One bed», and: «One man». In it, multiplicity is existent in actuality in consideration of the parts, not like the one water, and the one homogeneous body. Between these two degrees there is indeed a distinction.

This regards the particular to which the name «one» [applies] in the proper sense.

[§149]

[(a.2)] As for the figurative sense, it is the application of the name «one» to manifold things, because of their being classified under a single universal. This [consists in] five things.

[(a.2.1)] The first one is the oneness in genus, like your saying: «The man and the horse are one in the animality». [(a.2.2)] The second one is the oneness of the species, like your saying:

«Zayd and ‘Amr are one in the humanity». [(a.2.3)] The third one is the oneness in the accident, like [when] one says: «The snow and the camphor are one in the whiteness». [(a.2.4)] The fourth one [is the oneness] in the relation, like your saying: «The relation of the king with respect to the city and the relation of the soul with respect to the body are one». [(a.2.5)] The fifth one [is the oneness] in the subject-matter, like your saying about the sugar: «It is white and sweet», for which we will say: «The white and the sweet are one», namely the subject-matter of both is just one.

«One», then, is applied according to eight meanings.

[§150]

Moreover, the oneness in the accident [(a.2.3)] subdivides itself according to the subdivision of the accidents. [D185] If, then, it is oneness as for the accident of the quantity, it will be said to be equivalence [(a.2.3.1)]; if it is [such] as for quality, it will be said to be similarity [(a.2.3.2)]; if it is [such] as for position, it will be said to be equidistance [(a.2.3.3)]; and if it is [such] as for the property, it will be said to be correspondence [(a.2.3.4)].

Once you have known that the one is applied according to eight ways, [(b)] the manifold, which is opposed to it, will also be numbered, without a doubt, in as many ways.

[§151]

[(ca)] Among the appendages of the one there is the identity; indeed, if the thing is one in itself, but the verbal expressions or its relationship differ, one says: «It is it», in the same way in which one says: «The lion is *Panthera leo*» and in which one says: «Zayd is the son of ‘Amr».

[(cb)] As for the appendages of the multiplicity, they are [(cb.1)] the alterity, [(cb.2)] the difference, [(cb.3)] the opposition, and likewise [also] [(cb.4)] being reciprocally similar, equidistant, equivalent, and correspondent. As a matter of fact, that is not conceived by the intellect except [in the case] of two or more than two, and therefore it belongs to the appendages of the multiplicity.

[§152]

It is inevitable to clarify the divisions of the opposition [(cb.3)], which are four. [(cb.3.1)] The first one is the opposition of the denial and the affirmation, like your saying: «man» and «not-man». [(cb.3.2)] The second one is the opposition of the relation, like the father and the son, the friend and the friend, since one of the two is opposed to the other. [(cb.3.3)] The third one is the opposition of the privation and of the disposition, as between motion and rest. [(cb.3.4)] The fourth one is the opposition of the two contraries, like heat and coldness.

[(cb.3.3-4)] The distinction between contrary and privation is that it is said: «The privation is an expression referring to the privation of the thing only with respect to the subject, not with respect to the existence of another thing». Therefore, «rest» is an expression referring to the privation of the movement. If one posited the disappearance of the blackness, without the occurring of another colour, this would be a privation. As for when the red or

the white occur, this is rather an additional existence with respect to the privation of the blackness. [D186] Indeed, the privation is the absence of that thing alone, while the contrary is an existent occurring together with the absence of the thing [of which it is the contrary]. Hence, one says that one single cause is not appropriate for the two contraries, and rather it is inevitable that there are two causes for the two contraries. As for the disposition and the privation, their cause is one, and that one necessitates the disposition if it is present, and necessitates the privation if it is absent or it ceases to exist. Therefore, the cause of the non-existence is the non-existence of the cause of the existence: the cause of rest, indeed, is the non-existence of the cause of motion.

[§153]

[(cb.3.2)] As for the opposition of the related, its characteristic is that each one [of the two terms] is known with reference to the other; not like heat, since it is known without reference to coldness, nor like motion, since it is known without reference to rest.

[(cb.3.1)] As for the opposition of the denial and the affirmation, it distinguishes itself from the contrary and the privation because of the fact that it is only in the speech, and [that] it includes everything.

[(cb.3.4)] As for the name of «contrary», it does not fall unless upon that whose subject and the subject of whose contrary are one, and that is not enough until [the situation is] not such that the two [contraries] are not conjoined, but [rather] succeed consecutively to one another, and that between them there is the utmost [degree] of the difference, like [in the case of] blackness and whiteness; not like blackness and redness, since redness is a colour proceeding from whiteness to the blackness, therefore it is to be found between these two, and it is [thus] not at the extreme of the distance from [one of] them. Sometimes between the two contraries there are multiple intermediaries, some of them closer to one of the two extremes than others, and sometimes among them there are no intermediaries. Therefore, the contrary shares in the subject with [its] contrary, and likewise the disposition and the privation. This is not necessary in [the case of] the negation and the affirmation.

Sometimes among them there is participation in the genus, like maleness and femaleness, since they do not succeed to one another in a single individual; and sometimes one errs, since one posits the genus and takes the negation of the notion under it, combines with it a differentia or a property, imposes upon it an affirmative name, and thus believes it to be a contrary, like when one says: «The number subdivides itself in even and odd», [D187] and one believes that these two are opposed like contraries; but this is an error. As a matter of fact, the subject is not only one, since the even will never be odd, and the number subject to this will not be subject to that, but rather between them there is the opposition of the negation and the affirmation. As a matter of fact, the notion of «even» is that it subdivides itself into two equivalent [halves], while the notion of «odd» is that it does not subdivide itself in two equivalent [halves]. Our saying: «it does not subdivide itself» is a sheer negation, and yet the name of «odd», juxtaposed to «even», is imposed to it, in such a way that one believes that it is opposed to it as contrary.

Now, if [someone] asked: «Is it possible that one single thing has more than one contrary», one [should] answer: «Once [posited] that the contrary is an expression referring to two things succeeding consecutively to one another in a single subject, with the condition

that there is the greatest [possible] difference between them, according to this technical usage of the term it necessarily follows that there is not but one contrary, since what is at the extreme degree of distance is undoubtedly one».

[§154]

FOURTH DIVISION

The existent subdivides itself into [(a)] that which is anterior and [(b)] that which is posterior. Anteriority and posteriority as well fall within the essential accidents of the existence. Concerning the anterior one says: «It is before», and concerning the posterior: «It is after». One says that God Most High is before the world.

[(a)] Being before applies in five ways, since anteriority subdivides itself into five divisions.

[(a.1)] The first one, which is the most manifest, is the anteriority in time, and it is like the term «before» is truly [employed] in the language.

[(a.2)] The second one is the anteriority in degree: [D188] [(a.2.1)] either for the position, like your saying: «Baġdād is before Kūfa when one is headed towards Mecca from the Ḥurāsān», and: «This row [of people praying] is before this row», with the meaning that it is closer to the end relative to it as from the *qibla*, or [from] some other [point in the mosque]; or [(a.2.2)] as for the nature, like your saying: «Animality is before humanity», and: «Corporeality is before animality», if we have started from the side of what is more common. The property of this [kind of anteriority] is that it gets inverted if it is taken from the other side: if, as a matter of fact, you take in the first place the consideration of the more specific side, animality is before corporeality; and if you take the consideration from Mecca, Kūfa will be before Baġdād.

[§155]

[(a.3)] The third one is the anteriority in dignity, when we say: «Abū Bakr and then ‘Umar – may God be satisfied of them both! Indeed, Abū Bakr is before all the other Companions of the Prophet – may God be satisfied of them – in dignity and virtue».

[(a.4)] The fourth one is the anteriority in nature, and it is that which does not disappear for the disappearance of that to which it is anterior, while that to which it is the anterior disappears for its disappearance. As a matter of fact, you say: «The one is before the two», since if the non-existence of the one in the world was surmised, the non-existence of the two would necessarily follow from it, since every two is one and one; while, if the non-existence of two was surmised, the non-existence of the one would not necessarily follow from it. When you say: «The one is before the two», we do not mean with it a temporal anteriority. Rather, it is possible that it is together with the two, and that, that notwithstanding, one intellectually knows its priority.

[(a.5)] The fifth one is the anteriority in essence, and it is that whose existence is together with something else, and yet the existence of that something is by means of it, while its existence is not by means of that other [thing]. This is like the anteriority of the cause with respect to the caused, and like the anteriority of the movement of the hand with

respect to the movement of the signet ring. As a matter of fact, it is regarded as appropriate to say: «The hand moves, then the signet ring moves», while it is not regarded as appropriate to say: «The signet ring moves, then the hand moves». [D189] The ‘then’ is the succession, although it is known that [the two movements] are together in the time; but this priority is on the basis of the causality and the necessitating [of existence].

[§156]

FIFTH DIVISION

The existent subdivides itself into [(a)] that which is reason and [(b)] that which needs a reason, namely in [(a)] cause and [(b)] caused. Every thing that has an existence in itself, not from the existence of another known thing, having that known [thing] no existence unless by virtue of that thing [itself] – that thing alone, indeed, is called «cause» of that known [thing], and that known thing is the caused of that thing.

In all that which consists of parts, the existence of the parts is not because of the existence of the whole, but rather the existence of the whole is because of the existence of the parts, and of their gathering. As a matter of fact, the oxymel is not cause of the sugar, but it is rather the sugar to be cause of the oxymel, since it is from it that the oxymel results; and here, about these [things], it is apparent that the part is anterior in time with respect to the whole. If [the two things] were not separable in time, like the hand in its annexion to the man, [in this case] as well likewise. Therefore, all that is part of the whole is cause of the whole.

[§157]

[(a)] Therefore, the cause subdivides itself into [(a.1)] that which is part of the essence of the caused and [(a.2)] that which is external [with respect to it]. [(a.1)] That which is part of the caused subdivides itself into [(a.1.1)] that from whose existence the existence of the caused does not necessarily follow, like the wood for the chair, and [(a.1.2)] that from the determination of whose existence the existence of the caused necessarily follows, like the form of the chair. Indeed, when [the form] [D190] has been presupposed as existent, the chair [as well] is undoubtedly existent; not like the wood, although the chair is a whole whose existence does not subsist unless by virtue of the gathering of the form, and the wood. Therefore, that whose relation to the caused is [like] the relation of the wood to the chair is called material cause, and that whose relation is the relation of the form is called formal cause.

[§158]

[(a.2)] As for [that which is] external [to the essence of the caused], it subdivides itself into [(a.2.1)] that from which the thing is, like the carpenter for the chair, which is called efficient cause – and in this same way are the father for the son, and the fire for the heat –; and [(a.2.2)] that for the sake of which, not from which, the thing is, which is called perfective and final cause – and it is like seeking shelter for the house, and being suitable for sitting

for the chair.

[(a.2.2)] It belongs to the proper characteristic of the final cause the fact that the remaining causes become cause by virtue of it. As a matter of fact, until the form of the chair predisposed to sitting, and the need for sitting, have not been assimilated in the soul of the carpenter, he will not become an agent, nor will the wood become element of chair, nor will the form descend into it. Therefore, the final [cause] – as it exists in all the causes – is the cause of the causes.

[(a.2.1)] The efficient cause [(a.2.1.1)] [is] either [such] that it acts by nature, like the fire burns and the sun shines; [(a.2.1.2)] or it is by virtue of the will, like the man walks. Every agent has a goal in the action. It is necessary, then, that the existence of that goal and its non-existence are not in one [single] manner, since «goal» is an expression referring to that which makes the existence of the act by means of the agent worthier than its non-existence. If it is not like this, it is not called «goal». Indeed, [in the case of] that whose existence and whose non-existence are in one [single] manner as for the agent, the choice of its existence over its non-existence is not for an utility and [for] a goal. All that is like this, then, is not a goal.

[§159]

The question about why the existence was chosen over the non-existence, [however, still] remains. It [cannot] cease except by mentioning [D191] the goal. There is no goal unless that which makes the existence of the action by means of the agent worthier than the non-existence. If it were not worthier, existence and non-existence would be equivalent, and the inclination toward one of the two would be impossible.

All that which has a goal is defective, since obtaining that goal is better for it than not obtaining it. Indeed, [that which has a goal] lacks a thing which in itself falls within the goods, and that it can obtain through the action. Therefore, it becomes complete by obtaining it, and therefore it was not complete in itself without that. The speech of one who says that he [could] act not for a utility returning to him, but for the sake of something else, is a mistake. Indeed, one will say: «Is obtaining the utility for something else, for what concerns him, worthier than not obtaining it?». [(i)] As a matter of fact, if the benefit [of that] was worthier and more appropriate to him, he would already benefit in himself of the benefit of others, which is worthier and more appropriate for him. Then, before it he was separate [from this benefit], being then defective. [(ii)] If rather he did not have utility in the benefit [given to others], the question would return: «On the basis of what did he not acquire advantage?» – a returning which is inevitable.

Therefore, every agent has a goal, since the goal completes it and removes the defectiveness that was in it, thanks to the completeness resulting from obtaining [the goal]. If there were in the possibility [of the existence] an essence from which the caused in its essence followed, inasmuch as its essence [was] an essence from which the existence of something other than itself flows absolutely without a goal, then this efficient [causality] would be higher and loftier than the efficient [causality that realizes itself] by means of a goal and a choice.

[§160]

[D192] It is inevitable that all that which was not an agent became one for the sudden onset and the novelty of a thing, like a condition, or a nature, or a will, or a goal, or a power, or a state, or any other state you want. Otherwise, if the states of the agent [were all] as they were, and nothing was renewed either in his essence, or outside it, until the present moment, the existence of the act would not be worthier for him than the non-existence, and the non-existence would rather endure. Being the states as they were, as a matter of fact, it necessarily follows that the non-existence endures. Indeed, if the non-existence endured before this, since there were no selectively determining factor of the existence over [the non-existence], and now [the thing] rather exists, it is necessary that that is because of the obtainment of the selectively determining factor. If the selectively determining factor is not renewed, and the selectively determining factor is banished as it was [before], the non-existence necessarily endures as it did [before]. As for this, an increased explanation will follow.

[§161]

Hence, it is inevitable to mention that the cause subdivides itself into [(i)] cause by essence and [(ii)] cause by accident. [(ii)] The cause by accident is called «cause» in a merely figurative sense, since it is that which does not make the effect result by virtue of itself, but rather by virtue of something else. However, the necessitating of the caused is not possible for that something else unless in the presence of [the cause by accident], as the one removing the column from under the roof is called demolisher of the roof, although in a figurative sense, since the cause of the falling of the roof is its being weighty, except that [its falling] was prevented by the action on it of the column. The one removing the column made its action possible, so that it made its action. Likewise, that which is said: «Scammony refrigerates», with the meaning that it removes the yellow bile that prevented the nature to refrigerate; therefore, that which refrigerates is the nature, and yet [only] after the disappearance of the obstacle. Scammony, then, is the cause of the removal of the yellow bile, while it is no cause for the coldness resulting, by the nature [itself], after the disappearance of [the bile].

[§162]

[D193] SIXTH DIVISION

The existent subdivides itself into [(a)] finite and [(b)] infinite.

[(b)] The infinite is said in four ways, two of which are impossible and do not exist, and two whose existence is signaled by the syllogism.

[(b.1)] One of them is that one says: «The movement of the sphere is infinite, namely it has no first [moment]», and this was already signaled by the syllogism.

[(b.2)] The second one of them is that one says: «The human souls separated from the bodies are also infinite». This also follows necessarily from the negation of the end to the time and to the motion of the sphere, I mean from the negation of the [ir] having a beginning.

[(b.3)] The third one of them is that one says: «The bodies have no end», or: «The distances have no end upwards or downwards», which is impossible.

[(b.4)] The fourth one of them is that one says: «The causes have no end», in such a way that a thing has a cause, and its cause has a cause, which then does not terminate to a first cause that has no cause. And this as well is impossible.

The correctedness concerning it is that the existence of the infinite is impossible [coming] from all number that determines its units as existent together, and has a hierarchical order by nature, an anteriority and a posteriority. As the infinite causes, since the hierarchical order between the cause and the caused is necessary and natural, if it is removed its being cause is invalidated, and likewise the bodies and the distances, since they are hierarchically ordered as well, so that some of them are necessarily before others, when one starts from a [certain] side, except that they are ordered by the position, not by nature, as it was said before [concerning] the separation between them within [D194] the divisions of the anteriority and the posteriority.

[§163]

[(b.1)] As for that in which one of the two concepts exists without the other, so that the end [but not the principle] is denied to it, it is not impossible, like [for instance] the movement of the sphere. As a matter of fact, it has a hierarchical ordering and a succession, and yet not all its parts have an existence in one [single] condition. Then, when one says: «The movement of the sphere has no end», one does not intend by that the negation of the end about movements that are existent, but [it is] rather [a series of] passing away and [progressively] non-existent [movements].

[(b.2)] Likewise, it is possible to say that the numbers of the human souls separated from the bodies with death have no end, although they are simultaneously existing, since in them there is no hierarchical order by nature, inasmuch as, if its rising was surmised, their being souls would be invalidated. Indeed, it is not that some of them are causes for others, and yet they are simultaneously existing, without anteriority and posteriority in the nature and the position, since anteriority and posteriority can only be imagined at the time of their origin.

As for their essences, inasmuch as they are essences and souls, there is no hierarchical order in them at all, but rather they are equivalent in the existence, unlike the distances, the bodies, the cause and the caused. Then, as for the possibility of souls without an end [(b.2)] and of a movement without a first [moment] [(b.1)], what was mentioned about their signs will come [later].

[§164]

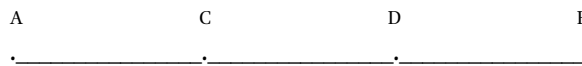
[(b.3)] As for the impossibility of the negation of the end with respect to the bodies, to the distances, and [in general] to [all] that which has a hierarchical order for the position or the nature, we will mention it immediately.

[(b.3.1)] As for the impossibility of the negation of the end with respect to the distances, it is made known through two signs.

[(b.3.1.1)] The first one of them is that if we posited a line CD, infinite in the direction

of D, and we made a line AB move in its circle toward the direction of C of the line DC, until it gets in the parallelism [with] it, this is a necessarily possible setting into motion. If, then, we made it move from the parallelism to the direction of the closeness to [CD], it is inevitable that a point of it intersects [CD] [D195], [a point] that is the first of the points of the intersection. Then, after that [one], the remaining points intersect [CD], until they desist from the intersection, ending up to the parallelism from the other side. That, [however,] is impossible, since if an inclination to it from the parallelism were surmised without the intersection, it would be impossible, but the intersection [itself] is impossible. Indeed, the intersection occurs firstly on a first point, but on a line that has infinite points, there is no first [point]. It is inevitable, as a matter of fact, that [for] every point that was posited as first for the intersection, that which is before it had already intersected [the line], necessarily before the intersection of [the first point]. Indeed, that which did not intersect the infinite [series of points presupposed before the 'first' point] does not intersect it, [either]. Moreover, there is not a first point in it that is the point of the intersection, which is impossible. This is a decisive geometrical demonstration concerning the impossibility of the establishing of infinite distances, [D196] regardless whether you have posited the full or the void.

[D197] [(b.3.1.2)] The second sign is that, if an infinite line is possible, then let that be the line AB, [D198] infinite in the direction of B.



[FIGURE 7]

We indicate the point D. If then it was finite from D to B, then when we add to it [the segment] CD, CB will be finite [as well]. If [rather] it was not finite from D to B, then if we encompass by the estimation DB on CB, either the two would extend together in the direction of B without variation, which is impossible, since the smaller would be [D199] equivalent to the greater – DB is indeed smaller than CB –, [or else,] if DB fell short of CB and was interrupted without it while CB continues, then DB would already be made finite in its being interrupted from the side of B, and CB would not increase unless by the finite measure of CD; but that which increases the finite of a finite is also finite; therefore, CB would necessarily be finite.

[§165]

[(b.4)] As for the impossibility of the infinite causes, it [consists] in the fact that when they are presupposed as hierarchically ordered, in such a way that some of them are a cause for others, then it is inevitable that they end up to a cause that is uncaused. This is an extreme, therefore they are finite. If they did not end up in an extreme, but rather continued to extend, there is no doubt that the complex of those infinite causes would result in the existence, inasmuch as it is a complex simultaneously existent. Then, about that complex, inasmuch as it is a complex, one of the two [holds true]: either it is a possible caused, or it is necessary. But it is absurd that it is necessary, since the complex results by virtue of caused units, and what results from the caused is not necessary. It is inevitable, then, that it is

caused. Then, there is need of a cause external with respect to that complex; but if we have already taken into the complex all that which falls among those units, and [if] the judgment concerning the complex [D200] which is able to take in [all] the units has been established to the effect that it is caused, then there is need of an external cause which is not caused. It, then, is undoubtedly an extreme, and [the causal chain] becomes finite.

This is the speech concerning the finite and the infinite.

[§166]

SEVENTH DIVISION

The existent subdivides itself into [(a)] that which is in potency and [(b)] that which is in actuality. The expression «potency and actuality» is applied in different ways, just some of which need to be clarified.

[(a)] As for the potency, it subdivides itself into [(a.1)] the potency of acting and [(a.2)] the potency of being acted upon.

[(a.1)] As for the potency of acting, it is an expression referring to the concept by virtue of which the agent is prepared to its being agent, like the heat for the fire in the act of heating. [(a.2)] As for the potency of being acted upon, we mean by it the concept by virtue of which that which receives is predisposed to being acted upon, like the softness and the suppleness in the wax for the reception of the impression and the modelled shapes.

The potency opposes itself to the actuality for another aspect, since of every existent resulting in its true nature it is said that it is in actuality, but what is intended with this [expression] is not what we said before about the actuality. Indeed, one says that the essence of the First Principle is in actuality under every respect, and within it there is nothing in potency. Actuality according to the first meaning in His truth is impossible, and yet His concept is the actual existent. The potency that opposes itself to this [meaning of] actuality is an expression referring to the possibility of the existence of the thing before its existence. As long as it is not existent, it is said that it is in potency, and it is tolerable that one says: «It is an existent in potency», although it takes the name of existent in a figurative sense, like one says: «The wine [D201] is intoxicating», although the intoxication which is in the wine while it is in the earthen jug is an existent in potency, that being a figurative sense. Indeed, since it is not intoxicating, and yet it is possible for the being of the intoxication to result from it, it is called intoxicating in potency, just like one says of a single body that it is divisible, namely that the subdivision is in it in potency. Otherwise, as a matter of fact, there is no subdivision within it in truth before the act of dividing and its being necessitated by means of the cutting of the body, and the separation between its parts.

We will perfect this division by mentioning two judgments.

[§167]

[(1)] The first one. The judgment about this last potency, which returns back to the possibility of the existence, is the fact that it requires a receptacle and a matter in which to be. It follows from it that all that which has a temporal origin is preceded by a matter, so that it is not possible that the first matter has a temporal origin, but rather it is eternal, since every

originated, before the origin, is in potency – namely, the origin is possible before the origin, so that the possibility of the origin precedes the origin. Regarding this possibility, then, one of the two: [(1.1)] either it is a real thing, or [(1.2)] it is an expression referring to nothing. [(1.2)] Now, should it be an expression referring to nothing, this originated would then have no possibility; then, it would not be possible for it to be, and then it would be prevented from being. But if it were prevented from being, it would never be, and this is impossible. Therefore, it remains established that [(1.1)] the possibility is a real thing, concerning which the intellect judges, so that [about it] one of the two: [(1.1.1)] either it is a self-subsisting substance, [(1.1.2)] or it is [something] that requires a subject-matter. [(1.1.1)] But it is absurd to say: «The possibility is a self-subsisting substance», since [this] is [rather] a designation annexed to that of which it is the possibility; then, its self-subsistence is not intelligible. [(1.1.2)] It is then undoubtedly necessary that it has a subject-matter, so that the gist of the possibility is traced back to the designation of the receptacle for the reception of change, [D202] just like one says: «It is possible for this youth to know», since knowledge is possible for this youth. [Likewise,] this sperm has within itself the possibility to become a man; indeed, the possibility of the existence of the humanity is a designation in the sperm. [And likewise,] it is possible that this air becomes water.

As for when an originated not preceded by a matter is posited, your saying that the originated is a possible originated before the origin would have no meaning, since the possibility is a designation which requires an existent in which to subsist. The thing before its existence is not a receptacle for [any] designation. As a matter of fact, the possibility of every originated is in its matter, and the potency of its origin is in its receptacle. This is [indeed] the meaning of our saying that it is an existence in potency, like one says: «The knowledge exists in potency in the youth», and: «The palm is in potency in the date pit». The potency is sometimes proximate, and sometimes remote: the sperm is man in proximate potency, while the dust is man in remote potency, since it does not become a man unless after having repeatedly shifted through several stages.

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[(2)] The second judgment is that [(a.1)] the potency of acting subdivides itself into two parts: the first [potency] is [(a.1.1)] that which is [applied] to the actuality, but not to its contrary, like the potency of the fire to burn, not to not burn. [(a.1.2)] The second [potency] is that which is [applied] to the act and to its omission, like the potency of the man toward [both] motion and rest. [(a.1.1)] The first one is called natural potency, and [(a.1.2)] the second one voluntary potency. [D203] The realization of the actuality of this second potency, whenever the perfect will conjoins to it and there is no further obstacle, necessarily follows by nature, just like it necessarily follows from the first potency. As a matter of fact, when the power is realized and the will is perfected and separated from the inclination and the oscillation, and rather it becomes peremptory, but [still] the actuality has not been realized, this is not but for an obstacle. Whenever [(a.1)] the agent potency meets [(a.2)] the patient potency, and each one of the two potencies is perfect, the being acted upon realizes itself by necessity.

In sum, then, every cause makes its own caused follow according to the way of necessity. Until the existence of the caused is not necessitated by the cause, it does not exist. Indeed, until the possibility of its realization endures, the realization of the complex of the

conditions of the cause does not exist, and therefore it does not realize itself. By contrast, when the conditions of the cause are perfected, the realization of the cause is specified, and [then] it is impossible that it does not realize itself, since when that which necessitates is present, and that which is necessitated is not present, but is rather delayed, this is not but for a shortcoming in its nature – if it happens by its nature –, or in its will – if it happens by its will –, or for the privation of its essence – if its act occurs by its essence.

As long as it is possible that the necessitated does not realize itself from it, that [means] that the cause is not in actuality, but rather in potency. A novel thing that makes it pass from potency to actuality is [then] inevitable. When then that thing is present, the passage to the actuality becomes necessary.

[§169]

EIGHTH DIVISION

The existent subdivides itself into [(a)] necessary and [(b)] possible. By this, we mean that the existence of every existent [(b)] either depends on something other than its essence, inasmuch as if the non-existence of that something was presupposed, its essence would cease to exist – just like the existence of the chair depends on the wood, on the carpenter, on the need for sitting, and on the form, so that if the non-existence of one of these four was posited, the non-existence of the chair would necessarily follow –; [D204] [(a)] or the existence of its essence does not depend [on anything else] at all, but rather if the non-existence of all that is different from it was posited, its non-existence would not follow, but rather its essence is sufficient for its essence.

It has already been agreed to call the first one «possible» [(b)], and to call the second one «necessary». Then we say: «All that whose existence is from its essence and nothing else is [(a)] necessary, [while] that which has the existence not by virtue of its essence, either [(b.1)] is prevented in itself, so that its existence is always impossible, or [(b.2)] it is possible in its essence.

[§170]

[(a)] The necessary, then, is the necessarily existent. [(b)] The possible is the essence that does not make the necessity of its existence, nor of its non-existence, follow. However, the existence of every possible in its essence – if [indeed] it has existence – is undoubtedly by virtue of something other than itself, since if it were for its essence it would be necessary, not possible. With that other, it has three ways of being considered.

[(i)] The first one of them is to consider the existence of that other that is a cause, so that it is necessary, since it is apparent from that which precedes that the existence of the caused is necessary in the presence of the existence of the cause.

[(ii)] The second one of them is to consider the non-existence of the cause, so that it is prevented, since if it existed [also under this hypothesis], it would be existent by virtue of its essence, without a cause, so that it would be necessary.

[(iii)] The third one of them does not take into account the consideration of its cause, neither as for existence, nor as for non-existence, but rather takes into account its abstract

essence. Indeed, it has from its [own] essence the third thing, which is the possibility.

This is like [the fact] that the cause of the existence of the four is the existence of two and two, since [(ii)] if one considers the non-existence of two and two, the existence of the four in the world is impossible, [D205] while [(i)] if one considers their existence, the four is necessarily existent. [(iii)] If one has not taken into account the two, and yet takes into account the four, one finds it to be [merely] possible in its essence, *i.e.* there is neither a necessity for its existence, nor a necessity for its non-existence.

Therefore, the existence of every possible existent in its essence results by virtue of its cause. As long as the possibility of its resulting by virtue of its cause lasts, it does not result. When rather it has become necessary existent thanks to its cause, then it results, since as long as it remains possible the non-existence endures. It is inevitable, then, that the possibility ceases. This ceasing possibility is not the possibility that is has in its essence, since that is not the cause, so that it may cease. Rather, it is necessary that the possibility of its cause ceases, being replaced by the necessity, and that by virtue of the fact that the complex of the conditions is present, and the cause becomes just like it is necessary for it to be in order for it to become a cause.

[§171]

It is inevitable now to know an important principle about the possible, upon which a great foundation will be built, namely that the world, if it is eternal, is it possible that it is an act of God Most High, or not? It is already known that the existence of every possible is only by virtue of something other than it, and this other is the agent for it. [D206] About the thing's being agent two things are understood. [(i)] The first one of them is that [the cause] originates in time [the possible], by virtue of the fact that it extracts it from the non-existence to the existence, like the man builds a house that was not there [before]. This has been elucidated [and is] well-known. [(ii)] The other is that the existence of the thing is by virtue of it, like the existence of the light is by virtue of the sun, so that the sun is called by nature agent of the light.

Those who believed that «act» has no other meaning but the giving origin perhaps have thought that when the originated realizes itself, it can do without the originator, so that if that ceased to exist, the originated would not cease to exist. And perhaps someone among them had the audacity to say: «If the non-existence of the Creator – He who is Most High with respect to what the unjust say – were surmised, the non-existence of the world, after its existence [has been granted], would not follow from it». They signaled this by means of [(1)] an example and [(2)] a proof.

[§172]

[(1)] As for the example, it is that the death of the builder, after the house has been built, does not harm the house, nor does the house cease to exist because of his non-existence. [(2)] As for the proof, it is that the non-existent needs a giver of existence; as for the existent, it does not need a giver of existence.

[(1)] As for the example, it is absurd, since the builder is not the cause of the existence of the house except in a figurative sense, as it is only the cause of the movement of the parts

of the house towards one another. These movements are caused by his movement, and they interrupt for the interruption of his movement. However, the notion of the permanence of the structure of the house is that the part establishes itself in the place in which it was placed, and since it is weighty it tends downwards, while that which is under it, being dense, holds it [in place]. Therefore, the cause is its weight, and the density of that which is under it. Indeed, if the density ceased to exist, the structure of the house would be annihilated. The structure of the wall built of clay endures for the dryness that is in the clay. It is indeed [the dryness] that holds its structure, so that if one built it with a fluid in a mold, the structure of the wall would be annihilated as soon as the mold is lifted, because of the non-existence of the dryness.

[D207] Therefore, the builder is not the agent of the house, and likewise the father is not an agent for the son, but he is rather the cause of the movement of the sexual intercourse, and that movement is the cause of the movement of the sperm toward the uterus. Moreover, the cause of the origin of the form of the man in the sperm [consists in various] notions about the essence of the sperm, existing with the form, and the cause of the soul is an existing cause perpetually existent. It is meaningless, then, to raise objections because of this example.

[§173]

[(2)] As for the proof, it is that the existent does not need a giver of existence, which is true; it needs, however, a perpetuator for its existence.

[(2.a)] The clarification of this is that the originated act has two attributes: the first one of them is that it is existing now, and the other one is that before this it was non-existent. [(2.b)] Likewise, the agent has two attributes: the first one is that the existence is from it now – I mean the existence of the origin from it –, and the other one is that before it [the existence was] not from it.

Let us observe, then! Indeed, about the dependence of the act on the agent one of the three [holds]: either it derives [(i)] from the side of its existence, or [(ii)] from the side of its preceding non-existence, or [(iii)] [else] from both. [(ii)] It is absurd that it derives from the side of its non-existence, since the preceding non-existence has no dependence on the agent, nor has the agent any influence on it. [(iii)] It is [also] absurd that it derives from both, since when the dependence on the agent of the non-existence has been falsified, one has already falsified that it [may derive] from both. [(i)] The dependence of the act however is inevitable, and it has not remained [anything on which to depend] but its existence. That which depends on the agent is then the existence of the act, not its non-existence.

[§174]

If, then, [someone objected by] saying that [the act] depends on [the agent] inasmuch as it is an existent preceded [D208] by the non-existence, the meaning of that would be that its existence is after its non-existence; but the agent has no influence in its being an existence after a non-existence, since this existence cannot be unless an existence after a non-existence. Then, it is after the non-existence for its essence. If the agent had wanted to produce an existence which is not after a non-existence, it could not have. As a matter of fact, its

being after the non-existence is not the making of a maker, but it is only for the influence of a maker regarding its existence. Yes, the agent has the power not to act, and not to bring into existence. But as for the fact that it brings to the existence not after the non-existence, this is impossible. Therefore, the need that the originated has of the agent is from the side of its existence, and it is possible, indeed, from this side alone. As for its being existent after the non-existence, this is necessary, not possible – as a matter of fact, there is no need of the agent in this case. Whatever its dependence on [the agent] is, it is by virtue of the existence, so that as long as it is existent, it cannot do without the agent, and rather it is dependent on it, namely its existence is with it in all its states, just like the existence of the light is with the sun in all its states.

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[(2.b)] As for the agent, it also has two attributes, as we have mentioned. As a matter of fact, the being of the agent is a cause in one of these two ways: [(2.b.1)] either it is such inasmuch as something else has got existence by means of it, or [(2.b.2)] inasmuch as its existence, which was not by means of it, then results by means of it. [(2.b.1)] The truth is that it is cause inasmuch as something else has got existence by means of it, not [(2.b.2)] inasmuch as it was not and then it was. Indeed, if the existence did not derive from it before, it is only because it was not a cause. That, then, regards the state of the non-existence of its being cause, not its [actual] being cause and agent. [This is] like the fact that the man, when he did not want the thing that is not but for his will to be, and then he wanted it, when then the wanted [thing] was realized, he was an agent inasmuch as the wanted [thing] is actually existent since the will is actually existent, not inasmuch as the will has become actually existent after the non-existence.

Therefore, the existence of the thing is one matter, [D209] and the process of its becoming existent is another matter. The thing's being cause and agent is one matter, and the process of its becoming cause and agent is another matter. Indeed, the process of its becoming existent after not having been such opposes itself to the process of its becoming cause and agent after not having been such, and its being existent opposes itself to its being agent. If, then, someone understands from the act that the thing becomes existent after not having been such, let him understand from the agent also that it becomes cause after not having been such, and that then it changes into cause, in order to change into existence the non-existence of the caused. If someone understands from the act that it is existent by virtue of the agent, let him understand from the agent also that it is a cause for the existence, not for the process of its becoming existent.

That which is the cause of the existence of a thing, adding itself to its essence, is an agent. If then it were an eternal cause, it would be an eternal agent, and if it were a temporal cause, it would be a temporal agent. If it became an agent, it would become a cause. If it were eternally agent, it would be eternally cause. Yes, the common people do not understand the distinction between the thing's being agent and the process of its becoming agent. From this, then, they imagine what they imagine, and according to this it follows that the caused in its permanence, and in all its states, is subsisting by virtue of the cause, and that it cannot do without it. If, then, the cause and the agent ceased to exist, the caused and the act would [also] cease to exist. If [the agent] were eternal, the act would be eternal, since

its dependence on it only regards its existence, not its origin, which is an expression referring to an existence after a non-existence, as it was said before.

[§176]

[II]

[D210] SECOND TREATISE

ON THE ESSENCE OF THE NECESSARY EXISTENT AND HIS INSEPARABLE CONCOMITANTS

We have already mentioned the fact that the existence of the existent either depends on something other than itself, so that from the non-existence of that something its non-existence follows, or it does not depend [on something else]. If then it depends, we call it possible, while if it does not depend we call it necessary by its essence. Twelve things about the essence of the Necessary Existent follow from this.

[(1)] The first one is that He is not an accident, since [the accident] depends on the body, and its non-existence follows from the non-existence of the body, while, with the expression «Necessary Existent», we referred to that which has no attachment with anything else at all. On the contrary, the accident is possible, and every possible is existent by virtue of something other than itself, that something being its cause. It is then undoubtedly a caused.

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[(2)] The second [thing] is that He is not a body, for two aspects.

[(2.1)] The first one of them is that every body is divisible into parts according to the quantity. The whole, then, is dependent on the parts. If then one surmised the non-existence of the parts, its non-existence would follow, just like the non-existence of the man follows from surmising the non-existence of his parts. We have already mentioned that every whole is caused, hence it is not possible that the Necessary Existent is composed of parts. Indeed, if [someone] asked us: «Why is the ink existent?», we would answer: «Because there were the water, the gallnuts, the vitriol, and the gathering, so that from the mixed the ink results». As a matter of fact, these parts are the cause of the whole, and likewise [D211] the parts of every compound are a cause for the compound.

[(2.2)] The other [aspect] is that it has already been established that the body is composed of form and matter, so that if the non-existence of the matter was surmised, the body would be made non-existent, and if the non-existence of the form was surmised, [the body] would be made non-existent, [as well]. With the expression «Necessary Existent», however, we referred to, and intend, that whose non-existence does not follow by virtue of the non-existence of something other than His essence, and whose non-existence follows if one surmised the non-existence of His essence alone.

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[(3)] The third [thing] is that the Necessary Existent is not like the form – since it is dependent on the matter, and if one surmised the non-existence of the matter that is with it, its non-existence would follow –; nor is He like the matter, which is the receptacle of the form

and does not exist but together with it, since the matter exists in actuality with the form, and the non-existence of the matter follows from the non-existence of the form, so that it has got a dependence on something else.

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[(4)] The fourth [thing] is that His existence is not other than His quiddity, but it is rather necessary that His concrete existence and His quiddity are united. Indeed, it has already been said before that the concrete existence is not the quiddity, and that the existence which is the concrete existence is an expression referring to something accidental with respect to the quiddity. But if it is accidental it is caused, since if it were existent by virtue of its essence, it would not be accidental for something else. Indeed, that which is accidental for something else has a dependence on [that] something else, since it is not but together with it. About the cause of [His] existence, one of the two: either it is the quiddity, or it is something other than it. If, then, it were something other than [the quiddity], [His] existence would be accidental and caused, and He would not be the Necessary Existent. [However,] it is absurd that the quiddity in itself is a cause for the existence of itself, since the non-existence is not a cause for the existence, and the quiddity has no existence before this existence – how then [could] it be a cause for it? [D212] If it had an existence before this existence, it could do without a second existence, but this question would [however] follow by necessity about that existence, since it [would] be accidental in it – whence, then, would it accidentally inhere into it, and follow from it? It is then established that the concrete existence of the Necessary Existent is His quiddity, and the necessity of the existence is to Him what the quiddity is to that which is other than Him. It is apparent, from this, that the Necessary Existent does not resemble at all that which is other than Him. As a matter of fact, all but Him is possible, and for all that is possible the existence is other than the quiddity, while His existence is from the Necessary Existent [Himself], as will be [explained].

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[(5)] The fifth [thing] is that He does not depend on something else in the way in which that something depends on Him, in the sense that the being of each one of the two is cause of the other. This is indeed impossible for that which is not the Necessary Existent. That is the fact that B is the cause of C and C is the cause of B. Now, given that B, inasmuch as it is a cause, is before C, and C, inasmuch as it is a cause, is before B, [B] would be before that which is before it, which is impossible. Each one of the two would be before its companion, inasmuch as it is cause, and after it, inasmuch as it is caused, and this is a patent absurdity.

[§181]

[(6)] The sixth [thing] is that He does not depend on something else in the way in which that something depends on Him, not in the sense of the causality, but according to the way of the mutual relationship, like between two brothers. We say, indeed: «If His non-existence does not follow from the non-existence of that something else, He has no attachment to that something else». We permit that that which is not the Necessary Existent has an

attachment with the Necessary Existent, since the caused [D213] depends on the cause, [while] the cause does not depend on the caused. If His non-existence followed from the non-existence of that something else, He would be possible, not necessary. As a matter of fact, all that depends on something other than Him is possible, because one of the two [holds true]: [(6.1)] either that something else is sufficient for its existence, so that that something else is its only cause, and [that which depends on it] is its caused; [(6.2)] or there is need of another thing together with that something else, so that [the dependent thing] is the caused of the whole. All this, however, is incompatible with the necessity of the existence.

[§182]

[(7)] The seventh [thing] is that He cannot be two things, each of which Necessary Existent, in such a way that they are equal as for the necessity, and that each one is autonomous in itself, not depending on the other. Indeed, one of the two: [(7.1)] either they are identical under every respect, [(7.2)] or they differ.

[(7.1)] If, then, they were identical under every respect, the[ir] plurality would be suppressed, as one could not intellectually understand the duality, as we have mentioned concerning the impossibility of two blacknesses in one single receptacle, in one circumstance, clarifying that the universal does not realize itself [in the actual particulars] unless by means of a differentia, or of an accidental which is undoubtedly proper to it.

[(7.2)] If, [by contrast, the two] were different by virtue of a differentia or an accidental, this would also be impossible, since it has already been said before that the differentia and the accidental do not have access to the true nature of the essence of the universal, nor does the humanity have access to the being animality of the animality, but it only falls within its being existent, and that regards the fact that the existence is accidental with respect to the quiddity, and to the other [things depending from it].

[D214] As for that Whose concrete existence and Whose quiddity are one, the differentia does not fall within His quiddity, nor within His concrete existence. The Necessary Existent, then, is devoid of differentia, and indeed the differentia and the accidental [regarding Him] are nonsense. If He were not the Necessary Existent without that differentia, the differentia would already fall within the true nature of the notion, namely the notion of the necessity of the existence. It has already been said before that that is impossible, and that it only falls within the existence of the quiddity and of the true nature when the quiddity is other than the existence.

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[(8)] The eighth [thing] is that He cannot have an attribute additional with respect to the essence, since [(8.1)] if His existence subsisted by virtue of that attribute, so that His existence would be suppressed by surmising the non-existence of that, He would already depend on it, and He would then become a compound of parts, whose essence is not assembled unless by virtue of their sum; and every compound of things is caused, as it was said before. [(8.2)] If [rather] His non-existence did not follow from surmising the non-existence of that attribute, it would accidentally inhere to Him, like for instance knowledge [accidentally

inheres] to the man; but this is impossible, since every accidental is caused, as it was said before. [(8.2.1)] If the cause [of the accident] were the essence of the Necessary Existent, the essence would be agent and receptive; but His being agent is other than His being receptive, since He does not receive inasmuch as He acts, and He does not act inasmuch as He receives. Then, there would be a multiplicity in Him under a certain respect, but we have already clarified that the multiplicity is impossible in the essence of the Necessary Existent, since the motivation of the whole is necessitated by the units. Thus, He is one under every respect.

[§184]

By contrast, we will clarify in the *Physics* that the body does not move by itself, that it is impossible that a thing is moved and moving under a single respect, [D215] and that the agent is not receptive, but rather the body is receptive, and the agent [comes] from outside, like its being set into an upward motion; or the receptive [element] is matter, and the agent is the form, like its downward motion. The gathering of the action and the reception, therefore, is indeed conceivable in the body and in the other things of the kind, which are composed of a thing that is like the form – by virtue of which one acts – and of a thing that is like the matter – by virtue of which one receives. We have already clarified, [however,] that the Necessary Existent is not like that.

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[(8.2.2)] It is [also] absurd that that accidental is from something other than Him, since [in that case] He would become possessor of an attachment to [that] something, so that His existence according to that attribute would depend on the existence of that something, while His existence devoid of that attribute would depend on the non-existence of that something. He is either described by [that attribute], or He is devoid [of it], but in both circumstances He is dependent. That, however, whose existence depends on the non-existence of something other than itself is caused, just like that whose existence depends on the existence of something other than itself is caused, since its essence cannot do without that non-existence, in such a way that if one surmised its replacement with the existence, its essence would be suppressed. Therefore, its essence is dependent on that something else. The Necessary Existent, [by contrast,] has no attachment at all to something else, but rather His essence is sufficient to itself. This is [precisely] what we mean with «Necessary Existent».

[§186]

[(9)] The ninth [thing] is that it is impossible that the Necessary Existent changes, since «change» is an expression referring to the origin in Him of an attribute that was not there [before]. Every originated needs a cause. It is impossible that it is something else, as it was said before, and that it is His essence, since every attribute follows from the essence, is with the essence, and is not posterior to it. We have already mentioned that the agent is not receptive. Nothing, then, produces anything at all in His essence.

[§187]

[D216] [(10)] The tenth [thing] is that only one thing proceeds without an intermediary from the Necessary Existent, and that manifold things proceed from Him according to a hierarchical order and through intermediaries; and that because it has been established that He is one, without multiplicity in Him under any respect. Multiplicity is indeed [(10.1)] either by virtue of the multiplicity of parts each of which is autonomous, like the multiplicity of the composite body, [(10.2)] or it is by virtue of the multiplicity of the notion, by which token the thing divides itself into two things, each of which is not autonomous without the other, like the form and the matter, or the existence and the quiddity. However, we have already denied all that about Him, therefore it does not remain [anything for Him] unless [being] one under every respect, and from the one, only one proceeds.

The act of the one only differs [(i)] either for the difference of the receptacle, [(ii)] or for the difference of the instrument, [(iii)] or for a cause additional with respect to the essence of the one agent. The demonstration of it is that when we lay a body before a thing that warms it up, [and] then we lay it before another [thing] that cools it down, we necessarily know that there is a difference between the two [things], since if they were equal, their two acts would also be equal. Then, however impossible the existence of two different things from two equal essences [may] be, it will be all the more impossible from one single essence, since [any]thing is farther apart from the other than itself, than from itself. When then the correspondence to the other necessitates that the action of the one and the action of the other do not differ, the correspondence to oneself [will] all the more [necessitate] that. «Correspondence to oneself» is figurative; but the intent [here] is [just] to make understand.

[§188]

[(11)] The eleventh [thing] is that the Necessary Existent, just as He does not receive the predicate of «accident», as we have said before, likewise does not receive the predicate of «substance», even though He is self-subsisting and is not in a receptacle, like the substance.

[D217] «Substance», however, in the technical usage of the group [of the philosophers], is an expression referring to a nature and a quiddity whose existence is not in a subject: we mean [the nature and the quiddity that,] when they exist, then their existence is not in a subject, not an existent of realized actual existence. Take then as an example the fact that the crocodile is a substance, and you do not doubt that; you can however doubt [D218] whether it is immediately realized, or not – and likewise all the substances. Therefore, «substance» applies to a nature and a quiddity to which, when the existence accidentally inheres to them, it inheres not in a subject. It is then an expression referring to that whose quiddity is other than its concrete existence.

That, then, whose quiddity and whose concrete existence are one is not called «substance» according to this technical usage, unless someone invents [another] technical term, making it an expression referring to an existence that has no receptacle. In this case, we do not deny its application to Him.

[§189]

If someone [objected] by saying: «Does not one say: “The Necessary Existent is an existent, and that which is other than Him is [also] an existent, and the existence is comprehensive”? Then He is already classified with what is other than Him under the genus, and then it is necessary that He differentiates from it by virtue of a differentia; therefore, He has a definition», he would be answered [that this is] not [the case], because the existence befalls Him and that which is other than Him according to the way of the anteriority and the posteriority. Rather, we have already clarified that it also befalls the substances and the accidents in such a way. It is not, then, according to the way of synonymy, and that which is not according to the way of synonymy is not a genus either.

If the existence is not a genus, it will not become a genus by the fact that a negation is annexed to it, which is «not in a subject» [D219] – indeed, [nothing] is annexed to it but an abstract negation. Then, the existence not in the subject, which belongs to Him and to that which is other than Him among the substances, is not according to the way of generality. Substantiality is [rather] a genus for all the substances.

From this it results, then, that the Necessary Existent does not fall in any of the ten categories – since He does not fall in the category of the substance, how [could] He fall in the categories of the accidents? How, since the existence of all the categories is additional with respect to their quiddities and accidental with respect to them, being external with respect to their quiddities, whereas the existence of the Necessary Existent and His quiddity are one [and the same] thing?

From this, then, it appears that the Necessary Existent has no genus, nor differentia, nor definition. It has [also] appeared that He has no receptacle, nor subject, and then He has no contrary. It has appeared that He has no species, no equal, and no associate. It has [also] appeared that He has no cause, no change, and no parts at all.

[§190]

[(12)] The twelfth [thing] is that it is necessary that all but the Necessary Existent proceeds from the Necessary Existent according to the hierarchical order, and that the existence of all but Him is from Him.

The demonstration of it is that, once it has been clarified that the Necessary Existent is not but one, that which is not Him is not necessary, and will then be possible, so that it needs the Necessary Existent, and then it is from Him. As a matter of fact, all the possible [things] do not escape from four divisions: [(12.1)] either some of them are from others, and they concatenate to the infinite; [(12.2)] or one comes to an extreme, and that extreme is a cause which has no cause in itself; [(12.3)] or one comes to an extreme, and that extreme has a cause in the complex of its caused; [(12.4)] or one comes to the Necessary Existent. The aspect [according to which] these divisions are exhaustive is that one of the two [holds]: [(a)=(12.1)] either they concatenate [to the infinite], [(b)] or they come to an end. If, then, they come to an extreme, that extreme [D220] either is the Necessary Existent [(b.1)=(12.4)], or it is something else [(b.2)]. [(b.2)] If, then, it is something else, then that extreme either has a cause [(b.2.1)=(12.3)], or it does not have a cause [(b.2.2)=(12.2)].

[§191]

[(a)=(12.1)] As for the first division, which is the infinite concatenation, we have already falsified it.

[(b.2.2)=(12.2)] As for the second one, that is that they arrive to an extreme other than the Necessary Existent that we have presupposed, and that that extreme does not have a cause, this [division] leads to the fact that the Necessary Existent is twofold, since with «Necessary Existent» we do not mean but that which has no cause at all; and we have already falsified this.

[(b.2.1)=(12.3)] As for the third one, that is that the cause of that extreme is, in turn, a thing among its caused – for instance that A is cause of B, and B cause of C, and C cause of D, and then one comes back so that D is cause of A –, this is impossible, since it leads to the fact that the caused is a cause, since the caused of the caused is a caused: how, then, will it come back [to be] its cause? And the cause of the cause is a cause: how, then, will it come back [to be] a caused? The falsification of that has already come before.

[(b.1)=(12.4)] The fourth one results then specifically imposed, namely that [all the possible things] ascend to an extreme which is the Necessary Existent.

[§192]

If then someone [objected] by saying: «You have already divided the existence into that which depends on something other than itself, and that which has no attachments, and you have given the name of “necessary” to that which has no attachments, and you have claimed that the Necessary is necessitated to be so and so, so that He is preserved from the attachments, but you have not shown that, in the actual existence, He is existent by virtue of this attribute. Which is, then, the sign that establishes [the existence of] the Necessary Existent, since He is the existent Whose descriptive feature you have not mentioned?», [D221] one [should] answer that His demonstration is that the existence of the sensible world is apparent, and it [consists of] bodies and accidents, the concrete existence of which all is other than their quiddity. We have already established that that which is such is possible – and how [could] it not [be]? The subsistency of the accidents is by virtue of the bodies, which are possible, and the subsistency of the bodies is by virtue of their parts, and of form and matter. The subsistency of the form is by virtue of the matter, and the subsistency of the matter is by virtue of the form, since the one cannot do without the other. And it has already been said before that that which is such is not necessary. As a matter of fact, we have clarified that there is no Necessary Existent that is form, nor matter, nor body, nor accident. The universal negative converts in a [proposition] similar to itself, then none of these things is the Necessary Existent; therefore, they are [all] possible.

[§193]

We have already mentioned that the possible is not existing by itself, but by virtue of something else, and this is the meaning of its being originated. The world, then, is possible, and it is then an originated. The meaning of its being originated is that its existence is from something else, and that it does not have an existence by itself. In consideration of its own

essence, then, it does not have an existence, while it has some kind of existence in consideration of something other than itself. That which the thing has by its own essence comes before that which it has by virtue of something else, for a priority related to the essence. [The world] has the non-existence by essence, and the existence by something else: its non-existence, then, is before its existence. It is then eternally and forever originated, since it is eternally and forever existent by virtue of something other than itself. It has already been said that the perpetuity of the thing does not exclude its being an act.

[§194]

[D222] That from which the thing perpetually exists is worthier than that which remains inactive for an infinite period of time, and is then provoked to the act. When it has been established that the universe is possible – since it has already been said before that all that falls within the possible things needs a cause, and that it is inevitable that the causes ascend by necessity up to the Necessary Existent, which is inevitably one –, from that it emerges that the world has a principle necessary by its own essence, one under every respect, whose existence is by virtue of its own essence, and which is rather, by essence, the truth of the pure existence. He is the spring of the existence in every true [thing] other than Him. Indeed, His existence is perfect and above perfection, so that all the quiddities become existent by means of Him according to their hierarchial order. The relationship of the existence of the other things to His existence is like the relationship of the brightness of the bodies to the brightness of the sun. As a matter of fact, the sun is bright by itself, from its own essence, not from another bright [thing], while the other things are lit by means of it, as it is the spring of the brightness for all that is lit. The brightness, namely, flows from its essence on the other things without anything separating from its essence; and yet the brightness of its essence is cause for the origin of the brightness in the other things.

[§195]

This simile would be sound if the sun were in its essence a brightness without a subject; but its brightness is in a body which is a subject. The existence of the First which is the spring of the existence of the universe is not in a subject, but it [also] differs [from the sun] for another respect, namely for the fact that the brightness follows from the essence of the sun by the pure nature, without the sun having knowledge and notice of the resulting of [the brightness] from it. Its knowledge of the existence of the brightness from it is not, then, the principle of the existence of the brightness from it. We will clarify, [by contrast,] that the knowledge of the First about the way of the intellectual ruling in the universe is the principle [itself] of [that] ruling, and that the existing ruling comes after the intellectual ruling represented in the essence of the First.

[§196]

[III]

[D223] THIRD TREATISE
ON THE ATTRIBUTES OF THE FIRST

Within it, [(b)] allegations and [(a)] a premise are to be found.

[(a)] As for the premise, it is that it has already been said before that the Necessary Existent cannot have a multiplicity in His essence in any way. [Yet,] it is inevitable that the Necessary Existent is described with [some] descriptions, and then it is inevitable to distinguish between the descriptions that lead to a multiplicity in the essence, and that that does not lead to it, so that nothing is established for Him except that which does not lead to the multiplicity.

The descriptions are of five kinds, which [can] be summarised in our saying, of a specified man, that he is a [(a.1)] body, [(a.2)] white, [(a.3)] knowing, [(a.4)] magnanimous, [(a.5)] poor. These, then, are five attributes.

[(a.1)] As for the first one, it is that he is a body. It is then an essential [attribute], which falls within the quiddities, and is a genus. It is not possible to establish that which is similar to this for the essence of the Necessary Existent, for what has been said before about the fact that He has no genus, nor differentia.

[(a.2)] The second one is «white», which is an accidental description for the man. The establishment for the Necessary Existent is not possible for that which is similar to it, either.

[§197]

[(a.3)] The third one is «knowing». As a matter of fact, the knowledge is an accident for the man, and it has a dependence on something else, namely the known. Whiteness, [by contrast,] is an accident not depending on something else, [D224] and this is the discriminating [element between the two]. It is not possible to establish an accident in the essence of the Necessary Existent, be it dependent or no, as it was said before.

[(a.4)] The fourth is «magnanimous», which refers to the relation of the essence to an act that proceeds from it. This falls within that which is possible to establish for the First. The multiplicity of the relations in Him, as for what concerns different aspects [addressed] toward the acts proceeding from Him, is possible. This does not necessitate a multiplicity in the essence, since it does not refer to a description internal to the essence. Indeed, the change of the relation does not necessitate the change of the essence, and this is like your being at a [certain] man's right, since [this] is a description relative to you with respect to him. However, if that man moved to your right, there would be a change in him by virtue of the movement, but as for you, your essence does not change by virtue of that. There is then no objection against the multiplicity of this kind of attributes.

[(a.5)] The fifth one is «poor», which is a name for an attribute that denies, since its meaning is the non-existence of the wealth, but with respect to the expression, one estimates that it is the description of an [actual] establishment. This as well is not far from

being permitted about the true nature of the First, since multiple things are denied of Him.

[§198]

From the two descriptions of the relation [(a.4)] and of the negation [(a.5)] multiple names are generated for the First, [names] which do not necessitate multiplicity in His essence. Indeed, when He is said [to be] «One», the meaning of that is the negation of the associate and the matching [for Him], and the negation of the subdivision. When He is said to be «Eternal», its meaning is the negation of the beginning with respect to His existence. When He is said [to be] «Magnanimous», «Generous», and «Merciful», the meaning of that is His relation to acts that proceed from Him. When one says: «He is the Principle of the universe», its meaning is once again the relation. This is then the premise.

[§199]

[ALLEGATIONS]

[(B.1)]

[(b)] As for the allegations, [(b.1)] the first one of them is that the First Principle is living, since he who knows his own essence [D225] is living, but the First knows His essence; therefore He is knowing [and] living. The demonstration of His being knowing of His essence is that you know what is the meaning of our saying that the thing is knowing, and what is the meaning of our saying that it is knowledge and known. It will be [explained] in the book on the soul, within the *Physics*, that our soul intuitively knows herself, the things other than herself, and her [own] action of knowing. The meaning of her being knowing is that she is a being free from matter; and the meaning of the thing's being known and intellectually known is that it is abstract from matter. Indeed, whenever the descending of an abstract [thing] in a [thing] free [from matter] is presupposed, that which descends is a knowledge, while the receptacle [in which it descends] is a knower. «Knowledge», as a matter of fact, has no meaning but the impression of a form abstract from the material [bounds] in an essence which is free from the material [bounds]. That which is impressed is then a knowledge, and that within which it is impressed is a knower – and the knowledge has no meaning but this. Whenever then this happens, the name[s] of «knowledge» and «knower» truly apply, and whenever it is denied, they do not apply truly.

[§200]

That which is intended with «free» and «abstract» is [in general] a single thing; yet, we have specifically characterised the abstract as «known», and the free as «knower», so that there is no dubiousness in the reiteration of the words.

Moreover, the man only knows his soul because his soul is abstract, and he is not concealed from himself, so that he needs the obtainment of his [own] likeness and of his [own] form in him, in order to know himself. Rather, his soul is present to the soul herself, and her essence is not concealed from her own essence, so that he knows himself.

It has already been said before that the Necessary Existent is free from the material

[bounds], with a stronger freedom than the freedom of the human soul, since the soul depends on the matter for the dependence [due to] the act [of the matter] on her, while the essence of the First, as we will clarify, is separated from [all] attachments with the material [bounds]. His essence is indeed present to His own essence, and He knows by necessity His essence, because His abstract essence is not concealed from His free essence. [D226] «Knowledge» [in Him] is an expression only referring to what is similar to this condition.

[§201]
[(B.2)]

[(b.2)] The second allegation is that His knowledge of His essence is not added to His essence, in such a way as to necessitate a multiplicity in Him, but it is rather His [own] essence. We will make a premise precede the clarification of that, namely that all that man knows, either it is known to him thanks to its direct appearance in his soul, by virtue of the external sense or the internal sense, or it is not known to him, and there is no way to make it known unless by means of the comparison with a thing among that which has been established through the direct testimony within his soul. If indeed [the man] does not directly know from himself a matching [element] for [that thing], [at least] under a certain respect, he cannot make it known.

When then this has been established, we say: «The man does not know this in the truth of the Divine, unless by drawing an analogy to himself. Indeed, he knows himself. His known then is different from him, or is it identical to him? If it were different from him, then he would not know himself, but he would rather know something other than himself. If [rather] his known were identical to him, then the knower would be himself, and the known [would also] himself, so that the knower and the known would already be united».

[§202]

We will then set up the sign that the knowledge is the known, as well, so that once we have made the known a basis, and we have clarified that the knowledge is identical to the known, and also that the knower is identical to the known, as it was said before, from that it follows by necessity that all [these] are one [thing], without multiplicity in it.

The sign that the knowledge is the known, and the sense is the sensed, is that man is sensing by virtue of the impression of that which impresses itself in his eye of the form and the image of the seen perceived with the senses. He then perceives that trace impressed in him, and he is sensing that alone. As for the external thing, it corresponds with that trace, and it is a cause for the resulting of the trace, which is the second perceived [thing], without the first. Rather, what you receive [D227] is that which results in your essence.

«Sense» is an expression referring to that sensed trace. The first sensed is also that trace. The sense and the sensed are one. Likewise, the knowledge is the known itself, and its image is that which corresponds to it, namely the known perceived [thing], I mean the image that impresses itself in the soul. As for the external existent, it corresponds to it, and it is cause of its resulting in the soul. The known, then, is in the truth that form. Since, then, it has been established that the known, whatever it may be, is the knower himself, the knowledge, the knower and the known are united.

Therefore, the First is knower of Himself, and His knowledge and His known are Himself, and the expressions only differ for the difference of the considerations. Indeed, inasmuch as His essence is free from matter, and He has an abstract essence not concealed to Him, He is knowing; inasmuch as His essence is abstract from His free essence, He is known; and inasmuch as His essence has His essence, is in His essence, and is not concealed from His essence, He is knowledge in His essence. All this is because the knowledge requires a known alone. As for that known being other than the knower, or identical to it, the knowledge does not necessitate a distinction concerning [this], but it is rather possible to say: «The known subdivides itself into that which is the knower itself, and that which is other than it». Indeed, its requirement about an absolute known is more common than its requirement about a known other than it, or identical to it.

[§203]

[(B.3)]

[THIRD ALLEGATION. KNOWLEDGE OF THE FIRST PRINCIPLE]

[(b.3)] The third allegation is that the First knows all the species of the existents and their genera. Nothing, then, escapes His knowledge. This is now more subtle and more obscure than the preceding [allegation]. [D228] Its clarification is that it has been established that He knows His essence, so that it is necessary that He knows Himself according to that which He is in Himself, since His essence is abstract with respect to His essence and unveiled to Him according to that which He is in Himself, in His truth. His truth is that He is a pure existence, Which is the spring of the existence of all the substances, of all the accidents and of all the quiddities, according to their hierarchical order. If, then, He knows Himself as a principle for them, so that the knowledge of them is already involved in His knowledge of Himself.

If He did not know Himself as a principle, He would not know Himself according to that which He is in Himself, which is impossible. Indeed, He knows His essence only because His essence is not concealed from His essence, and both are abstract – I mean His essence according to the two ways of considering [it] –, that is like He is in Himself unveiled to His [own] essence. As a matter of fact, when one of us knows himself, he knows undoubtedly himself as living and powerful, because he is such; if he did not know himself in this way, he would not know himself according to that which he is in himself. The First as well, then, knows Himself as a principle for the universe, so that the knowledge of the universe is involved under His knowledge of Himself, undoubtedly according to the way of the inclusion.

[§204]

[(B.4)]

[FOURTH ALLEGATION. UNITY OF THE KNOWLEDGE OF THE FIRST PRINCIPLE]

[(b.4)] The fourth allegation is that this as well does not lead to a multiplicity in His knowledge and His essence; and this is more obscure than the preceding [one], since the known [things], in their multiplicity, require multiple knowledges. Indeed, the existence of

one knowledge of distinct known [things] is impossible, since the meaning of «one» is that it has in itself no thing different from [another] thing – such that if the non-existence of one of them were surmised its [own] non-existence would follow –, since it has no parts. When it has been presupposed that the knowledge of the substances and the accidents is one, if one surmised the ceasing of its dependence on the accidents, a thing other than that the ceasing of which has been surmised would [still] remain, namely its dependence on the substances; and likewise [for] every couple of known [things]. This opposes itself to the notion of unity. Yet, its clarification is by virtue of a comparison to the direct testimony of the soul. As a matter of fact, the soul is an abridged transcription of the whole world, within which there is a matching [element] for everything and through which one takes possession of the knowledge of the universe.

[§205]

We say, then, that man has three states with respect to knowledge.

[D229] [(i)] The first one of them is that he articulates the forms of the known [things] in his soul just like he thinks, for instance, about a juridical form, ordering a part of it after another. This is the articulated knowledge.

[(ii)] The second one is that he is already practiced in the jurisprudence, having obtained it, possessing it in autonomy, and having obtained the faculty of the jurisprudence in such a way that he knows every form presented in front of him, without enumeration. Then, it can be said of him – in the state of his indifference with respect to articulation – that he is a jurisprudent, since in his mind there is not a present knowledge, and yet he acquires a condition and a disposition, which disposition is an effusive principle for the infinite forms of the jurisprudence. The relation of that condition to every possible form is one. This is a simple and plain condition, and it is one, without minute analysis within it, despite having a relation with infinite forms.

[(iii)] The third one, which is an intermediate condition between the [first] two conditions, is for instance that the man hears in a discussion words of another [man] about a question, while he is autonomous as for his knowledge [of the topic], so that he knows that his answer is present within him, that what [the other] says is false, and that he is decidedly capable of falsifying him. As if he had heard [the other] saying: «The world is eternal», by means of a specious argument such and such, while he knows that it has an origin and the way to answer to that specious argument, although its mentioning and its adduction require [then] minute analysis and prolixity.

[§206]

He [however] knows at once by himself, with certainty, what is comprised by the answer in its complex, even though he has not [yet] articulated in his mind the ordering of the answer. Later on he takes up the answer drawing it from the simple universal thing that he had perceived in his soul. A distinct form after the other, then, unceasingly originate themselves in his mind from that universal thing, to which [forms] he refers with an expression after the other, and which he supplies with a premise after the other until he has treated exhaustively the elucidation of the simple answer that was in his soul thanks to premises and

articulations which were not present in his mind, at that moment, according to their articulation. Rather, he had a simple condition, as it were a principle for the articulation and a creator for it, which is more noble than the articulation.

[(iii)] It is then necessary that it is surmised that the knowledge [that] the First has of the universe is of the kind of the third condition.

[§207]

[D230] [(i)] As for the the fact that it is [rather] of the kind of the first condition, this is impossible, since the articulated knowledge is the human knowledge that does not gather two things of it[self] in one [single] circumstance, but rather one comes to pass after the other. As a matter of fact, knowledge is a picture in the soul, and since it is not conceivable that there are two pictures and two shapes in the [same] wax in one [single] circumstance, neither it is conceivable that there are two distinct present knowledges in the soul in one [single] circumstance. Rather, they closely succeed to one another, so much so that their succession is not perceived for the fineness of the time. Indeed, the manifold known [things] become combined as one thing, so that the soul has from them one [and a single] condition, whose relation to all the forms is one. That is like the one picture [in the wax].

Now, this articulation and [this] transfer are not but in the man. If, indeed, the existence of them both together, in [their] distinction, was presupposed in the true nature of God Most High, there would be infinitely numerous knowledges [in Him], which would require a multiplicity. Moreover, it would be contradictory, because the engagement of the soul with one articulated [known thing] prevents [her] from [knowing] another [thing].

Therefore, the meaning of the First's being knowing is that He is according to a simple condition whose relation to all known [things] is one. Then, the meaning of His being knower is His being principle for the flowing of the articulation from Him in the things other than Him. His knowledge, indeed, is the creative principle for the articulations of the knowledges in the essences of the angels and of mankind. He is knowing according to this consideration, and this is more noble than the articulation, because the articulated does not exceed one – since it is inevitable that it is finite –, while this is a relation to that which is infinite, its relation to what is finite being one.

[§208]

The example of it is that one presupposes a king who has got the keys of the treasuries of the riches of the earth and [yet] does without them, not availing himself of gold nor silver and not taking from them, but rather makes them flow on the people, so that everyone has some gold, having taken it from [the king], and having reached it by means of the keys [of the king]. Likewise, the First has got the keys of the unknown, and the principle of the knowledge of the unknown and of the creed flow from Him upon the universe. As it is impossible to not call «rich» the king who has in his hand the keys [of the riches], it is [also] impossible to [D231] not call «knower» He Who has got the keys of knowledge. The poor who has received from him numerous dinars is called «rich» in consideration of the fact that the dinars are in his hand. Then how would the king not be called «rich», in consideration of the fact that the dinars are from his hand and that it is by virtue of his beneficial

help that the richness flows upon the all? Analogous [to this] is then the state of the knowledge.

Indeed, the relation of the condition which is [proper] of the First to the articulated knowledges is the relation of the alchemy to the specified dinars. The alchemy is more precious [than the single dinars], since it makes infinite dinars result for us by virtue of the appraisal and of the multiplication of the exemplar. It is then necessary to understand the knowledge of the First as simple, and that that is by virtue of the comparison to the third condition. Then, the relation of the knowledge of the First to all the known [things] is like the relation of the state of the discussant to the gist of the articulated answer.

[§209]

If then [someone objected] by saying: «That condition comes back to the fact that He is devoid of the knowledge, and yet predisposed to the reception of the knowledge by virtue of the proximate potency. However, one says that He is knowing for the proximity of the potency, and otherwise He would be disjoined from the knowledge. The First is then disjoined from the knowledge in actuality, and it is not conceivable that He is receptive in potency, then He is neither knowing in potency, nor in actuality», one [should] answer [him]: «What you mentioned in [your] question is the true nature of the second condition, not the true nature of the third condition». The third condition has already been distinguished from the second in that the possessor of the second condition can be unaware of the knowledge and the known in the complex and in the articulation, [while] the possessor of the third condition is knowing of the absurdity of [his opponent's] allegation about the eternity of the world, and of the way of answering to his specious argument, being firmly confident of that, and convinced that he has a present condition in actuality [addressed] to that condition, [a present condition] which is a relation with the articulated knowledges whose articulation is not [yet] present in his mind. Rather, he is capable of making them present. Then, by virtue of this condition, it is necessary that he is similar to the state of the First, so that it [can] be intellectually [D232] understood what is researched in this allegation.

[§210]

[(B.5)]

[FIFTH ALLEGATION. KNOWLEDGE OF THE POSSIBLES ON THE PART OF THE FIRST PRINCIPLE]

[(b.5)] The fifth allegation is that God Most High, as He knows the genera and the species, [also] knows the possible events, although we do not know them. As a matter of fact, it is impossible to know the occurring or the non-occurring of the possible, as long as one knows that it is possible, since, about it, one only knows the description of the possibility, whose meaning is that it is possible that it is, and it is [also] possible that it is not.

If then we knew, for instance, that the arrival of Zayd will inevitably happen tomorrow, it would then become necessary that it happens, and our saying that it is not possible that it happens would be false. Therefore, the possible is that of which, as long as one does not know about it [anything] but the possibility, it is not conceivable to know that it occurs or that it does not occur. However, we have already mentioned that every possible in itself is

necessary by virtue of its cause, so that if one knows the existence of its cause, its existence is necessary, not possible, and that if one knows the non-existence of its cause, its non-existence is necessary, not possible. Therefore, the possible [things] are necessary in consideration of [their] cause.

If then we pointed out all the causes of one thing, and we knew their existence, we would conclude for the existence of that thing, like the fact that it is possible that Zayd finds a treasure tomorrow, and it is possible that he does not [find it], but once we have known the existence of the causes of the discovery of the treasure, the doubt ceases: for instance, if you knew that in his house a cause of inconvenience for him will take place, which necessitates his going out of the house on the way so and so, and that he moves on the line so and so, and [if] it is known that on that line there is a treasure, whose summit is covered by something light which does not sustain the weight of Zayd, then it will be known that he will inevitably discover it, because that becomes necessary, in consideration of the presupposition of the existence of its causes.

[§211]

The First Glorious and Most High knows the originated by virtue of their causes, since the reasons and the causes go back to the Necessary Existent. Every originated and possible, then, is necessary, since if it were not necessitated by its cause it would not exist. Its cause is in turn necessary, until [the series] does not terminate at the essence of the Necessary Existent. By virtue of the fact that He knows the hierarchical order of the causes, He undoubtedly knows the caused, [as well]. The astronomer, inasmuch as he scrutinizes some of the causes of the existence, without however pointing out all of them, certainly [D233] judges about the existence of the thing with a [mere] opinion, because it is possible that that to which he pointed is hindered by an impediment. Indeed, what he mentioned is not every cause, but, rather, that [to which he pointed will happen] when accompanied by the absence of the [possible] hindering [forces]. If then he has pointed to a greater [number] of causes, his opinion strengthens, and if he has pointed to all the causes the knowledge [of the future event] results for him, just like in winter he knows that the air will become hot in six months, since the cause of the heating is the sun's being in the middle of the sky, for its being in the [sign of the] Lion – since [the astronomer] knows, on the strength of the habit and of the inductive proof, that the sun does not change its travel, and that it will reach the Lion after that period [of time]. This is, then, the way of the knowledge of the possible [things on the part of the First].

[§212]

[(b.6)]

[SIXTH ALLEGATION.

ATEMPORAL KNOWLEDGE OF THE PARTICULARS ON THE PART OF THE FIRST PRINCIPLE]

[(b.6)] The sixth allegation is that the First Glorious and Most High cannot know the particulars with a knowledge that falls under the past, the future and the present, so that He knows that the sun was not eclipsed today, but it will be eclipsed tomorrow, and that He knows moreover, once the next day has come, that it is eclipsed in that moment, and that

He knows, once the day after the next day will have come, that it was eclipsed yesterday.

As a matter of fact, this would necessitate a change in His essence, for the variation of these knowledges in Him; but it has already been said before that the change is impossible about Him. The way of the necessary following of the change is that the known is followed by the knowledge. Then, whenever the known changes, the knowledge [also] changes, and whenever the knowledge changes, the knower [also] changes, since the knowledge does not belong to the attributes at the variation of which the knower does not change, like its being right and left. Rather, the knowledge is an attribute of the essence [of the knower], whose variation necessitates the variation of the essence. Neither is the relation of the knowledge to the known a relation that does not necessitate the variation of the known at a variation [occurring] in it, so that one [single] knowledge is presupposed, [D234] which is the knowledge of the fact the eclipse will be; then, when [the eclipse] is, it will become knowledge of the fact that it is [ongoing]; and when [the eclipse] is vanished, it will become knowledge of the fact that it has already been. The knowledge in itself is one, but the known is changeable, because the knowledge is the image of the known, and the images of different [things] are [in turn] different. When, then, it has been surmised that the First is knowing of the fact that the eclipse will be, He has by virtue of this a [certain] condition. When then the eclipse is [ongoing], if that condition remained, it would become ignorance, since the eclipse is [ongoing at that moment]; and if it became knowledge of the fact that [the eclipse] is [ongoing], this condition would vary with respect to what there was before it, and then He would change.

[§213]

Rather, the First only knows the particulars by virtue of a universal species by which He is characterized eternally and forever, and which does not change. An example is that He knows that the sun, when it has gone past the descending node, returns to it after a period [of time] so and so, and that the moon has already arrived to it and becomes, in its opposition [to the sun], interposed between it and the earth, for instance with an imperfect opposition – let it be of a third of it –, so that it is necessitated that one sees a third of the sun eclipsed in the geographical region so and so. This, then, He knows in such a way, eternally and forever, and it is true no matter whether the eclipse is existent or non-existent. As for the fact that you say: «The sun is not eclipsed now», and then you say tomorrow: «It is eclipsed now», the first and the second [utterances] already differ. This, then, is not appropriate for Him Who cannot have change within Himself.

Therefore, that which [belongs] to the particulars, even if it is of the weight of an atom, [always] has got a cause, so that He knows its cause thanks to a universal species within which there is [no] indication of moment or time, and He remains knowing of it eternally and forever. Then, [even] the weight of an atom does not escape His knowledge, and, in spite of that, all His states are uniform and do not change, whichever matter may be presupposed in that way.

[§214]

[(B.7)]

[SEVENTH ALLEGATION. WILL OF THE FIRST PRINCIPLE]

[D235] [(b.7)] The seventh allegation is that the First is willing and has got a will and a providence, and that that does not add [anything] to His essence. Its clarification is that the First is agent, since it is manifest that all things are realized from Him, and therefore are His act.

The agent is [(i)] either agent by the pure nature, [(ii)] or by will. [(i)] The pure nature is the act disjoined from the knowledge of the product and of the act [itself]. [(ii)] Every act that cannot do without the knowledge cannot do without the will, as well. The universe flows from the essence of God Most High together with His knowledge of the fact that it flows from Him. Its flowing from Him is not incompatible with His essence, so that it is hated. Indeed, there is no hatred for it in Him, and therefore He is satisfied with its flowing from Him. It is permitted to refer to this condition with [the word] «will». The principle of the flowing of the universe from Him is His knowledge of the way of the ruling in the universe, so that His knowledge is the cause of the existence of the known. Therefore, His will is His knowledge.

[§215]

[About] every voluntary act, one of the four [holds true]: either it is from a decisive belief, or [from] a knowledge, or [from] an opinion, or [from] an imagination. As for the knowledge, it is like the act of the geometer in accordance with the true knowledge. As for the opinion, it is like the act of the ill [person] in [his] caution with respect to that which he estimates [could] harm [him]. As for the imagination, it is the soul's research of the thing which resembles the loved one, despite her knowledge that it is different than it, and like her being prevented with respect to the thing which has a similarity to that which she hates. It is not possible that the act of the First is by virtue of an opinion or of an imagination, since these are accidents which are not established and which do not persist. It is necessary, then, that it is by virtue of a true intellectual knowledge.

[§216]

[D236] It remains now [to ask] how the knowledge [can] be a cause for the existence of a thing, and by virtue of what He [can] know that the things result from Him by virtue of His knowledge. As for the First, [this] is not known but by the example of the direct testimony of the soul. Indeed, when we happen to conceive a loved thing, the power of longing is provoked by [our] conception. If then it strengthens, the desire perfects itself, and our conception that it is necessary for it to be [realized] is annexed to it, [then] the power sent out in the muscles is provoked and the tendons move, and from [this] the movement of the organic limbs is provoked, and the researched act results. Likewise, we imagine the form of the line that we want to draw, and we estimate it necessary that it is, so that the power of the desire for it is provoked, through it the hand and the pen are set into motion, and the form of the line as we have conceived it results. The meaning of our saying: «It is necessary

for it to be» is that we know, or we believe, that it is useful, or pleasant to us, or a good for our true nature. Therefore, the movement of the hand results from the desiderative faculty, and the movement of the desiderative power results from the conception and the knowledge of the fact that it is necessary that the thing is [realized]. Then, we have already found the knowledge in us as a principle for the resulting of a thing.

[Even] more apparent than this is the fact that he who walks along a trunk extended between two extremely elevated walls estimates in his soul [his] fall, and then he falls; namely, the falls results by virtue of his estimation. If [rather the trunk] was extended on the earth, and he walked on it, he would not fall, since he would not estimate [his] fall, nor would he be conscious of it. Then, it is the conception of the fall, and the presence of its form in the imagination, to be cause for the resulting of the conception [itself]. We have then already come across the example of the direct testimony of the soul.

[§217]

We return then to the First and we say [that] the act of the First [D237] <either> proceeds from Him like the movement proceeds from the desiderative power, which is impossible, since the desire and the longing are impossible for what regards Him. Indeed, it is [in both cases] a research of a missing thing, whose realization [would be] worthier. In the Necessary Existent there is by no means anything in potency, whose realization He researches – the signs of which have come before. Then, it does not remain but to say that His conception of the ruling of the universe is cause for the flowing of the ruling from Him.

As for us, our conception about the form of the line and the picture is not sufficient for the existence of the form of the line, since the things, as for us, are subdivided into that which is convenient for us and that which is incompatible for us. Then, we need a desiderative faculty which is suitable for us in some organs, and in relation to which we know the convenience and the incompatibility. When then [the desiderative faculty] is provoked, we need organs and limbs, which we move in the realization of our intent.

[§218]

As for the First, His conception itself is sufficient for the realization of the conceived thing, but He differs from us [also] for another respect, namely that it is inevitable that we know, believe or imagine that that act is good for us, [while] that is impossible in the true nature of the First, since that necessitates the goal, and we have already clarified that the goal does not move but an imperfect [being]. Our will [of a certain thing,] then, is in consideration of our imagination of the fact that it is good for us. His will is [rather addressed] to the universal ruling, in consideration of His knowledge of the fact that it is good in itself, that the existence is essentially better than the non-existence, and that it is possible that the existence is according to [some] divisions – that which is more complete and more perfect, among the complex of those divisions, is one, while that which is not so is defective in relation to it. But the more perfect is better than the more imperfect. The essence of the First is an essence from which every existence undoubtedly flows in the more complete and more perfect way, in accordance with the progressive elevation of the possible in it, up to the utmost degree of the ruling order.

[§219]

[PROVIDENCE OF THE FIRST PRINCIPLE]

The meaning of His providence for the creation is that He knows for instance that the man has need of a hitting instrument, devoid of which he would be defective [D238], so that there would be a harm in his true nature; and [He knows] that it is necessary that the hitting instrument is for instance the hand, and the palm of the hand, while it is inevitable that its extremities are divided by means of the fingers – since if it were not thus, the force [of the hand] would be prevented –; and [He knows] that it is possible that the fingers have multiple positions, being five in one row as well as four in one row, and [that] it is possible that they are four on the row of the thumb, in opposition to them in such a way that it is encircled by all of them, and [that] it is [also] possible that they are on two rows, and in [yet] different manners. [He also knows] that what is intended of the hand in the variety of its movements, for its being hitting one time, hurting another [time], and pushing a [third] time, is not completed unless by virtue of this form [actually] witnessed [in it]. Thus, His knowledge of it is cause for its existence. Yes, the relation of His knowledge to all the configurations is one, but this configuration is specified and distinguished from the other configurations because the good and the perfection are in it, and His essence is an essence which gives preponderance to the flowing of the good over the flowing of the evil from Itself – I do not mean the good and the evil in their true nature, but rather in [the thing] itself and with respect to the creation. Therefore, all the existents, from the number of the stars to their measure, from the appearance of the earth to the animals, and [in general] every existent, only exists in the way in which it exists because [that] is the most complete of the ways of the existence, [while] that which is not [among] the possibilities is imperfect in relation to it.

[§220]

And rather, if He created the organic limbs for the animals and did not guide them to the way of their usage, He would also be idle. Indeed, He has already created the beak for the chick, with which it [could] pierce the egg. If then He did not guide [the chick] to put [it] at use, so that it [could] immediately employ it in the picking up [of food], He would be idle.

The providence, then, is perfected thanks to the perfection of the good, and the good is perfected thanks to the guidance after the creation, as the Most High informed by saying: «[He] Who gave each thing its creation and then guided [it]», and: «[He] Who created me, He [also] guides me», and «[He] Who destined and guided». [D239] This is then the meaning of the will and the providence. They are traced back to the knowledge, [but] they do not add [anything] to it, nor does the knowledge add [anything] to the essence [of the First], as it was said before.

[§221]

As for the fact that His action is either [meant] to a goal or without knowledge [at all], it is not such. If [someone objected] by saying: «Which unlikelihood [would] there be in the fact that He has an intent, just as we have an intent with [our] knowledge, and that His intent

is the effusion on [all] the rest, not for the sake of Himself, just as we sometimes intend to save a drowning person not for some goal, but rather because we want the effusion of the good?», one [should] answer: «The intent [presupposes] by necessity that the intended thing is worthier than its contrary for him who tends [to it], and that makes [one] understand the [notion of] goal, since the goal indicates the defectiveness. As for us, it is not conceivable for us an intent but [addressed] to a goal, namely a research of a reward, or a praise, or of the fact that we acquire the disposition of the virtue in our souls thanks to [our] doing the good. If then the action and its non-existence were tantamount to one another for us, it would be impossible for us to have an intent and to be provoked to it, since «intent» has no meaning but the inclination to that which is established as convenient. If, then, this was not specified with the intent, it would be a pure [vocal] expression without an understandable [content]».

[§222]

[(B.8)]

[EIGHTH ALLEGATION. POWER (OMNIPOTENCY) OF THE FIRST PRINCIPLE]

[(b.8)] The eighth allegation is His being powerful. Its demonstration is that «powerful» is an expression referring to he who acts if he wants [so], and does not act if he wants [so]. He has this attribute. Indeed, we have already clarified that His volition is His knowledge, and that that in which He knows that there is the good already is, while that for which He knows that it is worthier not to be is not.

Now, if [someone objected] by saying: «How [can] this be true, since He could not destroy the skies and the earth according to these?», one [should] answer: «If He wanted, He would destroy, but He does not want. Indeed, [D240] His eternal volition of the existence in perpetual has already been [established] before, since the good is in the eternal existence, not in the destruction and the ruin». The powerful is powerful in consideration of the fact that he acts if he wants [so], not in consideration of the fact that it is inevitable for him to want. Indeed, one says: «So-and-so can kill himself», although one knows that he is not going to kill himself, and this is correct. God Most High can produce the resurrection now, although we know that He is not going to do so. In sum, what is different than the known is in the possibility [of the powerful]; therefore, He is powerful over every possible, with the meaning that if He wanted, He would act.

[§223]

Our saying: «If He wanted, He would act» is a conjunctive hypothetical [clause]. It is not a condition of the truth of the hypothetical that both its parts are true. Rather, it is possible that both of them are false, or just one of them, while [the hypothetical] is true. The speech of one saying: «If man flew, he would move in the air» is true, even though both its parts are false. And if one says: «If man flew, he would be an animal», this [hypothetical] is [also] true, although its antecedent is false and its consequent is true. If then [someone objected] by saying: «Your saying: “If He wanted, He would act” lets notice the fact that it is conceivable that [His] will of a [certain] thing has a beginning, which is a sign of change», one [should] answer: «The correct expression is that one says: “He is powerful with the meaning

that all that He wants, is, and that which He does not want, is not; and that which He wants, if it is possible that He does not want it, then is not, [while] that which He does not want, if it is possible that He wants it, is”».

This is then the meaning of His power and His will, and they are [thus] already traced back jointly to His knowledge, while His knowledge is traced back to His essence. Nothing of this, then, necessitates a multiplicity in Him.

[§224]

[(B.9)]

[NINTH ALLEGATION. WISDOM OF THE FIRST PRINCIPLE]

[(b.9)] The ninth allegation is that the First is wise, since «wisdom» applies to two things.

[(a)] The first of them is the knowledge, namely the conception of the things by means of the verification of the quiddity and the definition, and the judgment about them by means of the pure, verified certainty. [(b)] The second one is the act, inasmuch as it is well-ordered [and] wisely gathering all that it needs in terms of completeness and adornment.

[D241] [(a)] The First knows the things according to what they are thanks to a knowledge which is the noblest of the species of the knowledges. Our knowledge subdivides itself into [(a.i)] that by virtue of which the existence of the known is not realized, like our knowledge about the form of the sky, of the stars, of the animals and of the plants, and [(a.ii)] that by virtue of which the existence of the known is realized, like the knowledge that the artist has of the form of the artwork which he spontaneously invents, without imitating a previous example. Indeed, [in this case] the artwork comes to be from him, and then his knowledge is the cause of the existence of the known. [By contrast], when someone else has looked at it, for him the known is the cause of the existence of the knowledge. The knowledge that benefits the existence [(a.i)] is nobler than the knowledge that derives benefit from the existence [(a.ii)]. The knowledge that the First has of the ruling of the existence is the principle of the ruling of the universe, as it was said before. Thus, it is the noblest of knowledges.

[§225]

[(b)] As for the ruling of His acts, it is at the utmost degree of wise exactness. Indeed, He gave each thing its creation and then He guided [it], and He bestowed upon it [(i)] all that is necessary to it, [(ii)] all that it needs – although it is at the utmost degree of the necessity –, and [(iii)] [even] all that is adornment and complement – although they do not [belong] to the realm of need –, like the bow of the eyebrows, the concavity of the plantar vault, the germination of the beard which hides the withering of the skin in the old age, and other subtleties that are beyond comprehension regarding the animals, the plants, and all the parts of the world.

[§226]

[(B.10)]

[TENTH ALLEGATION. GENEROSITY OF THE FIRST PRINCIPLE]

[(b.10)] The tenth allegation is that He is magnanimous, because the benefaction and the bestowal of the good subdivide themselves into [(i)] that which is for a utility and a goal which are traced back to the benefitter, and [(ii)] that which is not such. The utility subdivides itself into that which is similar to the offered [thing], like the compensation of money with money, [D242] and that which is not similar [to it], like he who gives money in exchange for the hope of the reward or the commendable act, or for the acquisition of the attribute of the virtue and [for] the research of the perfection by means of it. This is also a commutative contract and a transaction, but it is not magnanimity, as the first [case] is a transaction, although common people call this magnanimity. Magnanimity is rather benefiting with that which is necessary, without a further goal. Indeed, the giver of the sword to him who does not need it is not a [generous] bestower. The First has poured forth the existence upon all the existents as it was necessary, without sparing anything [that was] possible as for necessity, need, and adornment, and all that without a goal and without a utility [for Him]. Rather, His essence is an essence from which flows upon all the creation what is appropriate to it. This is the true magnanimity, and the name of magnanimity applies to the others in a figurative sense.

[§227]

[(B.11)]

[ELEVENTH ALLEGATION. JOY OF THE FIRST PRINCIPLE]

[(b.11)] The eleventh allegation is that the First is glad of His own essence, and that there are concepts proper to us with which one could refer to the matching of Him, like the pleasure, the delight, the glee and the joy due to the beauty of His essence and to His perfection, which do not fall under any possible description, and that [also] the angels close [to Him], the demonstration of whose existence will be made subsist [afterwards], have, from the gladness and the pleasure by virtue of [their] acquaintance with the beauty of the sovereign presence, what adds up to their gladness by virtue of their own beauty. The familiarization with this is [achieved] through premising some principles.

[§228]

[(i)] The first principle is that one knows the meaning of pleasure and pain. If, indeed, they are traced back to an additional thing with respect to the individualized perception, they are not conceivable in relation to Him. If [rather] they are traced back to a perception described with an attribute, and it is established that His perception is according to that attribute, [then this] allegation is undoubtedly established.

Pleasure and pain are bound by necessity to the perception. Indeed, where there is no perception there is neither pleasure, nor pain. The perception has two species with regard to us: [D243] a sensible one, which is exterior and which depends on the pleasure of the five

senses; and an interior one, which is intellectual and estimative. Each one of these perceptions subdivides itself, in consideration of its relation of dependence on the perceptive faculty, into three parts. [(a)] The first one of them is the perception of that which is suitable to the perceptive faculty, and convenient to its nature. [(b)] The second one is the perception of its contrary. [(c)] The third one is the perception of that which is neither incompatible, nor suitable. [(a)] «Pleasure», then, is an expression only referring to the perception of that which is suitable, while [(b)] «pain» is an expression only referring to the perception of that which is incompatible. [(c)] As for the perception of that which is neither suitable nor incompatible, it is not called «pain», nor «pleasure».

It is not necessary for you to believe that «pain» is an expression referring to an attribute that follows the perception of the incompatible, but rather [you have to believe] that it is [that perception] itself. As a matter of fact, the encounter of the incompatible regarding the perceptive faculty with the perception is not conceivable unless the name of «pain» turns out to be true and its notion is verified, even if the non-existence of everything else than it is surmised; and likewise [for] the pleasure. «Perception», indeed, is a common name, which subdivides itself into pleasure, pain, and that which is neither pain nor pleasure: [these names,] then, are not [something] additional with respect to it.

[§229]

[(ii)] The second principle is that one knows that [what is] suitable to every faculty is its act, which is [that which] is required by its nature without harm. Indeed, every faculty is created in order for an act to proceed from it, and that act is [that which] is required by its nature. [That which] is required by the nature of the irascible faculty is the victory and the research of the vengeance, and its pleasure is the perception [D244] of the victory. [That which] is required by the nature of the longing is the tasting, and that which is required by the imagination and the estimation is the hope, and in it they feel pleasure, and likewise for every faculty.

[§230]

[(iii)] The third principle is that in the perfect intelligent the interior faculties strengthen with respect to the exterior faculties, and he thus regards as contemptible the pleasures of the sensible faculties with respect to the intellectual and estimative faculties. In the imperfect, [on the contrary,] the sensible faculties strengthen with respect to the intellectual and estimative faculties. Hence, if one were made choose between the greasy sweet and the seizure of the enemies – and [with that] the obtainment of the causes of supremacy and loftiness –, if he who is made choose is vile of ambition, dead of heart and dull of interior faculties, he would choose the sweet pastry and the sweetness over [that]. If [rather] he who is made choose is elevated of ambition, and composed of intellect, he will regard the pleasure of the savoured [thing] as contemptible with respect to the pleasure that he would obtain from the supremacy and the victory over the enemies. With «vile of ambition» we mean the defective in himself, whose interior faculties are dead, or whose life is not yet complete, like the youth whose interior faculties have not yet passed from the potency to the act.

[§231]

[(iv)] The fourth principle is that every potency has the pleasure of the perception of that of which it is potency, when it is convenient to it, and yet, the pleasures vary according to [(iv.a)] the variation of the perceptions, [(iv.b)] of the perceptive faculties, and [(iv.c)] of the perceived notions. These, then, are three reasons that trigger the variation of the pleasures.

[(iv.b)] The first triggering reason is the variation of the perceptive faculties. [D245] Indeed, the stronger and nobler is the faculty in itself and within its body, the more perfect is its pleasure. The pleasure of food depends indeed on the faculty of desiring the food, and the pleasure of the sexual intercourse likewise [depends on the faculty of desiring it]. The pleasure of the intelligible [things] is nobler in its genus than the pleasure of the sensible things. Hence, it wins it, so that the intelligent [person] chooses the intellectual pleasures over the eating and sensible ones.

[(iv.a)] The second [reason] is the variation of the perceptions. Indeed, the more intense is the perception, the more complete is the pleasure. Thus, the pleasure of contemplating a beautiful face closely, and in a bright place, is more complete than the pleasure of perceiving it from far away, since its perception in the closeness is more intense.

[(iv.c)] The third [reason] is the variation of the perceived, since it also varies according to the conformity and incompatibility. Indeed, the more perfect it is from its side, the more perfect are the pleasure or the pain, just like the pleasure varies on the basis of the variation of the manners in the beauty and the ugliness. As a matter of fact, the pleasure concerning that which is more beautiful is undoubtedly greater, and the pain concerning that which is uglier is [also] greater.

[§232]

[(v)] The fifth principle, which is the conclusion of the preceding principles, is that the intellectual pleasure which is in us is inevitably stronger than the sensible pleasures. Indeed, if we contemplate the faculty, we find that the intellectual faculty is stronger and nobler than the sensible [one]. Indeed, we will clarify in the book of the soul that the sensible faculties are not but in the bodily organs, and that they are corrupted for the perception of their perceived [objects], if [these] are strengthened. As a matter of fact, the pleasure of the eye is in the brightness, and its pain in darkness, but the strong brightness corrupts it; and likewise, a strong sound corrupts the hearing and prevents it from perceiving a [more] concealed [sound] later. The clear intelligible perceived [things rather] strengthen the intellect and add light to it – and how [could it be] otherwise, since the intellectual faculty is self-subsisting, and it is not susceptible of change nor mutation, [D246] [while] the sensible [faculty] is in a changing body? The closest of the earthly existents to the First, and that which has the greatest affinity [with Him], is the intellectual faculty, as it will be explained.

As for the perception of the intellect, it differs from the perception of the sense according to [some] respects, since the intellect perceives the thing according to that which it is in itself, without the association to it of that which is extraneous to it. The sense [rather] does not perceive the colour until it has not perceived together with it breadth and length, closeness and farness, and other things extraneous to the essence of the colour. The intellect

perceives the things as abstract, as they are, and abstracts them from their extraneous connections. And again, the perception of the sense varies, since it see the small big and the big small, [while] the perception of the intellect corresponds to the perceived, and does not vary. And rather, either [the intellect] perceives [the perceived object] as it is in itself, or it does not perceive it [at all]. As for the perceived, the [things] perceived by the sense are the bodies and the vile changing accidents, while the [thing] perceived by the intellect is the eternal universal quiddity, whose change is impossible. Among its perceived [things] there is [also] the essence of the First True, from Which every beauty and magnificence proceed in the world. Therefore, the sensible pleasure has no comparison with the intellectual [one].

[§233]

[(vi)] The sixth principle is that it is not unlikely that the perceived that necessitates the pleasure is present, even though the man does not feel the pleasure [linked] to it because of his being indifferent or busy – like the one who is thinking is indifferent with respect to the pleasant melodies –; or because of his being afflicted by a pain that changes his complexion with respect to his nature – like the one who feels pleasure in eating clay, or something acid, by virtue of his long familiarity [with eating those things]. Indeed, the length of the practice [with a certain thing] sometimes produces a conformity between it and his nature, so that that which is hated with regard to the originary nature results [then] pleasant – [D247] like he who is ill of bulimy, whose [bodily] parts all need food, but in whose stomach there is a harm preventing him from feeling the desire for the food, and [rather] producing hatred for it. That is not a sign of the fact that the food is not pleasant in itself, with regard to the originary nature.

Sometimes, the annihilation of the perception of the pleasure occurs by the weakness of the perceptive faculties. Indeed, the weak sight sometimes is harmed if it faces a brightness, although that is conformable and pleasant with regard to the unimpaired nature. By means of this, therefore, the objection is refuted of the one who says: «If the intelligible things were more pleasant, our pleasure due to the knowledges and our pain due to their privation would overcome our pleasure due to the sensible things, and our pain due to their privation». [To this,] indeed, one should say: «The cause of that is the exit of the soul from that which is required by the nature because of the mean habits, the accidental harms, the occurring of the familiarity with the sensible [things], and the engagement of the soul with that which is required by the longings».

Indeed, that dwells in the heart and the soul because of the dwelling of the illness, which is the numbness in the limb. Sometimes, the numb limb is hit by a fire burning it, and does not feel it; but when the numbness has ceased, then it feels [it]. The sleeping [person] sometimes embraces his beloved, and in the same way the fainted ill [person], when he regains conscience, feels [again]. The obstacles of the body necessitate [in the soul something] similar to this numbness. Indeed, when the soul is separated from the body with the death, she perceives that pain which results in the soul because of the ignorance, if she was ignorant and evil of behaviour, and [that] pleasure [which results] because of the knowledge, if she was knowing and sharp-witted by nature.

[§234]

We return then to the intent, and we say that the First perceives Himself according to what He has as for beauty and magnificence, which is the principle of every beauty and magnificence, and the source of every goodness [D248] and ruling. If we contemplate then the perceived, it is the most glorious and highest of [all] things; if we contemplate the perception, it is the noblest and the most perfect; and if we contemplate the perceiver, He is likewise. Therefore, He is the strongest of the perceivers, for the most glorious of the perceived, by means of the most perfect of the perceptions, by virtue of what He has got as for majesty and glory.

Let indeed the man contemplate his joy in himself, when he is fully conscious of his perfection in the supremacy – thanks to the knowledge – on the universe, and in the supremacy – thanks to the victory and the reigning – on all earth, and when to that the health of the body, the beauty of the form, and the obedience of the totality of the creation are added. If then the gathering [of all that] were conceivable in an individual, he [would feel] the utmost degree of pleasure, although all that is borrowed from another and exposed to ceasing, and [although] it is not traced back but to the knowledge of some known [things], and to the supremacy on part of the regions of the earth, which in their existence have no proportion to the bodies of the world, let alone the intellectual and ensouled substances.

[§235]

Therefore, the proportion of the pleasure of the First to our pleasure is like the proportion of His perfection to our perfection, if the like of this condition were established for us. Aristotle has already said: «Even if He did not have, of the pleasure of the perception of the beauty of His essence, anything but the pleasure that we have for the perception of Him, whenever one turns his attention to His beauty, and we interrupt our contemplation of all but Him, and we become aware of His majesty, His beauty, and His glory; of the realization of all [things] according to the best of the rulings from Him; of their obedience to Him according to the way of the subjugation; and of the persisting of that perpetually and forever, without possibility of change – that pleasure would not have comparison with [any other] pleasure». And how [could it]? The perception that He has of Himself has no relation with our perception of Him. As a matter of fact, we do not perceive of His essence and His attributes [anything] but epitomized, insignificant matters.

[§236]

As for the angels, they also know themselves [D249] by virtue of the First, as they are in perpetual in acquaintance with that beauty, according to that whose clarification will follow. Their pleasure, then, is also perpetual, despite being inferior to the pleasure of the First. Rather, their pleasure due to the perception of the First is superior to their pleasure due to the perception of themselves, and rather their pleasure of themselves is inasmuch as they see themselves as servants, subjugated to Him.

[§237]

The example of that is he who loves a king, devotes himself to him, and is received in his service. His bragging, his rejoicing and his boasting for the direct testimony of the beauty of the king and for his being a servant received at his [court] are greater than his bragging of his [own] body, of his strength, of his father, and of his lineage. Just as our joy is more complete than the joy of the beasts, because of the variation that exists between us and them as for the perfection in the faculty and in the intellect and for the balancing of the natural disposition, [likewise] the joy of the angels is also greater than our joy, despite they do not have the desire of the stomach and of the female sex, and that because of their closeness to the Lord of the worlds, and because of their sureness about the ceasing of that in which they are, forever.

[§238]

Man has a way to the acquisition of an eternal happiness, namely by means of the passage of the intellectual faculty from potency to the act, in order to depict with a [certain] appearance the entire existence according to its hierarchical ordering. Thus, he perceives the First, the angels, and that which is under them among the existents. He may feel a lower pleasure from being acquainted with [these things] already in this life, in the circumstance of his being occupied with the body. When then he will be separated from the body with death, and the obstacle will be lifted, the pleasure will become complete, the integument will be unveiled, and the eternal happiness will persist forever. He will then reach the lofty congregation, and he will be the companion of the angels in the closeness to the First True, closeness of attribute, not of place. This alone is then the concept of the happiness, and God knows what is right.

[§239]

[D250] EPILOGUE OF THE SPEECH ON THE ATTRIBUTES

It already appeared manifestly to you from all these [matters] that you do not know the unknown unless by means of that of which you are direct witness. The meaning of that is that there is no way of making you understand all that you wonder about His modality [of being], unless [by the fact] that the image of your direct testimony is externally impressed in you by means of the sense, or internally by means of the intellect. When then you ask: «How is the First knowing of Himself?», your sufficient answer would be to say: «As you know yourself», so that the answer is understandable. And when you ask: «How does the First know that which is other than Him?», [the sufficient answer] will be: «As you know that which is other than you», so that it is understandable. And when you ask: «How then does He know all the known [things] with one simple knowledge?», [the sufficient answer] will be to say: «As you know the answer to a question all at once, without minute analysis, and later you occupy yourself with the minute analysis». And when you ask: «How, then, is His knowledge of the thing the principle of the existence of that thing?», [the sufficient answer] will be to say: «As your estimation of the fall from the trunk, when you walk on it, is

the principle of the fall». When you ask: «How, then, does He know all the possible [things]?», [the sufficient answer] will be to say: «He knows them by means of the knowledge of their causes, as you know the heat of the air in the coming summer for your verified knowledge of the causes of the heat». And when you ask: «How is His rejoicing for His perfection and His magnificence?», [the sufficient answer] will be to say: «As you rejoice of it, if you have a perfection by virtue of which you distinguish yourself from the [rest of] humanity and you are aware of that perfection».

[§240]

[D251] The intended [thing] is that you cannot understand anything of God Most High but by way of the comparison to something which is in yourself. Certainly you perceive in yourself [some] things that vary in the perfection and the imperfection: then you know, together with this, that what you have understood about the First is nobler and loftier than what you have understood about yourself. That, then, is in sum the faith in the unknown; and otherwise, you will not know the truth of that increase which you could estimate, since the image of that increase is not within you.

Therefore, if in the First there is something which has no matching in you, there is no way at all for you to understand it. That is His essence, since it is an existence without a quiddity additional with respect to the existence, and it is the source of every existence. When then you ask yourself: «How is an existence without a quiddity?», we cannot apply for you an example [taken] from yourself, and you cannot then understand the true nature of the existence without a quiddity. The true nature of the essence of the First, and His proper characteristic, [consist in the fact that] He is an existence without a quiddity additional with respect to the existence, and in the fact that His concrete existence and His quiddity are one. This [feature] has no matching in that which is other than Him, because that which is other than Him is either a substance or an accident, while He is neither a substance, nor an accident.

[§241]

This is not verified either in the angels, because they as well are substances whose existence is other than their quiddity. Existence without quiddity is only God Most High, and therefore no one knows God but God [Himself]. If then you asked: «But of what is knowledge, then, our knowledge of the fact that He is an existent without an additional quiddity and that His true nature is the pure existence, if it is not knowledge of Him?», we would answer that it is knowledge of the fact that He is an existent, which is a common thing.

[§242]

[D252] Your saying: «[His existence] is not other than the quiddity» is a clarification of the fact that He is not like you. As a matter of fact, it is knowledge of the negation of the similarity, not of the true nature above the similarity – [just] like your knowledge that Zayd is neither a goldsmith nor a carpenter, since [this] is not knowledge of his technique, but it is rather knowledge of the negation of a thing from him.

Your knowledge about His will, His power and His wisdom is traced back [in] all [three cases] to His knowledge of Himself and of the things other than Him. Your knowledge of the fact that He is knowing of Himself is as it were knowledge of a summing-up concomitant among the concomitants of His essence, but not of the truth of His essence, because the truth of His essence is that He is the pure existence, without an additional quiddity.

[§243]

If then you asked: «How is the way to the knowledge of God Most High?», one would answer that you will know by demonstration that the knowledge of Him is impossible; that who is other than Him does not know Him; and that the fact that it is conceivable to know from Him His actions and His attributes, His outpouring existence and the negation of the similar from Him, and to understand an existence without quiddity is impossible for him who is not in himself an existent without quiddity, so that he can compare himself to Him. The existence without an additional quiddity does not belong but to Him, and then no one knows Him save Him.

[§244]

Because of this the Lord of men and demons said: «You are as You have praised Yourself, I do not enumerate a praise of You», and because of that the greatest companion said: «The weakness in the attainment of the perception is a perception». Yes, all men are weak as for His perception, but he who knows by means of the verified demonstration the impossibility of His perception, this is knowing and perceiving, namely perceiving at the utmost degree with which it is conceivable that man perceives. He who is weak and does not perceive that the weakness is necessary by virtue of the demonstration that we have mentioned, he is ignorant about that – and it is the totality of the creation with the exception of the friends of God, of the prophets and of the knowing [men] firmly rooted in the knowledge.

[§245]

[IV]

FOURTH TREATISE

[D253] Since we have already apprised from the mention of the attributes of the First, the mention of His acts is necessitated, I mean the divisions of all the existents, since all that is other than Him is an act of His, until – when we will have apprised the divisions of the existents – we will mention in the fifth treatise the modality of their proceeding from Him, the modality of the ordering of the chain of the causes and the caused from Him, together with their multiplicity, and then their return, in the afterlife, to one cause, who is the causer of the causes. Said things are contained in this treatise in a premise [(A)] and three pillars [(B)].

[(B.1)] The first [pillar] is the speech on the bodies that are to be found in the concave of the sphere of the moon, on the modality of their being signs of the existence of the skies, and on their movements.

[(B.2)] The second [pillar] is the speech on the skies and on the cause of their movements.

[(B.3)] The third [pillar] is the speech on the souls and the intellects, to which one [also] refers [with the expressions] «spiritual celestial angels» and «cherubim».

As for the premise [(A)], it has three subdivisions.

[§246]

[(A)]

[(A.1)] The first [subdivision] is that the existing substances, in consideration of the being influenced and the influence, subdivide themselves on the basis of the possibility into three parts: [(A.1.i)] that which influences without being influenced, to which one refers with the technical term of «abstract intellects», which are substances that are neither divisible, nor composed; [D254] [(A.1.ii)] that which is influenced without influencing, namely the space-occupying and divisible bodies; [(A.1.iii)] and that which influences while being influenced, that is influenced by the intellects, and influences the bodies; [these things] are called «souls», and they as well are not space-occupying and are not a body.

[(A.1.i)] The noblest of the divisions is [constituted by] the intellects, which do not change and which do not need to acquire influence and perfection from anything other than them. Then, their perfection is present together with them, and there is nothing in them that is in potency.

[(A.1.ii)] The vilest of them is [constituted by] the changeable and corruptible bodies.

[(A.1.iii)] The middle ones are the souls, which are the medium between the intellects and the bodies. The souls depend on the intellects as for the influence, and they pour forth [in turn] an influence on the bodies.

The intellect establishes these divisions by virtue of their possibility. As for their existence, it needs a demonstration. Certainly, the bodies are known to be existent by virtue of

the sense; as for the souls, the movements of the bodies are sign of them; and as for the intellects, the souls are signs of them, as it will be explained.

[§247]

[(A.2)] The second subdivision. The existents, in consideration of the defectiveness and the completeness, subdivide themselves into [(A.2.i)] that which – inasmuch as it does not need anything other than itself that helps it to acquire, from it, a description for itself, being rather everything possible for it – has got the existence as present, and it is called «perfect»; and [(A.2.ii)] that to which not all that is possible is present, and rather it is inevitable that it [tries to] obtain for it[self] what it has not [already] obtained, and this is called «defective», before the obtainment of the perfection for it. Moreover, the defective subdivides itself into [(A.2.ii.1)] that which does not need anything external to its essence in order to obtain that which is necessary that it obtains, and this is called «self-sufficient»; and [D255] [(A.2.ii.2)] that which needs [something external], and is called «absolute defective».

As for the perfect [(A.2.i)], if it has already obtained what is necessary and is moreover in the state of making others obtain something from itself, is then called «above perfection» (A.2.i.1), because it is perfect in itself, and as if it was already superabundant for what is other than it.

[§248]

[(A.3)] The third subdivision is about the bodies in particular. It has already emerged that the bodies are the vilest of the divisions of the existents. It subdivides itself into [(A.3.i)] simple and [(A.3.ii)] composed, I mean according to a subdivision in the intellect by virtue of the possibility; but if it were also in the [actual] existence, likewise.

We mean with [(A.3.i)] «simple» that which has one nature, like the air and the water, and with [(A.3.ii)] «composed» that which gathers two natures, like the clay is the compound of the water and the dust. Sometimes one gets, by virtue of the composition, a utility which is not in the simples, like the utility of the ink, which is indeed not in the gallnuts and in the vitriol. However, the simple is the principle of the compound, and it is undoubtedly anterior to it in the existence, by rank and by time.

[(A.3.i)] The simple also subdivides itself, according to an intellectual division, in [(A.3.i.1)] that from which the composition comes, and [(A.3.i.2)] that [from which a composition] does not come. With «that which is susceptible of the composition» [(A.3.i.1)], we mean that thanks to whose falling within the compound some utility is obtained, which was not in the simples. [(A.3.i.2)] That which does not compose itself is, [by contrast,] that whose perfection is found in its simplicity, since an addition to it due to the composition is not conceivable.

[§249]

[(B)]
[(B.1)]

[Now] then that these premises have been put in clear order, let us return to the first pillar

[(B.1)], which is the speech about that of which the inferior bodies are sign.

We say, then, [D256] that the existence of the bodies under the concave of the sphere of the Moon is known through the direct testimony [of the senses], and that they are susceptible of the composition. Indeed, the clay is for instance composed of water and dust.

[(B.1.1)] We say, then, that this witnessed composition is a sign of the existence of the rectilinear movement. The movement, with respect to its interval, is a sign of the establishment of two delimited directions, different by nature. [(B.1.2)] The difference of the two directions is [in turn] a sign of the existence of a body surrounding them, which is the sky.

[(B.1.2)] The movement is [also] a sign, with respect to its origin, of the fact that it has got a cause, and [this] cause has [in turn] a cause, to the infinite. That is not possible unless by virtue of the movement of the sky according to a circular movement.

[(B.1.3)] The movement, in the body, is also a sign of the natural inclination which is in it, of the moving nature, and of the time in which the movement [occurs].

Let us mention, then, the way of these inductive signs and [their] concomitants.

[§250]

[(1)] The first concomitant of the composition is then the rectilinear movement, and its way is that the water has a domain, and the dust has a domain, each of which is natural, since all the bodies have necessarily a natural place, as it will be explained in the *Physics*. The composition, then, does not result but for the movement of one of them to the domain of the other, since if each one was inseparable from its domain, they would remain adjacent, not composed. This, then, is manifest. Therefore, the intellect concludes – before the speculation about the existence – that, if there were in the existence a composition of two simples, it would not be possible but by virtue of a rectilinear movement. If there were a movement, it could not be but from a direction, and toward a direction. There is need, then, of two directions, which is manifest. It is inevitable that they are delimited and different by nature. As for their difference by nature and by species, it only follows inasmuch as the movement is either natural [D257] or violent, as it will be explained.

The natural [movement], then, is like that of the stone downwards, and this necessitates that the domain that [the stone] leaves is different than that which it researches. Indeed, if [the two domains] were homogeneous, it would be impossible for it to flee from one of the two and to research the other. Because of this, the stone does not move naturally on the surface of the earth, since the element of the earth is homogeneous to its true nature. There will be necessarily need, then, [of the fact] that the fled direction is different than the intended direction. If [rather the movement] is violent, like the movement of the stone upwards – the notion of «violent» is according to the contrariety of the nature –, then it would be necessary that there was in it a natural inclination to a direction as opposed to [another] direction, in order for a violence to be conceived. Every violence, indeed, is the consequence of the nature.

It has already been clarified that the natural inclination to a direction as opposed to another necessitates the difference of the two directions. As for their being delimited, its meaning is that it is necessary that the downward direction, for instance, has a purpose having reached which it halts. Its halting [place] is then its limit and its end. The same [holds for] the upward direction. That is because of three signs.

[§251]

[(i)] The first one of them is that the direction only is in a dimension which can be undoubtedly pointed at with the hand, with a sensible pointing, since it is not conceivable that the movement of the body regards the intellectual thing of which there is no pointing. We have already mentioned the fact that an infinite dimension is impossible, be it presupposed in the void or in the plenum.

[(ii)] The second one is that what is understood by «direction» requires a specified limit. Indeed, when you say: «It is necessary to point at the direction of the tree» – or the mountain, or the east, or the west –, [D258] then it is necessary that the tree whose direction is the [pointed] direction can be pointed at. At all that at which a path does not terminate, there is no pointing; and that at which there is no pointing has no direction. Certainly, the tree is one single purpose for the direction of the tree. If then the distance between you and the tree is presupposed [to be] infinite, you cannot conceive the pointing at it. Likewise, when you say: «The downward direction», it is required that the «down» has a limit, a purpose and a meaning at which it terminates – that is, the lowest of the low [things] –, and likewise for the «up». Otherwise, indeed, if it extended to the infinite, it would not be possible to point at it at all.

[(iii)] The third one is that you understand intellectually that some of the things which are located in the downward direction are lower than others. Then, if the low did not have a specified purpose and a limit that one [can] point at – so that what is closer [to this] is lower, and what is farther from it is higher –, something's being «lower» would have no meaning, but it would rather be necessary that that direction were homogeneous [to all others], so that there would not be lower and higher in it.

Therefore, it is inevitable that there are two different, delimited directions for every rectilinear movement. The direction is distant, or is not distant, only in a body, as it will be explained concerning the impossibility of the void. It is inevitable, therefore, [that there is] a delimited body, which delimits the directions, in order for you to conceive the movement.

[§252]

[(2)] The second allegation, concomitant of the first, is that it is inevitable that the body that gives the limit to the directions surrounds the body whose movement is rectilinear, [this being] the surrounding of the sky for what is within it. As a matter of fact, the difference of the two directions by species and by nature is not conceivable unless by virtue of a surrounding body, in order for [its] centre to be the utmost degree of the distance, and the surrounding [surface] the utmost degree of the closeness, and between the closeness and the distance the utmost degree of the difference in species and nature.

[D259] The demonstration of it is that the difference of the direction is by necessity either [(i)] in the void, [(ii)] or in the plenum. [(i)] It is absurd that it is in the void, for the impossibility of the void; because [even] if the void were presupposed, it would be homogeneous. Then, there is no [part] of [the void] which is differentiated with respect to any [other], so that it [may] specify, for a body [assumed to exist] in it, a direction as opposed to [another] direction.

[§253]

[(ii)] If [rather] it is in a plenum, I mean in a body, one of the two [holds true]: [(ii.1)] either the difference of the direction falls within the body, [(ii.2)] or it is external with respect to it.

[(ii.1)] If then it fell within the body – in [a thing] falling within a body there would be no difference but by virtue of the centre and the surrounding [surface]. [(ii.1.a)] Indeed, if the body was hollow, the surrounding [surface] would be at the utmost degree of the closeness to it, and the centre at the utmost degree of the distance. [(ii.1.b)] If [rather] the difference of the direction were presupposed from the surrounding [surface] to the surrounding [surface], so that it does not pass by the centre, [thus] being the line that cuts the circle in two different parts, so that one says: «One of the two points is different than the other» – it would be impossible. Indeed, between the two [points on the surrounding surface] there is no [other difference] but the difference by number, and otherwise they are homogeneous by the nature, since every one of the two has a closeness with respect to the homogeneous surrounding [surface]. [(ii.1.c)] If [then] a diametre passing by the centre were presupposed, surmising the difference of the two directions upon two points of the diametre would [also] be impossible, since every one would be close with respect to the homogeneous surrounding [surface].

There is no difference in [the body], then, unless by virtue of the centre and the surrounding [surface] [(ii.1.a)]. Indeed, if the centre overstepped, it would fall from the [utmost degree of the] distance in the closeness. The centre, then, is the limit of the distance, and the circumference is the limit of the closeness.

[§254]

[(ii.2)] If the difference of the direction were presupposed as external with respect to the body, this is [also] impossible, because one of the two [holds true]: [(ii.2.1)] either one body is presupposed as the centre, and the directions are presupposed around it; [(ii.2.2)] or two bodies are presupposed.

[D260] [(ii.2.1)] If then it were one body, the closeness to it would be specified, while the direction of the distance would not be delimited, because the domains around it are homogeneous [things], no part of which distinguishes itself from [another] part but for the number. The distance from it, then, does not have a delimited limit; but we have already clarified that it is inevitable that the direction has got the limit. The distance alone is not specified, because it is conceivable that on the [same] centre there are located distinct circles as for the distance, to the infinite. The centre, then, does not specify the surrounding [surface], while the surrounding [surface] specifies by necessity one centre.

[(ii.2.2)] If two bodies were presupposed, and it were said that the closeness of one of the two is different than [the closeness of] the other, this would [also] be impossible, because the question of the individualization of each one of the two bodies by virtue of the spot that is peculiar to it is [still] subsisting. Indeed, until the direction has not been found in the first place, the inclination of this body will not be found [either], according to the fact that, [(ii.2.2.a)] if the two bodies are homogeneous, the closeness to one of the two does not differ by nature from the closeness to the other. [(ii.2.2.b)] If [rather] the two [bodies] differ,

their difference does not necessitate the specification of the two directions and their delimitation by means of the two, but rather the question about the individualization of each body by virtue of the domain by which it is individualized remains, that is: «Why is it individualized by means of it and why is a domain distinguished from the other by virtue of the closeness and the distance from another thing, since the void is homogeneous?».

[§255]

For [this reason], if that is presupposed, [and] then (i) the exchange of the two domains is surmised on the basis of the two bodies – so that each one is transferred in the place of the other –, that would not require the ceasing of the difference of the two directions. Having already exchanged the two directions, if the non-existence of one of the two were surmised, what was estimated about the difference of the two directions would remain, whenever the remaining of the distance were surmised together with one of the two directions, even though the body was suppressed. (ii) And if the composition of the two bodies were surmised, the difference of the two bodies would be suppressed, but the difference of the two directions would remain. It is apparent, then, that the difference of the two bodies is not the cause of the difference of the two directions, and that that is not conceived [D261] but by virtue of a surrounding body, which delimits the two directions by means of the circumference and the centre.

It is impossible that that circumference receives a rectilinear movement, because it would need the difference of the two directions and [thus] of another body that surrounds it, so that the directions are delimited by means of it. That which delimits the direction can do without the direction. Thus, there is not a rectilinear movement in it, and it is incumbent upon it that it does not receive the tearing, since the meaning of «tearing» is the going of the parts in length and breadth rectilinearly. [The tearing] is then by necessity a rectilinear movement, but from the necessity of the rectilinear movement the difference of the two directions [is required], and from the necessity of it another surrounding [body] that delimits the two directions [is required], as it was said before.

[§256]

[(3)] The third allegation is that the time undoubtedly follows from the movement, because every movement [occurs] in a time, and the time is the measure of the movement. If then there was not a movement, there would not be either a time in the existence, and if the soul did not sense the movement, she would not either sense the time, just like it happened in the case of the Companions of the cave and of everyone sleeping from a morning to the morning of the next day. Indeed, [that person] does not sense the elapsing of a time, unless [by] the fact that he senses in his soul a change, which he knows, by habit, that is not but in time.

The one who wakes up, when he senses a darkness or a brightness, or the ceasing of the shifting from west to east of a shadow, knows the time of [his] sleep, whenever he knows – due to the habit of these matters – the measures of the time.

[§257]

It is inevitable to point at the verification of the time, and although that would be more appropriate in the *Physics*, yet we say [that] there is no doubt that between the beginning of a movement and its interruption there is the possibility to measure another movement, which passes through a specified interval at a specified quickness, or a specified slowness, so that the like of that movement passes through the like of that interval, and it is neither possible that is greater than it, nor lesser. It is possible to pass through a greater interval with a quicker movement that begins together with it, while if it is slower, [D262] the interval is lesser. If it begins together with it and it is equivalent to it in the quickness, it will not fall behind it at the half of the interval; and between the beginning of this movement [up] to the half and its interruption [there], there is a possibility that is the half of that which is between the two ends of the complete movement. Likewise, it is possible to presuppose for this possibility a fourth or a sixth [part], and these delimitations do not return but to a measure. The definition of «measure» is other than the definition of «movement»; then the measure is not the movement, I mean its essence, but rather it is in the movement and an attribute for it.

Every movement, then, has got a measure, according to two respects. The first one is [the measure] *qua* interval, as when one says: «He walks for a parasang». The second one is [the measure] *qua* the possibility that we have mentioned, which is called «time», as when one says: «He walks for an hour».

[§258]

Then, this measured possibility is the time, which is the measure of the movement as for its subdivision, in its extension, into the anterior and the posterior.

(a) Indeed, it is impossible that it is the measure of the moving body, since sometimes the movement of the elephant and of the chinch are equivalent to each other in the time, although it is impossible that the measure of the [traversed] interval is one [in the two cases]. Indeed, sometimes that which passes through a parasang and that which passes through two parasangs are equivalent to each other in the time.

(b) It is impossible, [moreover,] that this gets back to the quickness and the slowness, since the two movements concordant in the quickness sometimes differ in this possibility. As a matter of fact, the movement from the [sun]rise to the sunset is equivalent to the movement from the dawn to the noon – I mean that it is equivalent to the half of itself in the quickness, while it is not equivalent to it in the time.

Therefore, that is not but the measure of the movement in its extension, since it is a greater movement, as for extension, than [another] movement. Then, the abundance of the [traversed] extension is the abundance of the time, and its paucity, paucity of it. The root of the extension is the root of the duration and of the time, since «time» is an expression which refers to the duration of the movement, namely to the extension of the movement. It is not possible that the time is other than the duration of the local movement, because it is an expression which refers to a thing which subdivides itself into anterior [D263] and posterior. The anterior does not remain at all together with the posterior. It is indeed bound by necessity with that which is according to the elapsing and the dwindling, so that two

parts of it [cannot] be gathered. There is no anterior by itself but the movement. That which is simultaneous with the anterior is said to be anterior, and that which is simultaneous to the posterior is said to be posterior.

[§259]

When it has been made apparent that [the time] is the measure of the movement, and that circumstances require that the movements have a standard which measures them, it is necessary that the standard is known and learned, so that what is other than it [can] be measured by means of it, like the cubit by means of which the measures of the garments are taken.

Likewise, the daily movement of the [heavenly] sphere is the quickest of the movements, and the most apparent of them for the creation, since the Sun is the most apparent of the sensible [things], and it is rather by means of it that the rest of the sensible [things] are sensed. That, then, takes [the role of] standard by means of which the movements are measured.

The movement of the sphere has in itself a measure and it measures the other things. Likewise, the cubit has measure in itself and it measures the other things. «Time», then, is an expression referring to the measure of the movement of the celestial sphere, with regard to its subdivision in anterior and posterior, [such that] the anterior of it does not remain together with the posterior.

[§260]

[(4)] The fourth allegation is the fact that, from the [(a)] movement of these bodies susceptible of the composition, there follows that there is undoubtedly [(b)] an inclination toward a [certain] direction in them, and that in them there is [also] [(c)] a nature which is necessitating for the inclination.

[(a)] Movement, [(b)] inclination and [(c)] nature are three heteronomous matters. Indeed, when you have filled a skin with air and you have left it underwater, [this] rises to the domain of the air. In the condition of [this] rising the movement, the inclination and the nature are [to be found]. If you held it forcedly underwater, there would not be any [(a)] movement, but you would feel its inclination and its struggle against your hand, and its leaning against you in the research of its direction. This is what is intended with «inclination» [(b)]. [D264] If [rather] it were above the water, there would be neither movement nor inclination, and yet there would [still] be in it the [(c)] nature that necessitates in it the inclination to its domain, whenever it is separated from its domain.

[§261]

The intent is that we clarify that every composed body is susceptible of the movement, and every [body which is] susceptible of the movement has undoubtedly and necessarily got an inclination. The demonstration of it in these composite [bodies] is apparent, because they are not composite but by virtue of a movement. If, then, in the moving [body] there was, by nature, an inclination to the direction to which the movement [is addressed], even if its

nature were removed [from it], it would move. If it did not move to it, even if its nature were removed, then there would be no inclination in it. And if there were not in it an inclination to it, it would incline to the domain in which it [already] is.

If it were presupposed at the distance, in a [certain] domain, a body that does not have any inclination to that domain, nor to any other, this would be impossible. Indeed, from this it would follow that there is a movement without time, which is impossible; then, that which leads to [this conclusion] is [also] impossible.

[§262]

[(a)] If someone [objected] by saying: «We do not surrender to the fact that the movement without time follows from it», we would answer that there is no doubt that, when the body has for instance a downward inclination and we move it upwards, that inclination resists to the inclination of the forced setting into motion, and that necessitates a slowness in the movement, such that the greater is the inclination, the stronger would be the resistance and the slower the movement, while the lesser is the inclination, the quicker would be the movement. The variation of the movement in quickness and slowness is then relative to the variation of the inclination.

We say, then, that if we presupposed a body within which there is no inclination and we made it move, for instance, for ten cubits, there is no doubt that [this movement] would [happen] in a [certain] time – let us call it an hour. [D265] If, [by contrast,] we presupposed a body in which there is an inclination and made it move, its movement would undoubtedly be slower [than the first]. Let us surmise then for instance that it [happens] in ten hours. We say, then, that it is possible to surmise a body in which there is a tenth of that inclination. It follows, then, that [this body] moves in an hour, because the relation of the time of the movement with the time of the movement is the relation of the inclination to the inclination. Then, the movement of the body in which there is a tenth of that inclination will be equivalent to the movement of the body in which there is no inclination, which is impossible. Rather, just like it is impossible that two [movements] differ in the measure of the inclination and are [yet] equivalent in the time of the movement, it is [also] impossible that two [movements] differ in the root of the existence and the non-existence of the inclination, and [yet] are equivalent in the measure of the movement – rather, [the latter is impossible] *a fortiori*.

This, then, is a decisive demonstration of the fact that in every body there is inevitably a natural inclination, either to the direction to which [the body] moves, or to a different one, however it be.

[§263]

[(b)] If someone [objected] by saying: «On the basis of what, then, do you answer to him who challenges the second premise, namely that a movement not in time is impossible?», one [should] answer: «If the movement is presupposed [to be] not in time, then one of the two [holds true]: [(i)] either it is in a distance, [(ii)] or it is not in a distance. [(ii)] If then it is not in a distance, it is not a movement. [(i)] If it is in a distance and in an interval, we have already mentioned the fact that all the distances are divisible and that an atom is not conceivable, nor is conceivable an individual distance or an indivisible interval. It is not

possible, then, to conceive an indivisible time, because the time is the measure of the movement.

The necessity of every movement is that it subdivides itself by means of the subdivision of the interval of the movement. [D266] The part which is in the first [section] of the interval, then, is before the part which [comes] after in it. This is the meaning of the thing's being in time. In sum, how [can] the movement of something be in ten cubits without its being anterior in the first section with respect to the second section? But when the anteriority and the posteriority result, the time already results.

When a movement is presupposed in an indivisible distance, this is impossible, because it has been established that every distance is divisible. Then, the distance, the body, the movement and the time, these four things, are by necessity divisible, and it is not conceivable that there is in them an atom, as it was said before.

[§264]

[(5)] The fifth allegation is that these compounds do not move by nature but with a rectilinear movement, because it is inevitable that every body has a natural place. Indeed, if it is left in its domain, which was presupposed for it, and its nature settles down in it, this [place] is natural for it; while its inclination would [tend] to it if it were separated from it for another spot. The researched spot is then natural for it, and its natural inclination [tends] to its natural spot. In the separation, then, the movement toward it occurs, while the rest [occurs] in [the body] in the occasion of its attaining [its natural spot]. When there is its inclination to it, it would not move to it but by the shortest of the roads, since, if it deviated from the shortest of the roads to it, it would incline away from it, not to it.

When it has been established that there is no direction but the middle and the surrounding [surface], the natural movement subdivides itself, for these bodies that the surface surrounds, in two rectilinear movements: [D267] the first one of them from the surrounding [surface] to the middle, and the other from the middle to the surrounding [surface].

[§265]

[(6)] The sixth allegation is that the movement, with regard to its origin – I mean the movement of these compounds – is a sign of the fact that they have a cause, and their cause has [in turn] a cause, to the infinite. That is not possible but by virtue of the circular celestial movement. Every originated movement, then, is a sign of a perpetual movement which has no end. Indeed, if that were not presupposed, the origin of the originated would not be conceivable. When then the originated are being, it is inevitable that there is [also] a perpetual movement which has no end.

The demonstration of it is that the origin of the originated without a cause is impossible. If its cause were existent from before and did not originate [anything], it would not originate only because of the cause's need of a further circumstance and condition by which it gets predisposed to bringing into existence [its effect]. Therefore, the cause does not originate until that circumstance has not been originated for a cause; but [then] the question about that circumstance necessarily follows, that is, [the question] why it originates now, while it had not originated before. [This further circumstance] needs, then, the cause, and

likewise it chains up [for every successive cause], so that that which is originated needs, by necessity, causes that have no end.

[As for] those reasons and causes, one of the two [holds true]: either [(a)] they are simultaneously existent according to an interrelation, or [(b)] [they are] according to a succession. [(a)] But the simultaneous existence of causes without an end is impossible, and we have already suppressed it. [(b)] It does not remain, then, [anything] but the continuous sequence, which is not but by virtue of a perpetual movement, every part of which is as if it had an origin. The complex of them is an uninterrupted [sequence] which does not have an origin, so that its parts are cause for what is after them, and in the same way every part. If the interruption of this movement in a [certain] circumstance was presupposed, the origin of an originated after it would be impossible: indeed, if it did not originate in that moment, it will not originate after it. [D268] It needs then an originated, and that originated also needs something similar to itself, so that the origin is not conceivable. Whenever a perpetual movement has been posited, the question is interrupted.

[§266]

The example of it is that one says: «Why did this seed in the earth receive the vegetative soul now, while it had not received it before, as it was buried in the earth?». It will be answered, then: «For the excess of the coldness in winter, and the non-existence of the balance before». One will then ask: «And why did the balance originate now?», [to which] it will be answered: «For the origin of the heat of the air». One will then ask: «And why did the heat of the air originate now?», [to which] it will be replied: «For the rising of the sun and its closeness to the middle of the sky, because of its entrance in the constellation of the Aries». One will then ask [again]: «Why did it enter now in the constellation of the Aries?», [to which] it will be answered: «Because its nature is the movement, and it disjoined itself only now from the other [constellation, that] of Pisces. Its entrance in the Aries does not happen unless by virtue of its separation from the Pisces. After its attainment of it, its separation from the Pisces is cause for its entrance in the Aries, while its being moving by nature, together with its attainment of the Pisces, is the cause of its disjunction from it. The cause of its attainment of the Pisces is the disjunction from what is before it, and in the same way it goes to the infinite».

Ultimately, then, the originated are undoubtedly traced back – beyond the chaining up of their earthly causes – to the celestial movement, and it is not possible that things are but in this way.

[§267]

The movement of the sky, then, [D269] is a cause for the origin of the things under two respects.

[(i)] The first one of them is that the cause [of the origin of the considered thing] is with it, like the brightness which is with the Sun rotates with it, and then originates in every part of the earth a thing after another. It originates the day in every region, bit by bit, and because of it the vision and the ceasing of darkness are originated. Because of the vision, the spreading of the people according to their goals is originated, and because of the spreading the [various] sorts of the movements [take origin], and from those movements [many] originated [things], which are not concealed, are [in their turn] originated.

[(ii)] The other [way] is the fact that the circular movement is a cause for the attainment of the predisposition to the causes, and yet the caused are delayed by virtue of the privation of the conditions, just like the sun necessitates a [certain] heat in the ground, because of which it is predisposed to the influence on the seeds, if it has been sown in it. And yet [this] is delayed for the non-existence of the seeds, while the seeds are delayed for the non-existence of the will of the mover of the seeds, whose will rests on [yet] another cause. When then the dissemination of the seeds has been made possible, now the heat operates, while before this it did not influence because of the lack of the receptacle. The being delayed of the originated is due to something similar to that.

In the same way one can conceive the origin of [all] things.

[§268]

It already appeared manifestly that the composition in the clay of the water and the dust, for instance, is a sign of the movement, while the movement is a sign of the necessary differentiation of the two directions, and the differentiation of the two directions is [in turn] not possible but by virtue of a surrounding body, which is the sky; and [it appeared] that it is inevitable that it moves perpetually, so that the origin of the originated is conceivable. Therefore, these signs are consistent with [what is] sensed, but [the force of the argument] gets to such a degree that when the blind, who does not directly witness the sky, carefully considers it, as soon as he speculates with his intellect about the lowest movement, he knows that it is inevitable that a perpetually rotating sky [also] exists, in order for the movement to be conceivable, while, otherwise, the creation of the movement in spite of that would be impossible; [D270] but the impossible is not in the possibility, then it has no existence at all.

Now, since we have already clarified the movement of the sky with the present demonstration – which is the inductive sign of it through the conclusion –, let us mention, then, the cause of its movement, and why it moves. Let us mention [also] its judgments.

[§269]

[(B.2)]

SPEECH ON THE CELESTIAL BODIES

[D271] The allegations about them are: [(B.2.1)=(1)] that they are moved by a soul by means of the will; [(B.2.2)=(2)] that they have an [always] renewed formal conception of the particulars; [(B.2.3)=(3)] that they have a goal in the movement; [(B.3.1)=(4)] that their goal is not the solicitude for the inferior [things], but their goal is [rather] the desire of imitation of a noble substance, nobler than them, between which and the bodies there is no attachment – that [substance] is called «abstract intellect» in the language of the group [of the philosophers], and «angel close [to God]» in the tongue of the Revelation –; [(B.3.2)=(5)] that the intellects are manifold; [(B.3.3)=(6)] that the bodies of the skies are of different natures; [(B.3.4)=(7)] and that one of them is not cause for the existence of others.

[§270]

[(B.2.1)=(1)] The first allegation is that they are moving by virtue of the will. As for the fact that they are moving, it is directly witnessed, and we have also already signaled it inductively. Adding [something], we will then say that this surrounding body, when it is presupposed as resting, has an individualized position, so that a specified half of it, for instance, will be over us now. Now, it would not be impossible if this, which is over us now, were surmised to be under us, because all the parts of the revolution, in the relation to all the [other] parts of it, are one. Thus, it is impossible that a part of the revolution is specified with respect to an [other] part, since if the upward direction were specified for one of them, that [D272] part would then be different than that for which the downward [direction] was specified, and then it would be a compound. But the compound is only gathered by virtue of the movement of the simple [elements] rectilinearly, and the impossibility of their being receptive of the rectilinear movement has already been clarified. In the simple, none of the parts of the circle is distinguished from another.

Therefore, they are receptive of the movement, and we have already mentioned that it is inevitable that in the nature of everything that is receptive of the movement there is an inclination. It is not permitted, however, that that is an inclination to the rectilinear movement. Indeed, it does not receive the rectilinear movement, since it would need another body which delimits for it the directions. Its inclination, then, [tends] to the turnover of the parts of the circle over it, and that [happens] by virtue of the rotation around the middle. Therefore, it is necessary that in its nature there is an inclination to the movement around the middle, since no [part] of the revolution is worthier than another to be with some parts.

[§271]

It is impossible that the like of this movement is by virtue of a pure nature, devoid of the will, because the natural movement is a flight from a position in the search for another position. When then it has attained that natural position, it settles down in it, and it is impossible that it returns by nature to that from which it separated itself, because had it been suitable for it, why would it have separated itself from it? And if it were [rather] incompatible to it, why would it return to it?

Rather, the sky comes back to any position from which it separated itself by virtue of the movement: it goes away [and] comes back perpetually. That, then, is not by the nature, but rather by virtue of the will and the choice. The will is not but with a conception. We call «soul» all that which has conception and will, since the body does not have will and conception by virtue of its abstract being a body, but by virtue of a proper nature and an individualized form, with which one refers with the expression «soul». Therefore, the movement of the sky by virtue of the will is a psychic movement.

[§272]

[(B.2.2)=(2)] The second allegation is that it is not permitted that the mover of the sky is a pure intellectual thing, which does not receive change, just as it is not permitted that it is a pure nature.

«Intellectual» is an expression referring to the stable substance which does not receive

change, while «psychic» is an expression referring to that which receives change. Thus, we say that, from [that which is] stable in one condition, it does not proceed but [another] stable [thing] in one condition. Thus, it is permitted [D273] for instance that the rest of the earth [depends] on a stable cause of it, because it persists in one condition.

As for the positions of the sky, they [rather] persist in the turnover, so that it is impossible that what necessitates [them] is what is stable [and] not changing. Indeed, what necessitates the movement from A to B does not necessitate [also] the movement from B to A if it remains in that condition, because this [second] movement is other than the first. If then the cause remains in its condition, nothing other follows from it than that which followed initially. Therefore, it is inevitable that its requirement of the movement from a second limit to a third limit is by virtue of a cause that overtakes it, just like the thing whose setting into motion differs because of the difference of its quality – indeed, when it cools down it moves in another way, whose setting into motion differs in the state of heat.

[§273]

Therefore, upon the change of that which necessitates, the change of that which is necessitated is inevitable. If then that which necessitates is the will, the change of the wills, and their renewal, is inevitable. Therefore, it is inevitable that there is a renewal of the particular wills, because the universal will does not necessitate a particular movement. Indeed, your will about the pilgrimage does not necessitate the movement of your foot in stepping to a specified direction until a particular will concerning the stepping to the spot to which you step has not renewed itself in you. Then, by virtue of that step, a conception about that which is after that step is originated in you, and a particular will about the second step is provoked. The particular wills are only provoked from the universal will, which requires the persistence of the movement up to the attainment of the Ka'ba.

[§274]

The originated then is a movement, a conception and a will. The movement is originated by virtue of the will; the will is originated by virtue of the particular conception together with the universal will, and the particular conception [D274] together with the universal will is originated by virtue of the movement.

The example of it is he who walks with a lamp in the darkness, the lamp not making visible for him but, for instance, the measure of a step in front of him. He conceives then one step, having with himself the lamp. From the conception and the universal will for the movement, then, a particular will for that specific step is provoked in him. [That] specific step then results, which is necessitated by the will, which is [in turn] necessitated by the conception. That step, then, becomes cause for the conception of the other step, so that the [second] step is conceived and results. From the step, then, the conception of another originates, and from the conception the will of another step, and from the will [still] another step, and likewise in perpetual. It is not possible that there is a particular movement, but in this way. It is in this way, then, that it is possible for the movement of the sky to be. Now, all that which changes by virtue of the change of the wills and the conceptions is called «soul», not «intellect».

[§275]

[(B.2.3)=(3)] The third allegation is that they do not move for a solicitude to the inferior world, and that the business of the inferior [world] does not affect them, their goal being rather the business of what is loftier and nobler than them.

The demonstration of it is that every voluntary movement is either [(i)] bodily [and] sensible, or [(ii)] intellectual. [(i)] Sensible is the movement [which happens] by virtue of the [(i.a)] longing and the [(i.b)] anger, but [(i.a)] it is impossible that the movement of the sky is for a longing, because «longing» is an expression referring to the research of that which is a cause for the persistence of the continuation. However, that which is not afraid of the imperfection and the destruction concerning itself, it is impossible that it has a longing, and [(i.b)] it is [also] impossible that it has anger, because [this] is an expression referring to the faculty of repelling the harming, incompatible [thing] that necessitates destruction and imperfection. [(i.a)] The longing then is for the research of the suitable, [D275] while [(i.b)] the anger is for the repelling of the incompatible. It is impossible that the destruction and the imperfection over[come] the sphere. Hence, it is not possible that its goal [in its movement] is of this kind [(i)], and it is then inevitable that it is intellectual [(ii)].

[§276]

The demonstration of the impossibility of the destruction and the imperfection about it is that, should that be, then one of the two would [hold]: [(a)] either it would be due to the ceasing of an accident of it – which is the conjunction with the breaking and the tearing, [(b)] or to the ceasing of its form and its nature, [(c)] or to its radical non-existence as for its form and its matter.

[(a)] It is absurd that it has a tearing and a breaking, since the meaning of that is the ceasing of the parts, in length and breadth, in rectilinear directions – it is indeed the notion of «scattering», I mean that it is by its necessity so. It has already been clarified, [however,] that they do not receive the rectilinear movement.

[(b)] It is [also] absurd that the suppression of its form from its matter [should] occur, because the matter would inevitably [(b.i)] either remain devoid of the form, which is impossible, [(b.ii)] or it would garb itself in another form, so that that will be a generation and a corruption, which is [also] impossible, because the generation and the corruption are by necessity the reception of the rectilinear movement. Indeed, [under this hypothesis] it would only receive a form which differs from the first form that it had by nature, so that it would demand a place other than its [previous natural] place, and it would then move to that [second] place with a rectilinear movement – like it is not conceivable that the matter of the air, when it is devoided of the aerial form and garbs itself in the form of waterness, [does that] unless by virtue of the fact that it moves toward the domain of the water with a rectilinear movement.

[(c)] As for its radical non-existence, namely the non-existence of its matter, this is impossible because the non-existence after the existence of all that which does not have matter is impossible, just as its existence after the non-existence is impossible. Indeed, it has already been established before that every originated has matter, since the possibility of its origin is before its origin – which is a stable description –, and then it is inevitable that it has a receptacle. [D276] Because of that, nothing is non-existent but from matter, so that

the possibility of its existence remains in its matter after its non-existence. It is not made non-existent of a non-existence [such that,] after it, its existence is impossible. It is impossible that the existent is transmuted into an impossible. When then it remains possible, the possibility, which is a relative description, requires a substance in which to subsist.

When then the impossibility of the change concerning them has been established by means of this [argument], their movement will not be for a longing, nor for an anger. Thus, it does not remain but an intellectual goal.

[§277]

It is impossible that their goal is the solicitude for these corruptible beings, so that the goal of their existence and of their movement are these inferior [things], because that which is wanted for a thing is undoubtedly viler than that thing. This would then lead to the fact that the superior [things] are viler than the inferior, despite the fact that the superior [things] are eternal, not susceptible of destruction and change, while these inferior [things] are imperfect and changeable, and they are in potency.

The complex of the earth, with that which is in it, is an insignificant part with respect to the body of the sun, since it is one hundred and some sixty times as [big as] the earth. The body of the sun has [in turn] no proportion to its sphere – how then [would it have proportion] to the furthestmost sphere? And how, then, will the goal of the like of this body be these vile matters? How will the goal of that eternal and perpetual movement be these vile matters? And how will these not be vile in relation to them, since the noblest of the inferior [things] is the animal, and the noblest [animal] is the man, and yet the most [part] of [humanity] is imperfect, and [even] he who is perfect within it never achieves the completeness of the perfection, since he is not disconnected from the differentiation of the states. Then [man] is always imperfect, namely [D277] he is deprived of the thing that he could have, such that if it resulted in him, he would be more complete for it.

The superior bodies, [by contrast,] are perfect and they are in actuality, nothing in them being in potency except that which is traced back to the vilest of their goals, which is the position, as it will be explained. The noble [things] do not tend at all to the viler for the sake of the viler in itself.

[§278]

If someone [objected] by saying: «If that which is wanted for something else is viler than that something, then [(a)] the shepherd is viler than the sheep, [(b)] the teacher is viler than the disciple, and [(c)] the prophet [viler] than the community. Indeed, the shepherd is not wanted but for the sheep, nor [is] the teacher [wanted] but for the disciple, nor the prophet but for conducting his community», one [should] answer: «[(a)] As for the shepherd, he is viler than the sheep inasmuch as he is a shepherd, and only nobler inasmuch as he is a man. Humanity [indeed] is not researched for the sake of sheep care alone. Then, if one did not consider of him but the description of his being shepherd, by virtue of this consideration he would be by necessity viler than the sheep, like the sheepdog for the sheep. Indeed, it is by necessity viler than the sheep, if it has no descriptive feature save its being a shepherd; but if hunting [for instance] were [also] feasible for it, by virtue of that respect it would need to be [considered] nobler. As for it, inasmuch as it only is a watching dog for

the sheep, it will be by necessity viler than them, because that which is wanted for the sake of something else comes after this something. How then could it not be viler than them?

[(b-c)] [This] is [also] the answer [to the objection about] the teacher and the prophet, since the nobility of the prophet, inasmuch as he is perfect in himself, is by virtue of attributes thanks to which he is noble, even if he were not engaged in the betterment of the mankind. If [however] one did not consider of him but the description of the betterment, it would follow that the [thing] whose improvement is researched is nobler than what is employed in the betterment.

[§279]

If then [someone objected] by asking: «Which unlikelihood [would] there be in the fact that its goal is the benefit of the good, in order for it to be an excellent good, and in order for it to be that from which goodness proceeds? Indeed, doing the good is good, and the inferior [things], as for themselves, are intended for it», one [should] answer: «The speech of the objector: “Doing the good is good” is a famous saying, [whose] advantage is that [D278] the common people believe it, so that they are held back from the shameful deeds. As for when one returns to the verification, however, as for [(a)] its predicate and [(b)] its subject there are an investigation and a minute analysis.

[§280]

[(b)] As for the subject, which is «doing the good», it subdivides itself into [(b.i)] that which is by virtue of the essence, and [(b.ii)] that which is by virtue of an intent.

[(b.i)] That which is by the essence is not a sign of the imperfection, and its meaning is the fact that it is an essence such that from its essence there follows a thing which is good, and by it one does not mean another thing at all. This [way of] doing is not by virtue of a will and a goal, but we have already mentioned that the circular movement is voluntary.

[(b.ii)] The other is that which is by virtue of an intent, which is the sign of the imperfection of the intending [being]. Indeed, it is inevitable that its doing is worthier for it than its non-doing, in order for it to obtain, by virtue of the doing, that which it had not [before]. If [rather] it was perfect, it would not lack the acquisition of another thing. If then this is not [the case], there are neither intent nor will, at all.

[§281]

[(a)] As for the predicate, which is «is good», it subdivides itself into [(a.i)] that which is good in its essence, [(a.ii)] that which is good as for the recipient, and [(a.iii)] that which is good as for the agent.

[(a.i)] As for the good in its essence, it is like what we say: «The existence of the universe, when it is compared to its non-existence, is better than the non-existence». The essence of the First is an essence from which what is good follows, but it is not a good for the First, since He does not derive benefit from anything, nor is it a good for the recipient, since there is no [thing] other than the universe, so that one can say: «The universe is a good for [this thing]».

[(a.ii)] As for the good for the recipient, it is a good but [also] a sign of the imperfection

of the recipient and of his lack of a thing, whose existence is more perfect for him than its non-existence.

[D279] [(a.iii)] The good for the agent is a sign of the imperfection of the agent, since if he were perfect, he would [be able to] do without the acquisition of the good and the perfection in actuality.

It became famous that doing the good, for the man, is a virtue and a perfection, not an imperfection, only because one expects from him the evil. It is a good, then, [only] in relation to that which is required by his nature, but otherwise, in truth and in relation to the absolute perfection, it is an imperfection. When then this has been established, we say: «If providing the good is not a good for the agent, it neither is a goal, nor is it conceivable that a will be turned to it». It would be inevitable to clarify, then, the way of its being a good for him, for it being conceivable that it [might] be a goal.

[§282]

[(B.3)]

[(B.3.1)=(4)] The fourth allegation is the establishment [of the existence] of the abstract intellects, which is the fact that the movement is a sign of the establishment [of the existence] of a noble, unchanging substance, which is neither a body nor is it impressed in it. The like of this is called «abstract intellect». It only is a sign of it by means of the non-existence of the finitude [in it]. Indeed, it has already been clarified that this movement is perpetual and infinite, eternal and forever. It is inevitable, then, that it has a supply from a moving faculty, since it is impossible that in the body there is a faculty [addressed] to what is infinite, because every body is divisible and it subdivides itself by virtue of surmising its subdivision as a subdivision of the potency. If then we estimated the subdivision, some of the potency will inevitably [(i)] either move to the infinite – so that the part would be like the all, without variation, which is impossible –, [(ii)] or move to an end – but something other will also move to an end, so that the complex would be finite.

It has been established, then, that it is not conceivable that a potency is [addressed] to an infinite matter, being that potency in a body. Therefore, it is inevitable for this movement to have a mover abstract from the material [bounds].

[§283]

The mover has two divisions.

[D280] [(a)] The first one of them. It moves like the loved moves the lover, the wanted the wanting, and the beloved the beloved.

[(b)] The second one. [It moves] like the spirit moves the body, and like the weight of the body [moves it] downwards.

[(a)] The first one is that for the sake of which the movement is, [(b)] and the second is that from which the movement is.

The circular movement needs the direct contact of an agent from which the movement is, and that is not but a changing soul, because the changing movement cannot proceed from the abstract, universal intellect which does not change, as it was said before. Then, the soul producing the movement is finite of potency, for her being linked to a body; and yet an

existent which is not a body assists her by means of its potency, which is not finite since it is undoubtedly free from matter, so that an infinite potency is effused from it. It is not an agent of the movement [(b)], but rather it is for the sake of the movement [(a)], inasmuch as its being is loved and intended [(a)], not inasmuch as its being is in direct contact with the movement [(b)].

A mover which does not move by itself is not conceivable unless by the way of love, like the setting into motion of the lover by the loved.

[§284]

If [someone] asked: «How is it conceivable that this intellect is a mover by the way of love?», one [should] answer that the mover by virtue of this way [(i)] either is such that its own essence is researched, like the knowledge – indeed, the researcher of the knowledge moves by virtue of his love for it, and what is researched is the obtainment of its essence –; [(ii)] or it is such that the resemblance to, and the emulation of it are researched, like the master – indeed, he is loved by the pupil and moves him, with the meaning that [the pupil] loves the resemblance to [the master]. In the same way, the resemblance to every coveted [thing] which possesses the quality of [being] magnificent is wanted.

[(i)] It is not permitted that this movement is of the first division, because it is not conceivable that the body [should] obtain the essence of the intellectual notion, since it has been clarified that it does not inhere in a body. [(ii)] Then it does not remain but the fact that the resemblance and the emulation are loved, by virtue of the acquisition of a descriptive feature which is similar [D281] to its descriptive feature, in order to get close to it in the descriptive feature, like the resemblance of the youth to his father, and of the pupil to his master.

[§285]

[(iii)] It is neither possible that it is by the way of the command and the obedience, since it is necessary that the commander has a goal in commanding, and that is a sign of an imperfection and of the reception of a change, and it is also necessary that the obedient has a goal in his obedience, that goal being his intended [thing]. As for the submitting to the command for the sake of the fact that it is a command alone, without utility, it is not possible.

[§286]

When it has been established that it is not possible but by the way of the resemblance to the beloved [(ii)], it has then three conditions.

[(1)] The first one is that the soul researching the resemblance has a conception of that researched descriptive feature and of the essence of the loved. Otherwise, [the soul] would research through her will that which she does not know, which is impossible.

[(2)] The second one is that that descriptive feature [belonging] to [the loved one] is lofty and magnificent. Otherwise, the covetousness concerning it would not be conceivable.

[(3)] The third one is that its obtainment is possible in its truth, since if [that] were impossible, its research by means of a true intellectual will would not be conceivable, except by the way of the opinion and the imagination, which is an accident close to ceasing

and does not persist forever in the mind.

Therefore, it is inevitable that the soul of the sphere has perception of the beauty of that loved, in order for her love to be provoked by her conception of [that] beauty – [love] which requires her contemplation and her attention to the superior direction, so that from it the conjoining movement toward the researched [object] of the resemblance [can] be provoked. Then, her conception of the beauty is the cause of the love. The love is [in turn] the cause of the research [of the resemblance], and the research is the cause of the movement. That loved is the First True, or what is close to Him among the close angels – I mean the abstract, eternal intellects removed from the reception of change, which are not destitute of anything among the perfections that are possible to them.

[§287]

If then [someone objected] by saying: «It is inevitable, then, to elaborate on this love and loved, and [on] the researched descriptive feature, whose obtainment is by virtue of the movement», [D282] one [should] reply that every research, as a matter of fact, is addressed to the proper characteristic of the Necessary Existent, which is that He is perfect in actuality, nothing in potency being in Him. Indeed, the being of the thing in potency is an imperfection, since its meaning is a lack, the obtainment of whose completion is possible to it. Every existent in potency for a [certain] aspect, then, is imperfect for that aspect, and its research is to eliminate from itself what is in potency, [passing it] into actuality. Then, the [thing] researched by everything is the perfection, and its obtainment.

All that in which what is in potency is abundant is undoubtedly viler, while all that which is in actuality for every aspect is perfect. Man, in his substance, is sometimes in potency, and sometimes in actuality. When he has become in actuality in his substance, he does not cease to be in potency in his accidents, not attaining the utmost degree of the perfection as long as he is in the body, since [during that time] the potency does not separate itself [from him].

As for the celestial body, it is not in potency at all in its substance, because it is not an originated, nor even is it in potency in its essential accidents, nor in its shape, but rather it is in actuality – namely, all that which is possible to it is realized for it. Indeed, among the shapes [it has] the most excellent, which is the sphere, and among the appearances the most excellent, which is the illumination and the transparency, and likewise for all the attributes.

[§288]

It only remains one matter which cannot be in actuality for them, namely the positions. As a matter of fact, [for] every position which is presupposed for it, it is possible to presuppose it in another position – indeed, it is not possible that it is in two positions in one single circumstance. If it did not have in itself this degree of potency, it would be close to resembling the abstract intellects; but one of the positions is not worthier than another [for it], so that it [might always] follow that [position] abandoning the remaining ones.

[D283] Since it was not possible to gather all the positions by virtue of the number, while it has been possible to gather by species, according to the way of the succession, it

will have perpetually the species of the positions in actuality, just like the fact that for the permanence of the man – since the permanence of his individuality was not [possible] in actuality – the preservation of his species by the way of the succession [of individuals] has been arranged.

The circular movement also [finds] a proper characteristic in its being in actuality and remote from change and variation. As a matter of fact, the rectilinear movement, if it is natural, changes to rest in its conclusion, and changes to feebleness in its conclusion if it is violent, while the circular [movement] lasts uniformly.

Therefore, the celestial body, whenever it takes upon itself the maintenance of the species of the positions in itself in actuality [and] perpetually, it already resembles the noble substances at the utmost degree of what is possible to it in itself. Its research of the resemblance is [an act of] worship for the Lord of the worlds, because the meaning of «worship» is the approximation, and the meaning of «approximation» is the research of the closeness – that is, it gets close to Him in the attributes, not in the place, because that is not possible.

This, then, is the goal that moves the skies.

[§289]

[(B.3.2)=(5)] The fifth allegation is the fact that the direct testimony is already a sign of the multiplicity of the skies. It is inevitable, then, that their natures are different and that they are not of a single species, [and that] by virtue of two signs.

[(a)] The first one of them is that if they were of a single species, the relation of one of the parts of one of them with one of the parts of the other would be like the relation of one of their parts with another of their parts; but if it was like this, the universe would be mutually conjoined, not disjointed. [D284] In the disjointment there is no dissimilarity but the dissimilarity of the natures, and this is like the fact that the water does not mix up with the oil when it is poured out on it, but rather oversteps it, [still] being dissimilar [from it]. The water [however] mixes up with the water, conjoining to it, and the oil with the oil.

Then, just like one knows, by virtue of the mutual separation, the relation of the parts of the water with one another, [and] like [one knows] the relation of some of its parts to the parts of the oil by virtue of the disjointment, likewise here, since with the mutual resemblance of the [parts of the] universe there would be no obstacle to the conjunction.

[(b)] The second one is that some of them are inferior and other superior, some surround and some are surrounded. That is a sign of the variation of the natures and the differentiation of the species, because, if the inferior were of the [same] species of the superior, it would be permitted to it to move toward the place of the superior, like it is permitted in [the case of] some of the parts of the water and the air that they move downwards or upwards from the domain of the water and the air. But if that were permitted [in the case of the body of the sky], then it would be inevitable [for it to have] the rectilinear movement, since it is by means of it that the inferior moves toward the domain of the superior, like in [the case of] the elements; but it has already been clarified that the reception of the rectilinear movement is impossible in them.

[§290]

[(B.3.3)=(6)] The sixth allegation is that it is not permitted that some of these celestial

bodies are cause of others. Rather, it is not permitted [in general terms] that a body be cause and reason for the existence of a body, because the body only influences the thing when it reaches the tangency with it, or the contiguity with it, or the equidistance, and, in general, when it relates to it with a [certain] correlation, like the sun influences the illumination of the body when [this] is in front of it and between them there is not an obstacle, and like the fire influences the combustion of what it encounters and touches.

Therefore, it is inevitable that there is an existent which the agent body encounters, so that it influences it, [in such a way that] a further thing results in it by virtue of its influence. When [by contrast] there is no [further] existent, it is impossible that the origination of another existent results by virtue of the body.

[§291]

[D285] [(a)] If then [someone objected] by saying: «Is not the fire cause for the origin of the air, whenever the fire is kindled under the water, so that the body of the air results because of the fire?», one [should] answer: «The air is not a body in the first place, but rather it is from another body, which the fire encounters and which it influences». Our speech here, however, is only relative to the celestial bodies, which are bodies in the first place, not being generated from another body. Indeed, we have already clarified that if they were generated [and] corruptible, they would be susceptible of the rectilinear movement, which is impossible in relation to them. Therefore, it has been established that the first bodies are not cause for the existence of one another.

[§292]

[(b)] If then [someone objected] by saying: «Why did you say: “From the body an act does not proceed unless after it has reached that about which is the action by virtue of a contact or something else”?», one [should] reply: «Its demonstration is that if the body acted, it would act [(b.1)] either by means of the abstract matter, [(b.2)] or by means of the abstract form, [(b.3)] or by means of the form with the mediation of the matter.

[(b.1)] It is absurd that it acts by means of the abstract matter, because the nature of matter is its being receptive of the form, and if it were active, it would not be active inasmuch as it is receptive, but rather for another respect. Then, there would be two things in it: the first one of them is that by means of which there is the reception, and in consideration of [this] it is matter; the other is that by means of which there is the act, and in consideration of [this] it is form. Indeed, with «form», we do not mean [anything] other than [this]; but [then] the matter in it would be form, and it would not be abstract.

[(b.2)] It is [also] absurd that it acts by means of the abstract form, because the abstract form has no existence in itself, but its existence is rather in matter.

[(b.3)] If it were by the mediation of the matter, [D286] [(b.3.1)] then either the matter would be a true medium, so that the form would be cause of the matter, and the matter cause of the thing, and then the form would be cause of the cause – but this is traced back to the fact that matter, inasmuch as it is matter, has already acted, and we have already falsified that –; [(b.3.2)] or it would be by the mediation of the matter inasmuch as, by virtue of its mediation, [the form] puts into operation the body toward the thing, in order for it to influence [the thing], like the form of the fire, by the mediation of the matter, is once here

– and its meeting influences it – and once there, so that its meeting there influences it. This requires undoubtedly a thing which is here or there, so that the body [may] influence it.

[§293]

[(B.3.4)=(7)] The seventh allegation is that it is necessary that the abstract intellects are manifold, and it is not permitted that they are fewer than the number of the celestial bodies; and that because it has been established that they are differentiated as for the natures and that they are possible, so that their existence needs a cause.

From the one only one proceeds: it is inevitable, then, that [the intellects] are a number, so that from each one [only] one [body] proceeds, and it is necessary that they differ by species, so that different species [may] proceed from them.

How? It has already been said that the multiplicity by number is not conceivable in one single species but by the multiplicity of the matter. If that which is not in the matter multiplied, it would not multiply but by virtue of the differentiation of the species, which is the prerogative of everything by means of a differentia thanks to which [a thing] distinguishes itself from another. It is not by virtue of an accidental, since it is impossible that an accidental which cannot be in its species follows the thing. When then there is no matter, there is not multiplicity either, except by means of the species.

[D287] It is necessary that these intellects are the loved of the souls of the skies. Indeed, the attention of every one [of the souls] is [directed to] her cause, and to the research of the resemblance to it, since it is impossible that the loved of all [of them] is only one. Otherwise, all [of them] would be one in their movement, and it is not like that. As a matter of fact, it has been clarified in the mathematics that their movement is differentiated, and [yet] if what they research were one, then the research would [also] be one. Then, each one [of the celestial bodies] has a soul proper to it, which moves it by the way of the direct contact and of the act, and an abstract intellect proper to it, which moves it by the way of love.

The souls are the celestial angels for their appropriateness to their bodies, and those intellects are the close angels for their freedom from the material attachments, and for their closeness in the attributes to the Lord of the worlds.

[§294]

[V]

[D288] FIFTH TREATISE

ON THE MODALITY OF THE EXISTENCE OF THE THINGS FROM THE FIRST PRINCIPLE,
 THE MODALITY OF THE HIERARCHICAL ORDERING OF THE CAUSES AND THE CAUSED,
 AND THE MODALITY OF THEIR ASCENT TO ONE, WHO IS THE CAUSER OF THE CAUSES,
 AND [ON] THIS TREATISE BEING THE CREAM OF THE DIVINE [THINGS],
 THEIR GIST, AND THE LAST RESEARCHED [THING] OF THEM ALL,
 AFTER THE KNOWLEDGE OF THE ATTRIBUTES OF THE FIRST TRUE

The beginning of an obscurity about it is that it has already been said that the First is one under every respect, and that from the one only one comes to exist. The existents, [however,] are manifold, and it is not possible that one says that they are [all] hierarchically ordered one after the other, since that [ordering] is not consecutive in all things. Certainly, it is possible to say: «The celestial bodies are before the elements by nature, and the simple elements are before the compounds», but this is not consecutive in everything. Indeed, in the four natures there is no hierarchical ordering, nor is there hierarchical ordering between the horse and the man, between the palm tree and the vine, between the blackness and the whiteness, and the heat and the coldness. Rather, they are equivalent in the existence. How, then, do they proceed from one? And if they proceed from a compound in which there is a multiplicity, whence did that multiplicity result? At last, it is inevitable that a multiplicity ascends to one, which is impossible.

[§295]

The rescue from this, then, is to say [that] from the First [only] one proceeds. That one is accompanied, not from the side of the First, by another state, so that a multiplicity results in it because of it. That is the principle of the realization [D289] of a multiplicity on a par, [and] then [also] hierarchically ordered. Thus, the [things] on a par and the arranged [things] are gathered in one. That one, then, necessitates a multiplicity by virtue of the multiplicity which is in it, and because of that the things are manifold. It is not possible but like that.

As for the way of that multiplicity, it is that the First is the True One, since His existence is pure existence, and His concrete existence is identical with His quiddity, while what is other than Him is possible. The existence of every possible is different than its quiddity, as it was said before, because every existence which is not necessary is an accident for the quiddity. Then, it is inevitable that there is a quiddity in order for the existence to be an accident for it. The possible existent is on the strength of the quiddity, while the Necessary Existent is by virtue of the analogy with the cause, since it has been clarified that every possible in itself is necessary by virtue of something other than itself, so that it has two states: the necessity in one respect, the possibility in [another] respect. In the respect in which it is possible, it is in potency, while, inasmuch as it is necessary, it is in actuality. It has the

possibility in itself, while it has the necessity from something other than itself. In it, then, there is a composition of a thing which resembles the matter, and of another [thing] which resembles the form. That which resembles the matter is the possibility, while that which resembles the form is the necessity, which [the thing] has from something other than itself.

[§296]

Therefore, from the First an abstract intellect proceeds, which has not, from the single First, but the single existence, necessary by virtue of Him. As for the possibility, it has it by itself, not from the First. Rather, it knows itself and it knows its principle. If it knows itself from its principle, [D290] because its existence is from Him, however its state will differ because of that. Then, in consideration of this multiplicity, a multiplicity will result from it, [and] then it will not cease to multiply by and by, until it will end up at the last of the existents.

If the multiplicity was inevitable, and if it was not possible but according to this way, it is however a small multiplicity. The first existents were not at the utmost degree of the multiplicity, but rather they gradually evoke one another to the multiplicity, so that the intellects, the souls, the bodies, and the accidents come to exist. These are all the divisions of the existents.

[§297]

If [someone objected] by saying: «How is it possible, then, that there is a distinction of their hierarchical ordering and of their composition?», one [should] answer that from the First an abstract intellect proceeds, in which, as it was said before, there is a duplicity: it has one of the two [aspects] from the First, and the other from itself. From it, then, an angel and a sphere result – the angel is indeed the abstract intellect. It is necessary that the nobler [being] results from the nobler descriptive feature; but the intellect is nobler, and the description which it has from the First, which is the necessity, is nobler. Then, a second intellect results from it in consideration of its being necessary, and the furthestmost sphere [results from it] in consideration of the possibility, which is in it like matter. From the second intellect the third intellect and the sphere of the constellations result; from the third intellect a fourth one, and the sphere of Saturn; from the fourth a fifth one, and the sphere of Jupiter; [D291] from the fifth a sixth one, and the sphere of Mars; from the sixth a seventh one, and the sphere of the Sun; from the seventh an eighth one, and the sphere of Venus; from the eighth a ninth one, and the sphere of Mercury; from the ninth a tenth one, and the sphere of the Moon.

With that, the existence of the celestial [things] has been treated exhaustively, since [all] the noble existents have resulted: save the First, nineteen – ten intellects and nine spheres.

This is sound if the number of the sphere is not greater than this. If indeed it were greater, it would then be necessary to increase [the number of] the intellects up to the completion of all skies. However, with the [astronomical] observation one does not get to a standstill but at these nine [spheres].

[§298]

Then, after that, the existence of the inferior [things] begins. They are in the first place the four elements, which are undoubtedly different [from one another], because their places are different by nature. Indeed, some of them research the middle, and some other the circumference. How, then, will their natures be united, if they are susceptible of generation and corruption, as it will be explained in the *Physics*?

It is inevitable that they have a common matter, and since it is not conceivable that a body is from [another] body, it is not permitted that the celestial bodies alone are cause of their existence. On account of the fact that the matter of the four is common, it is not permitted that the cause of the existence of their matter is manifold, while on account of the fact that their forms are different, it is not permitted that cause of their forms is other than a differentiated multiplicity, circumscribed to four things or to four species, because they are four forms.

[§299]

[D292] It is not permitted that the form alone is cause for the existence of the matter, since if it were like this, the non-existence of the matter would follow from the non-existence of the form; but it is not like this, and rather the matter remains, garbing itself in another form. It is not permitted [either] that the form has no access and no share [at all] in the existence of the matter, since, if it did not have any access [to it], the matter and its definition would remain – due to the permanence of [this] cause of theirs – [even] with the non-existence of the form, and this is impossible.

Therefore, the existence of the matter is by virtue of a cooperation of things.

[(1)] The first one of them is a separate substance, by virtue of which the root of its existence is. However, it is not by virtue of it alone, but by virtue of the cooperation of the form [(2)]. Like the moving faculty is the cause of the existence of the movement – on condition, however, that there is a receptive faculty in the receptacle –, and like the sun is the cause of the ripening of the fruits – on condition, however, that there is a natural potency in the fruit, receptive of the influence [of the sun] –, in the same way the existence of the matter is by virtue of the separate intellect, and yet its being in actuality is by virtue of the cooperation of the form.

[§300]

The individualization of a form as opposed to [another] form is not from that separate [cause], but it is rather inevitable that there is another cause which makes something of the matter worthier of the reception of a form as opposed to [another] form. Otherwise, indeed, the matter would be common for the elements, and that by virtue of the fact that it makes them predisposed to the reception of a specified form as opposed to another. This is not in the first place but from the celestial bodies, since the matters acquire different dispositions because of the closeness and the distance from them. When then they are predisposed, they receive the form from the separate [intellect].

On account of the fact that these celestial bodies are concordant in a universal nature, which is the one that requires the circular movement in all [of them], the matter benefits

of the absolute disposition to the reception of every form. Inasmuch as every one of them has a proper nature which necessitates in some of them a proper disposition to some of the forms, then the form is, for every matter, from the separate [intellect].

Therefore, the root of the bodily matter is from the intellectual, separate substance. Its being delimited as for the directions is from the celestial bodies, [D293] and its disposition is also from them. It is also permitted that some [part] of it has from some [other part] a predisposition to the particulars, like the fire, when it encounters the air, grants it the disposition to the reception of the form of the fire, so that [this form] flows upon [the matter of the air] from the separate [intellect].

[§301]

A distinction is made between its being predisposed and its being in potency, since the meaning of «potency» is that it receives the form and its contrary, while the meaning of «disposition» is that its improvement gives preponderance to the reception of one in particular of two forms. Then, the potency is equally [addressed] to the existence of the thing and to its non-existence, while the disposition is for the existence alone, by virtue of the fact that one of the two potencies becomes worthier than the other.

Likewise, the matter of the air is equally receptive of the form of the fireness and the waterness, but the predominance of the coldness makes it worthier of the reception of the form of the waterness – so that it transforms itself in water, for the reception of the form of the waterness, from the separate [intellect], in the presence of the acquisition of the predisposition from the cooling cause. Similar to this, the matter adjacent to the body which moves in perpetual is worthier of the form of the fireness, for the correspondence of the movement to the heat. The matter which is worthier of the rest is that which is far from it. Then, according to this respect the existence of these bodies – I mean the elements – is receptive of generation and corruption. Thus, the cause of the first disposition that matter has in relation to all the forms, and then the cause of its proper disposition in relation to the four natures, have already appeared from this.

[§302]

[D294] Then, by virtue of the mixture of these elements, other bodies are originated.

[(i)] The first of them are the events of the atmosphere, like the vapour, the smoke, the shooting stars, and so forth; [(ii)] the second of them are the minerals; [(iii)] the third the plants; [(iv)] the fourth the animals, and [(v)] the last of their order, the man.

All this is realized by virtue of the mixture of the elements.

[(i)] As a matter of fact, from the mixture of the form of the waterness and the airiness the vapour originates, while from the mixture of the fireness and the earthiness the smoke originates. Then, by means of the primary mixture, the events of the atmosphere result. The cause of their mixing are the movements which result in it from the heat and the coldness proceeding from the celestial bodies, from which they acquire, as a matter of fact, the predisposition. Then, the forms are poured forth from the Bestower of the forms.

[(ii)] When rather a stronger and more perfect mixture than that is realized, and to it some conditions are annexed, a predisposition to the proceeding of the mineral substances result, so that those forms as well are poured forth by their bestower.

[(iii)] If then the mixture is more perfect than that, the plants are realized; [(iv)] and if it is [even] more perfect, the animals are realized.

[(v)] The most perfect of the mixtures is [however] the temperament of the human seed, which has a predisposition to the reception of the form of the humanity. Cause of these predispositions are the celestial and terrestrial movements, and their entanglement. Cause of the forms is the separate substance. The celestial [bodies], then, do not cease to convey the predispositions, and the separate [intellect] to convey [D295] the forms, so that the continuation of the existence is perfected by means of both [of them].

[§303]

These mixtures do not [happen] by chance, but rather their causes, which are the celestial movements, are well-arranged according to a ruling. Hence, then, some things which are permanent by themselves are seen, namely the stars, and others whose permanence by themselves is impossible, like the plants and the animals. Then, for their permanence the permanence of their species has been arranged. That [happens] sometimes by virtue of the generation from the dust, in the presence of the realization of the predisposition through an individualized celestial cause, and sometimes by virtue of the procreation, but this [later] is predominant, since in every species a faculty has been created, from which a part resembling it in potency is elicited, so that it [can] be a cause for the existence, from it, of what is like it.

This, then, is the cause of the origin of these events. There is no event but in the concave of the sphere of the Moon.

[§304]

As for the celestial bodies, they are stable according to one [and only] circumstance, in their essences and in their accidents, with the exception of the vilest of their accidents in them, which is the position and the relation, since, by virtue of their opposite movements result the trine among the stars, the sextile, the conjunction, the opposition, the square, and the differentiation of the places where the rays are cast and of [various] species of mixtures, which are mentioned in the science of the stars and whose complete fulfillment is not in the potency of man. Those, then, are a cause for the differentiation of these mixtures and of these predispositions to the acquisition of the forms from the bestower of the forms, who is not niggardly in granting [them]. The forms do not result from it in [the things] in which they do not result only for a falling short in the recipient, not for avarice on its part.

Then, when those celestial correspondences differ by the species, predispositions different by species are realized, and different forms are poured forth, like the form of the man, of the horse, and of the plants. Indeed, the matter receptive of the form of the horse does not receive at all the form of the man; and hence a mare has never given birth to a man.

[§305]

[D296] When they vary in potency, despite the unification of the species, they necessitate a variation in the attribute of the predisposition. Indeed, the form of the one species varies in the perfection and the imperfection. Then, when an animal is imperfect as for a limb or

an attribute, its imperfection is not but [(a)] for a cause which is in the womb of its mother, or [(b)] at the time of [its] growing up, or [(c)] in one of the things which depend on it.

However, that cause is by virtue of another cause, and likewise [that second cause] is by virtue of its cause, and they do not chain up to the infinite, but they rise, at last, to the celestial movements. From this, then, it results that the good is poured forth on the universe from the First Principle by the mediation of the angels, in order for all that whose existence is in the possibility to exist according to the best and most perfect of the ways. Then, the existence of all that which is existent is like it is necessary [for it to be], and it is not possible that it is more perfect than it [is].

[§306]

If the matter from which the flies [come] received a more perfect form than the form of the flies, [this form] would be poured forth from its bestower, since there is no avarice and no obstacle [in it], and it only is effusive by nature, like the light is poured forth from the sun on the air, the earth, the mirror and the water, but its influence differs, so that it does not appear in the air, while it appears on the earth – though the rays are not reflected by it –, and it appears in the mirror and the water – because the radiance is reflected –, [and all this] not for a variation coming from the standpoint of the sun, but rather for the differentiation of the predisposition of the matters.

It is necessary to know that the flies are better than the matter of the flies if it were left as it is, and if it were not the case, then they would not exist.

[§307]

If [someone objected] by saying: «We see that this world is overflowing with evils, harms and monstrosities, like the lightnings, the earthquakes, the floods, and like the predatory animals, and so forth; [D297] and likewise in the souls of men as for longing, anger, and so forth. How, then, did the evil proceed from the First? Was it by divine decree? Or by something other than a divine decree? If it is not by divine decree, then something has already exceeded the power of the First and His will. From what does it [come], then? If, [by contrast,] it is by divine decree, how then did He decree the evil, since He is the pure Good, from Which nothing but the good is poured forth?», one [should] answer that the secret of the divine decree is not revealed but by virtue of the mention of the concepts of the good and the evil.

[§308]

As for «good», it applies according to two respects. [(a)] The first one of them is that it is a good in itself. Its meaning is that the thing is existent, and its perfection exists together with it. Since the good is this, then the evil is, in opposition to it, the non-existence of the thing, or the non-existence of its perfection. Then, the evil has no essence, and yet the existence is a pure good, while the non-existence is a pure evil. The cause of the evil is that which destroys the thing, or [that which] destroys one of its perfections. Then it is evil in relation to what it has destroyed.

[(b)] The other [respect] is that with «good» one sometimes intends Him from Whom

the existence of the things and their perfection proceed. The First is Pure Good according to this meaning. Otherwise, the things by virtue of these consideration are [of] four divisions.

[§309]

[(1)] The first one is what is a pure good from which it is not conceivable that any evil proceeds. [(2)] The second one is what is a pure evil, from which it is not possible that any good [proceeds]. [(3)] The third one is that from which the good and the evil [proceed], and yet the good is not predominant. [(4)] The fourth one is that from which the good is predominant.

[(1)] As for the first [division], it has already been poured forth by the First. It is the angels, because they are causes of the goods, with no evil [coming] from them.

[D298] [(2)] As for the second [division], it does not exist from Him. It is that in which it is not conceivable that there is any good, and rather is pure evil.

[(3)] As for the third [division], it is that in which the evil is predominant. Then, its truth is that it does not even exist, since bearing abundant evil for the sake of a little good is an evil, and not a good.

[(4)] As for the fourth [division], it is necessary that it exists.

[§310]

That is for instance like the fire, since in it there is a magnificent properness for the world. Indeed, if it had not been created, the ruling of the world would be defective, and in its being defective the evil would be great. If it is created, [however,] it undoubtedly burns the garment of the poor [man], if it ends up to it by means of the clash of the causes. Likewise, if the rain had not been created, the agriculture would be suppressed, and the world would be wrecked. If it is created, [however,] it is inevitable that it wrecks the roof of the house of the old woman, when it descends upon it, but it is not possible to create a rain which distinguishes, in its descending, between place and place, so that it does not fall upon the roofs, but it falls upon the fields which are beside it, since this is an act of a choosing [being].

[§311]

[However,] the form of the water as abstract, without mixture, does not receive the form of the life. If it does not mix with something else, thus producing an animal, it does not result from it the utility of the water in its perfection, just like it did not result from these animals. What is advantageous for the good between the fact that the rain is created for the good of the world, without caring about the rare evil which can be generated from it and which follows from it by necessity, and the fact that the rain is not created so that the evil becomes common – when then this is compared to that, one knows decidedly that the good [resides] in that it is created. For this [reason] Saturn and Mars, the fire and the water, the longing and the anger have been created, since, if there were not these matters, an abundant good would be suppressed because of their loss, although their creation is not possible unless a little evil follows from them. [He] knew that [all] that was among what would follow from Him, allowed by Him, so that the good is required by Him by essence, and the evil is required

by Him by accident, but everything is by virtue of [His] divine decree.

[§312]

[D299] If then [someone] asked: «It would have been desirable that [this kind of beings] were created such as to be pure good», one [should] answer: «The meaning of this question is that it was necessary that this division [(4)] were not created [at all], because the division which is pure good [(1)] already existed, while what was not purely good – whose good was however abundant, and whose evil was little [(4)] – remained in the possibility. Then, the good [resided] in the existence [of this kind of things], not in their non-existence. If indeed it were not like this, this division would not be. Then, the meaning of this question is whether it was necessary that the fire was created so as not to be fire, and that Saturn [was created] so as not to be Saturn, which is impossible».

[§313]

If then [someone] asked: «Why did you say: “The evil is small”?», one [should] answer: «Because “evil” is an expression referring to the destruction and the imperfection, whose meaning is the non-existence of an essence, or the non-existence of the attribute of an essence which is a perfection for the essence. This is impossible as for the angel and the sphere, as it was said before, and this does not exist but inasmuch as the mutually contrary forms – which are the elements – exist. Indeed, some forms undoubtedly annihilate others for the mutual contrariety. Then, that is not but on the earth. [Even] if the evil were [actually] common in the whole earth, it would [however] be small since the whole earth is small in relation to [all] the existence. Then how? The flawlessness is predominant, since these evils are only found with regard to the animals, which are the smallest [part] of what is on the earth. Moreover, they are not found but in the smallest [part] of the animals, since most of them are flawless; and that which is not flawless is [actually] flawless in most of its states, only changing in some states, or in some attributes, not in all.

Then, the fact that the [evil] is rare in relation to the good is not concealed. In sum, then, all this is not traced back but to the corruption of the states of the essence, and to the fear of the non-existence of the essences. Whenever the fear is conceived, it is stronger than the fear of the non-existence of the attributes. Then, the evil is non-existence, and the perception of the non-existence is the pain, [while] the good is the perfection, and its perception is the pleasure».

[§314]

[D300] Thus, the modality of the proceeding of these existents from the First, the modality of their hierarchical ordering, the modality of the intrusion of the evil within them, and the modality of its falling under the fate and the divine decree have already been elucidated.

We only restrained from mentioning the secret of the divine decree because among the common people it is estimated to be a weakness. Thus, it is advisable to report to them that the First is powerful upon everything, in order for that to necessitate a glorification [of God] in their hearts.

Indeed, if [someone] distinguished by saying: «No, He is rather powerful upon every

possible thing, but matters are divided in possible and not possible», and said that the creation of the fire so as to cook fare by means of it, and to melt the [mineral] substances by means of it, and yet not to burn the firewood of the poor when it falls in his house, would not be possible – [if someone said all this], they would believe that that is a weakness. And rather, if it were said to some of them that He does not have the power to create the like of Himself, or to gather the blackness and the whiteness, they would believe that that is a weakness. This, indeed, is the secret of the divine decree according to what is said, and God knows what is right.

The section on *Metaphysics* ends [here], and the section on *Physics* lies next to it.

The Natural Things
[Physics]

طبيعیات

[§315]

[D303] In the name of God, the Beneficent, the Merciful.

THIRD SECTION
ON THE NATURAL [THINGS]

We have already mentioned that the existent subdivides itself into [(a)] substance and [(b)] accident. The accident subdivides itself into [(ba)] that which is understood without relation to another, like the quantity and the quality, and [(bb)] that which is not understood but by virtue of the relation, and [this] branches off from the substance, the quality, and the quantity.

[We have already mentioned also] that the knowledge about the substance, the accident, and the states of the existence [belongs] to metaphysics, and that the subdivision descends [then] from it to the quantity, which is the subject-matter of mathematics, and to what depends on the material [bounds] with a dependence that is not susceptible of the abstraction from them neither in the estimation, nor in the existence. This [latter] is the subject-matter of the speculation of the physics, since it goes back to the speculation about the body of the world, inasmuch as change, movement and rest befall it.

Its intent is concentrated in four treatises.

[(1)] The first is about that which is attached to all the bodies and is the most common of their things, like the form, the matter, the movement and the place.

[(2)] The second is about that which is more specific than it, which is a speculation about the state of the simple among the bodies.

[(3)] The third is the speculation about the composite and the mixed [things].

[(4)] The fourth is the speculation on the vegetative, animal and human soul, and by means of it the goal is completed.

[§316]

[I]

FIRST TREATISE

ON THAT WHICH IS COMMON TO ALL BODIES

[D304] They are four [things]: the form and the matter, since a body cannot be disjoined from those two, the movement and the place. It is inevitable now to mention these [last] two.

SPEECH ON THE MOVEMENT

It is inevitable to clarify [(a)] its true nature and to clarify [(b)] its divisions.

[(a)] As for its true nature, it is well-known that «movement» only applies to the transfer from a place to [another] place; and yet it becomes, in the technical usage of the group [of the philosophers], an expression referring to a more common notion than that, namely the travel from an attribute to another attribute, with a gradual passage to it.

Its clarification is that all that which is in potency and can pass into actuality subdivides itself into [(i)] that which passes into actuality all at once, like [(i.a)] the white blackens at once, and like [(i.b)] the dark is lighted at once, with an enduring, still lighting, which does not increase; [D305] and [(ii)] that which gradually passes to actuality, so that it has a travel between the pure potency and the pure actuality, and [so that] it advances gradually in the exit from the potency into the actuality. It is not that it is pure as for the potency, because it is the beginning in the exit from it, nor is it pure as for the actuality, since it did not end after [having reached] the limit which was [its] intent and to which it was turned, like [(ii.b)] the dark is gradually lighted, for instance in the morning. Then, it is not luminous by virtue of the pure potency, when it has begun with the existence, nor is it [luminous] by virtue of the pure actuality, because the limit which was [its] intent to obtain has not [yet] been obtained. [(ii.a)] Likewise, when the body begins to blacken, separating itself from the whiteness, as long as it is travelling between the whiteness and the blackness, is called «moving», namely it gradually changes.

The transfer from a state to [another] state undoubtedly happens only in the ten categories.

[§317]

A FIRST DIVISION OF THE MOVEMENT

The movement does not happen [however] in all of them but in four [cases]: [(1)] the local movement, and the transfer [(2)] in the quantity, [(3)] in the position, and [(4)] in the quality.

[(1)] As for the place, the transfer at once is not conceivable in it, since the place is susceptible of subdivision, and likewise the body. Then, [the moving body] can only separate from its place a part after [another] part, with some of its [parts] preceding the others.

It is not conceivable but like this.

[D306] Then, concerning being in the place there is a [non-instantaneous] movement, and likewise [also] [(3)] concerning the position – and [this] is [for instance] the transfer from sitting down to laying down –, and likewise [also] [(2)] the transfer of the quantity – namely the fact that the thing becomes big or small –, and like the fact that every movement of the position, and also of the quantity, is not devoid of the local movement.

[(4)] As for the quality, the transfer at once is permitted in it, as if [a thing] blackens at once, but it is [also] permitted that there is the movement in it, and that because of the fact that it [can] blacken gradually.

[§318]

As for the transfer in the substance, the [gradual] movement in it is not conceivable. The water, indeed, transforms into air at once, and the semen transforms into man at once. The demonstration of it is that, when it begins to change, one of the two [holds true]: [(a)] either the species that was [before] remains, or [(b)] it does not remain. [(a)] If then it remained, it would be in addition to what is not withdrawing from what was in the place of it – since it is for instance a man –; but a variation in the substance is not conceivable. Indeed, there is not a man stronger as for humanity than another, as opposed to [what happens with] the blackness.

[D307] [(b)] If rather the species withdrew in universality, then it would be withdrawing in universality. Therefore, the substantiality would be changed in the specificity, as the transformation of the species is that which makes the [preceding] species withdraw. If then the species were permanent, the transformation would be in the accident, not in the differentia and the genus, I mean that it would not be in the definition and in the true nature.

The circular movement is a movement in the position, not in the place, because it does not separate itself from the place, but rather revolves in the place itself. [D308] The furthest sky does not have a place, as it will be explained, despite being moving.

[§319]

[(2)] As for the quantity, two movements are conceivable in it. [(2.1)] The first one of them is by means of the nourishment, that is, by means of the growth and of the wilt. [(2.2)] The other one is by means of something other than the nourishment, which is the rarefaction and the condensation.

[(2.1)] The growth by means of the nourishment is the fact that the body draws the nourishment from another body close to it in potency, in such a way that it assimilates to it in actuality and by means of it the body grows to the perfection of its development. The wilt is the fact that the body diminishes, not because of the rarefaction of its parts, but rather because of the loss of nourishment, which takes the role of what was dissolved from [the body]. Only a body from which something is perpetually dissolved – because of the enclosing of the air surrounding it, for its wetness, and because of the liquefaction of the heat innate to it – needs nourishment, because nourishment restores that which is continually dissolved from it.

[§320]

[(2.2)] As for the rarefaction, it is the fact that the body moves toward the increase, without help from outside, and yet it gets bigger in itself, without receiving anything from outside, by means of the fact that it receives a measure greater than its first measure, just like the water is heated, then it gets bigger, and when it fills up to the top of the vessel [this] is not sufficient for it anymore, so that it breaks; and like the food in the stomach is inflated and volatilized, so that its measure is made bigger, and then because of it the stomach, inflating, gets bigger.

When it has been clarified that the matter does not have a measure by essence, and that the measure is an accident for it, [then] there is not a measure of which it is worthier than another, so that the reception of an individualized measure is specified for it, but rather it is not impossible that it receives a smaller or a greater [measure]. That, however, does not happen randomly and in whichever way, but to a known limit.

As for the condensation, it is a movement toward the diminishment, for the reception of a smaller measure, without separation of anything from it, like the water, when it freezes, becomes smaller.

[§321]

[D309] A SECOND DIVISION OF THE MOVEMENT,
IN CONSIDERATION OF ITS CAUSE

The movement subdivides itself into that which is [(a)] by accident, [(b)] by violence, or [(c)] by nature.

[(a)] That which is by accident, then, is the fact that the body is in another body. Then, the surrounding body moves, and by virtue of [this] a movement results in the surrounded body, with the meaning that it is transferred from its common – as opposed to proper – place, like the mug in which there is some water, when it is transferred. Indeed, the water is not transferred in its proper place, which is the mug, and yet, when the mug is transferred from a house to [another] house, the water as well results transferred, even though the proper place of the water is the mug, not the house. The movement of the water in its true nature would [rather] be the exit from the mug.

[(b)] As for the violent [movement], it is that [the body] leaves its proper place, and yet by virtue of a cause external from its essence, like the transfer of the arrow by means of the bow, and the transfer of the thing by means of that which pulls or pushes it, like the stone is transferred upwards when it is thrown upwards.

[(c)] As for the natural [movement], it is that which [the body] has by its essence, like the downward movement of the stone, and the upward one of the fire, and like the natural cooling down of the water, when it has been violently heated. This is because when the body moves, it is inevitable that it has a cause. [D310] If its cause is external with respect to its essence, it is called «violent»; if it is not external with respect to its essence, it is called «natural». There is no doubt that it does not move from its own essence, for its being a body, since if it were like this, it would be perpetually moving, and [moreover] it would be for every body in one [and the same] way. Rather, [it is] for a concept which adds up to it, that

concept being called «nature».

[§322]

Moreover, it subdivides itself into [(c.1)] that which is by virtue of something other than a will, like the downward movement of the stone, so that it is properly contradistinguished by the name of «nature» [(c.1.i)], if its species is unified, while, if it moves to different directions, it is called «vegetative soul» [(c.1.ii)], like the movement of the plants. [(c.2)] If [rather] it is together with a will and is in different directions, it is called «animal soul» [(c.2.ii)]. If the direction is unified, like the movement of the sphere, it is called «angelic soul» or «[soul of] the sphere» [(c.2.i)].

If [someone objected] by saying: «Why, then, did you say that the movement of the stone and of the fire is natural? Maybe the air pushes the stone downwards, or the earth draws it to itself; and the skin filled with air [and immersed] in the water [maybe] only goes up because the air draws it, or because the water pushes it [away]», one [should] answer: «The demonstration of the falsity of that is that, if it were like this, the small would be quicker in moving than the big, because the attraction and the repulsion of the small are easier. Yet, the thing is the opposite of this, which is then a sign that [the natural movement] is by the own essence [of the moving thing]. Otherwise, why [should the quickness] be strengthened for the bigness of [the thing] itself, and be weakened by virtue of its smallness?».

[§323]

[D311] A THIRD DIVISION OF THE MOVEMENT

The movement subdivides itself into [(a)] circular, like the movement of the spheres, and [(b)] rectilinear, like the movement of the elements.

[(b)] The rectilinear [movement] subdivides itself [in turn] into [(b.1)] that which is toward the surrounding [surface] from the middle – which is called «lightness» –, and [(b.2)] that which is toward the middle – which is called «heaviness». Each one subdivides itself into [(i)] that which is to the utmost degree, like the movement of the fire to the surrounding [surface] [(b.1.i)], and of the earth to the centre [(b.2.i)], and [(ii)] that which is beneath it, like the movement of the air from the water toward that which is over it [(b.1.ii)], and like the movement of the water from the air to that which is over the earth [(b.2.ii)].

Then, in consideration of the middle, the movement is [subdivided into] three movements: [(3)] the movement around the middle, which is the circular one; [(1)] the movement from the middle; and [(2)] the movement toward the middle.

[§324]

[D312] SPEECH ON THE PLACE

The speech on the place is long, but its nutshell is that it has, concordantly, four properties.

[(1)] The first one of them is that the body is transferred from it to another place, and

settles down resting in one of the two.

[(2)] The second one is that one [and the same place] does not gather in itself two [bodies]. Indeed, the vinegar does not go in the mug until the water has gone out [of it], and the water does not go in until the air has gone out.

[(3)] The third one is that up and down are only in the place, not elsewhere.

[(4)] The fourth one is that the body is said to be in it.

[§325]

[(a)] Hence, indeed, there is a mistake in believing that the place is the matter, for the matter's being receptive of a thing after [another] thing, just like the place. It is an error, because the matter is receptive of the form, while «place» is an expression referring to that which receives the body, not the form.

[(b)] A faction believed that it is the form, because the body is in a form which is not separate from it. However, this is an error, because the form does not separate itself [from the body] during the movement, and likewise the matter, while the place does separate itself [from the body] with the movement.

[(c)] [Another] faction said: «The place of the body is the measure of the extension which is between the two extremes of the body». Then, the place of the water is that which is between the two extremes of the concave of the mug which the water occupies. These [thinkers] then differentiated themselves, so that [(c.1)] a faction said: «The assessment of this extension is impossible in the void, and rather it is not but in the plenum», [D313] while [(c.2)] the advocates of the void said: «It is permitted that this extension is emptied of a body that filled it», and thus they have established an infinite void beyond the surface of the world, and they have established a void in the interior of the world, as well. It is inevitable to invalidate the assessment of the possibility of the void.

[§326]

[(c.1)] As for the first school of thought, and namely that the place is the extension, it is only sound if it is understood that between the two extremes of the mug there is an extension which is equivalent to the extension of the water, or the air, which is in it. Thereupon, indeed, [this extension] would be a place for the water or the air. That however is not known, since the direct testimony [of the senses] does not indicate but the extension of the body which is in the mug. As for the extension of other things that [may] enter into the mug, it does not [indicate it].

If then [someone objected] by saying: «If we surmised the exit of the water without the entrance of the air, the extension between the two extremes would remain», this would not be a proof, even if it were true, because it is built on an impossible. Indeed, it is impossible that the water goes out without the air going in. Now, when the true is built upon an impossible, it is not true without that impossible. Indeed, if you say: «If the five were subdivided into two equivalent [parts], it would be even», this is true, and yet it is not permitted that, by virtue of it, it ends up being even. Likewise, if the mug emptied out, there would be an extension in it, and yet the antecedent is impossible. Thus, the consequent does not follow from it. This is then with regard to the conformity, in order to make understand what they

said.

[§327]

[D314] As for the demonstration of its impossibility, it is that the extension of the body between the two extremes of the mug is known. Then, if another extension were presupposed, it would already have entered into the extension of the body; but the interpenetration of the extensions is impossible, for the sign that the bodies do not interpenetrate. [As a matter of fact,] that is not for their being substance, because the extension, according to those [thinkers], is self-subsisting, and then it is a substance, although this falls within the body. Nor is it for its being cold or hot, or for [any] other accident, since, if it were like this, the interpenetration would be permitted given the non-existence of that attribute. Then, it has no cause but the fact that [the body] is endowed with an extension, and [thus] the extensions do not interpenetrate.

[§328]

Its meaning is that what is between the two extremes of the chest, for instance, is a cubit of air; but this body is also a cubit, then if it entered in [the chest] without the exit of the air, then the two cubits would have already become one [and the same] cubit, despite the existence of two bodies measuring a cubit. Now, however, it is impossible that two cubits became one cubit, and as this is impossible in a cubit which is air, [likewise] it is impossible in what is not [air]. Therefore, two extensions do not interpenetrate. If then with «interpenetration» one intended that one of the two is non-existent and the other remains, this would be a non-existence. If [rather] one intended the simultaneous permanence of both, one would return to two cubits which are one [and the same] cubit, which is impossible. And because of it, when the two extensions are surmised as simultaneously existent, by virtue of what does one know [their] duality? The sign which invalidated the allegation of two blacknesses in one [and the same] receptacle invalidates this, [as well]. Indeed, the duality is not understood but after the separation of the one from the other by virtue of an accident, as it was demonstrated before. Then, when the two extensions interpenetrate simultaneously, and one of them is not separate from the other, which distinction [would there be] between the speech of the one who says: «Indeed, there are two extensions here» and his saying: «[There are] three extensions» and «four extensions»? This is impossible.

[D315] It is not permitted that the distinction by virtue of a description is existent, and yet the circumstance of the interpenetration is non-existent, because the non-existent does not bring about the separation between the two things.

[§329]

[(c.2)] As for the second falsity – and namely the invalidation of the void – what we have mentioned is also sufficient, because in it there is a speech concerning the interpenetration of the extensions, and yet we will add [now some further] signs.

[(1)] The first one is that the void falls in the estimations only from the air, because the sense does not perceive it. Then, the man believes that the mug in which there is no water

is empty and void, and thus the conception of the void is planted in the estimations. Indeed, that which the supporters of the void have estimated is a thing like the air, because it has an individualized measure, it is self-subsisting, and it is divisible.

We do not intend with «body» but that in which these attributes are found, and with this consideration the air is a body. The void, then, would not be pure non-existence, because it would be described for being small, big, hexagonal, square and circular, and [for] the fact that this void is wide enough for two cubits of the plenum, not more than it, since if it were less than it it would not coincide with it. The pure negation is not described by the like of these descriptions. This, then, is a self-subsisting existent, it is not an accident, it has a measure, and it is susceptible of the division. With «body», we do not intend but this, by virtue of the sign of the air.

[(2)] The second one is that, if the void were existent, the body would be in it neither resting, nor moving; but the consequent is impossible, then the antecedent is impossible.

[(2.1)] We only said that the rest in the void is impossible, because the rest is either by nature, or by violence. If then the rest of the body were presupposed in a part of the void by nature, it would be impossible, because the parts of the void are homogeneous, with no differentiation in them. If [rather the rest] were presupposed by violence, it would only be by violence if [the body] had another suitable spot as opposed to that in which it is. When the differentiation is denied, the separation with respect to the nature is [also] denied; but the violence is after the nature.

[§330]

[D316] [(2.2)] As for the movement in the void, it is also impossible, by virtue of two signs.

[(2.2.i)] One of them is what we have mentioned, since if it were [(a)] by nature, it would be as if it searched for a different spot than that in which it is; but there is no differentiation in it. [(b)] Likewise the violence.

[(2.2.ii)] The second one is that, if there were a movement in the void, it would be not in time, which is impossible; then the antecedent is impossible. The way of its impossibility is that which was said before, [namely] that every movement is in time, because its being is undoubtedly in the first part before being in the second part. This impossible only follows because the stone moves downwards in the air more quickly than it moves in the water, since the air is thinner, and its resistance and its push are lesser. If the air became thick by virtue of [some] flour or something else, the movement of the stone in it would become slower as well, because of the resistance and the push that are in it.

Thus, the relation of the movement to the movement, as for the quickness and the slowness, is like the relation of the thinness to the thickness in the resistance and the push. Then, if we presupposed a movement in the void, for instance of one hundred cubits in an hour, and then we presupposed the movement of that body in that interval together with the presupposition of the existence of the air or the water, then it would be slower by necessity. Let us surmise, then, that it is in ten hours. If, then, we surmised the plenum of [another] thing which replaces the water, thinner and more subtle than it to the limit that its proportion to it in the resistance is a tenth, the movement [in this material] would be in an hour. [This,] then, leads to the equivalence of [this latter] movement, [conceived] with the existence of the principle of the obstruction, to the movement in the void, despite the non-

existence of the obstruction. But when there is a variation in the power of the obstruction, the variation in the movement is necessitated; then how could the variation between the existence of the obstruction and its non-existence not necessitate [it]?

This is a decisive demonstration which establishes what we have mentioned about the [necessary] following of the comprising of every body according to an inclination which is in it.

[§331]

[(3)] The third one – which is among the natural marks about the invalidation of the void – is that [(3.a)] when a cup of iron is thrown on the water, it does not become immersed in it. There is no cause for it but the fact that the air clings tenaciously [D317] to its concave. Indeed, if the cup became immersed, the air would not support it in order for it to attain the domain of the water, because it searches for the rise from its domain. If it separated from it and adhered to its domain, and the cup became immersed, a void would result between the surface of the cup and the surface of the separating air, which is impossible. The ship is built on this [principle], and hence if the air goes out from the cup, or from the ship, and they fill with water, they sink.

[(3.b)] Likewise, the tumbler of the copper extracts the air by suction, and, with it, it [also] draws [to itself] the skin of the one being cupped, because, if it did not draw it, a void would result, which is impossible.

[(3.c)] Likewise, the clepsydra holds together the water in itself, being turned upside down in the same way. If then the water goes out, in the lower part of the thief there would not be that which it would have taken as a substitute, then it would empty out. But the existence of the void is impossible, and [likewise] the separation of the surfaces of the bodies from one another without a substitute.

[(3.d)] Likewise, the long-necked bottle sometimes is laid down neatly on the mortar and then lifts the mortar by virtue of its lifting, and so forth with all [kinds of] artifices which are based on the impossibility of the void.

[§332]

Then, if someone asked: «What is the true nature of the place?», it [should] be answered: «What is firmly established about it is the opinion of Aristotle, on which all have agreed, that is that [«place»] is an expression referring to [(d)] the surface of the containing body, namely the surface internally touching the contained [body], because the four aforementioned marks are found in it, and every[thing] in which those marks are found is a place. They are found in the internal surface of the containing body, and thus it is a place, while they are not found in a form [(b)], nor in a matter [(a)], nor in something else [(c)], and thus [all these things] are not a place».

Therefore, the complex of the world is absolutely not in a place. Hence, it is not permitted to ask: «Why is it individualized by this domain, and not by a higher or a lower one?», because the void is impossible, and then there is not higher and lower.

As for the fire, its place is the circumference of the sphere of the Moon, from within; the place of the air is the internal surface of the fire; and the place of the water is the internal

surface of the air. It is necessary that you rely on this order.

[§333]

[II]

SECOND TREATISE

ON THE SIMPLE BODIES, AND ON THE PLACE SPECIFICALLY

[D318] The subdivision of the body into [(A)] simple and [(B)] composed is not concealed. [(A)] The simple [in turn] subdivides itself into [(A.1)] that which is not susceptible of the generation and the corruption, like the skies, and [(A.2)] that which is susceptible of [them], like the four elements.

[(A.1)] It was already said before that the skies are not susceptible of tearing apart, nor of corruption, nor are they devoid of the circular motion; and [it was already said] that they are manifold, that their natures are differentiated, and that they have souls which conceive and move by means of the will. All that has been said in *Metaphysics*.

We add here to these [allegations about the skies] that their matters – I mean their *hylai* – are differentiated by nature, they are not common, just like their forms are differentiated; not as the elements, since their matters are common. Indeed, if the matter [of the skies] were common, it would be fitting that the matter of one of them, with regard to its essence, was conceived with another form, and therefore were different. But if that were conceivable, their individualization by virtue of their form would be by chance. Their encounter would happen by virtue of a cause, and it is not impossible to presuppose the encounter of another cause. Then, they would receive another form, so that the first one would be corrupted and the second one generated. [D319] From it, [however,] it would follow that they would move with the rectilinear movement toward the domain of the other nature, which is impossible; and the possible does not attain to the impossible. A sign was given, then, that it is not possible that their matter is common, and that it is not similar to the matter of the elements.

This is the judgment of the simples of the skies.

[§334]

[(A.2)] As for the elements, [(1)] we will allege about them that it is inevitable that they subdivide themselves into [(aa)] hot-dry, like the fire; [(ab)] hot-wet, like the air; [(bb)] cold-wet, like the water; [(ba)] cold-dry, like the earth. Then, [(2)] we will allege that the heat, the wetness, the dryness, and the coldness are accidents in them, and not forms. Then, [(3)] we will allege that it is conceivable that the fire transforms into smoke, as well as that the water heats up; [(5)] that some of these elements are transmuted in some others; [(4)] that each one of them receives a greater or smaller measure than what was [initially] over it; [(6)] that they receive an influence from the celestial bodies; and [(7)] that it is inevitable that they are in the middle of the celestial bodies. These, then, are seven allegations.

[§335]

[(1)] The first one is that these bodies which are receptive of the change, of the generation and the corruption, and of the composition cannot be devoid of the hotness and the coldness, and of the wetness and the dryness, because they are either easy as for the reception of the shape, and easy as for its abandonment – and that is what is intended with «wetness» –, or they are difficult as for the reception of the shape or the conjunction, so that it is permitted that some parts touch each other and yet remain non-conjoined. If they are quick as for the conjunction, they are referred to with the expression «wet», like the water and the air. [D320] If, [by contrast,] they do not conjoin when in reciprocal contact, that is called «dry», like the dust and the fire.

Moreover, they cannot be devoid of the heat and the coldness, because they are susceptible of blending, as will be explained, and then it is inevitable that they interact, and some of them have an influence on some [others]. Otherwise, there would [indeed] be a proximity, but there would not be a mixture. Their action then is either by means of the scattering [of the parts], and is [then] called «hotness», or by means of the [ir] coagulation, and is [then] called «coldness». Hence [also] the frangibility is attached to them, namely by the force of the mixture of the wetness with the dryness. The softness is only from the wetness, and the hardness from the dryness; the natural smoothness is from the wetness, and the natural roughness from the dryness.

Therefore, the roots of these natures are these four [primary qualities], and the remaining ones are attached to them after [those]. These bodies cannot be devoid of these four.

[§336]

As for the odour, the flavour, and the colour, it is possible that they are not devoid of them. However, the air has no colour, the waters and the air have no flavour, and the air does not have an odour, which is not in the stone either.

Therefore, the tactile qualities are in the bodies primarily, and they precede the visual, olfactory, gustatory and auditory ones. Therefore, the primary mixture is of these four natures.

As for the lightness, it is only with the heat, while the heaviness is with the coldness. [D321] In the same measure as the dryness increases with one among the heat and the coldness, the lightness and the heaviness [also] increase. Thus, the hot-dry is extremely light, and the cold-dry extremely heavy. Since then it has been [made] inevitable to gather two qualities for every body, the composition is four[fold]: [(aa)] hot-dry, and there is nothing farther reaching in these two [features] more than the fire, which is the hot-dry simple; [(ab)] hot-wet, which is the air; [(bb)] cold-wet, which is the water; [(ba)] cold-dry, which is the earth.

Therefore, the compounds [which are] after them are beneath them regarding these concepts. Among the compounds, that in which these natures are predominant gets close to them.

[§337]

A sign of the fact that the air is hot by nature is that it searches for the upward direction when it is held in the water. When the fire is kindled under the water, and it becomes hot, [the water] evaporates and becomes rising air. Yes, we perceive the coldness of the air which is adjacent to our bodies, [but that is just] because it is blended with the vapours that mix up with it [coming] from the water adjacent to it. And were it not that the earth becomes hot by virtue of the sun, and because of it the air adjacent to it becomes hot [in turn], the air would be colder than this. However, the air that is adjacent to the earth becomes hot up to a certain limit, so that the coldness is reduced, and that which is above it is colder up to a certain limit, then it rises up to that which is hot, although it is not like the fire as for the heat.

As for the earth, it is dry-cold. Its coldness is with regard to the fact that it would be cold if left to itself. If there were not the coldness, it would not be heavy and thick, searching for a direction that is the opposite of the direction of the fire with respect to the distance.

Therefore, the simple bodies are these four, and they are the mothers of the bodies, and all the other bodies result from their mixture.

[§338]

[(2)] The second allegation is that these four attributes are accidents, and not forms – as a group believed –, because the form is substance, and it is not susceptible of increase and diminishment, nor [of being] stronger [D322] and weaker, while these bodies vary in heat and coldness – many waters are indeed colder than others. But if then the form of the water were the coldness, its form would be suppressed by means of the heat, which would necessitate that it separated itself from its place, [going] toward the place of the hot, and the true nature of waterness would not remain, but rather it would corrupt with the corruption of the coldness. And if the form of the air were the lightness and the upward movement, when it is held in the middle of the water in a skin it would not be air [anymore], for the removal of its form.

These, then, are accidents, while only the form of the element is another nature, I mean that it is a true nature inhering in the matter, which is not perceived in itself by means of the senses, since what is perceived by the senses of the colour, of the coldness and of the wetness is only an accident which proceeds from that nature. [The nature of the element] is only known by means of its action. Indeed, it produces in its body the rest in its natural receptacle, and the return to it in the case of separation [from it]. It necessitates the inclination to which one refers with the expressions «lightness» and «heaviness», and it necessitates in every body a proper quality, and a proper quantity.

In the nature of the water, then, the coldness manifests itself, and [indeed] when the coldness is violently removed from it, it returns to it as soon as the one exercising the violence is interrupted. Just like the fact that a downward movement is necessitated whenever [something] is thrown upward by compulsion – that is, when the compulsive potency is removed – likewise sometimes the measure of the water changes by compulsion to the smaller and the bigger; if however the compulsion is removed, it returns to its natural measure.

Therefore, every one of these four [elements] has a form which is its true nature and its existence, while these sensible qualities are accidents.

[§339]

[(3)] The third allegation is that these elements are susceptible of alteration and change, and thus it is permitted that the water becomes hot, namely that the attribute of the heat is originated in the water itself – and likewise for all the elements.

The heat can be originated for three causes.

[(i)] The first one of them is that a hot body, like the fire, is adjacent to [the one heated]; indeed, [the fire] heats up the water.

[D323] [(ii)] The second one is the movement, like the milk becomes hot in the churn by virtue of the movement, and the flowing water is hotter than the stagnant water, and when a stone is rubbed with [another] stone it becomes hot, and the fire appears from it.

[(iii)] The third one is the brightness. Indeed, when a body becomes bright, it becomes hot, like the burning mirror burns by virtue of its brightness.

[§340]

A group however has already diverged with regard to this. Indeed, they have said that the water does not become hot, and likewise the earth, while the air does not become cold.

Indeed, they have apparently struggled with these divisions, and they have said: «[(i)] When the water is adjacent to the fire, something disjoins itself from the parts of the fire, which mixes up with the parts of the water. Hot, then, are the parts of the fire, and the coldness of the water becomes disguised because the parts of the fire are predominant, and otherwise [the water] in itself would be cold as it were [before]. Whenever the help of the fire is interrupted, the parts of the fire disjoin themselves from [the water], and the coldness returns manifest after having been [merely] hidden, not annihilated.

[(ii)] As for the thing, then, it only becomes hot by virtue of the movement because its interior is not devoid of some parts of the fire. Then the movement extracts [those] parts to the open.

[(iii)] As for the brightness, it does not make something else hot, since it is not an accident, but rather it is a hot body in itself, which is a fine [thing] that spreads from spot to spot».

They only struggled with this because they believed that these accidents were forms. Thus, they apparently did not seriously apply themselves to [understand] the removal of the coldness of the water despite the permanence of its form, and hence they have struggled with this speech. We have already invalidated this root, and we will speak about the corruption of their inference in these three [divisions].

[§341]

[(3.1) = (ii)] As for the first division, and namely that the movement extracts the parts of the fire from the interior, it is a sign for its falsity the fact that, were it true, it would necessitate [D324] its exterior to become hot and its interior to become cold, by virtue of the transfer of the hot from its interior, but it is not like this. Indeed, when the arrowhead of the arrow

is [made] of lead, and it is shot, it melts completely, but if the heat exited toward its exterior, its interior would increase in coagulation, and it would [then] remain as it were. How? If it broke, and one [could] touch [it in order to verify] the state of its heat by virtue of the movement, one would find that its interior is hotter than it was before that, and in the same way its exterior.

Likewise the water, when it moves in the skin for a long time, is found hot in the whole of its parts, with a homogeneous heat in the exterior and the interior, [which] is a sign of the fact that the heat is originated in the whole of the parts, and it is not transferred.

[§342]

[(a)] If [someone objected] by saying: «The movement made hot the parts of the fire which were in them, after they were not», one [should] answer: «This is an admission of the alteration, which is the fact that they were existent [but] not hot, or [at least] weak in heat, and then they have been renewed».

[(b)] If [someone objected] by saying: «The arrowhead melts for the heat of the fire which is in the air, not for a heat in the interior of the arrowhead; and likewise the whole of its parts melt», one [should] answer: «This is absurd, because the air does not exceed the unmixed fire in the heat, and [in any case] that which lingers in the fire is stronger in burning than that which moves in it with quickness, because that which influences needs a time in order to influence. Thus, the [mere] being of that which is influenced in the air would be worthier to burn it than a nimble movement in it».

[(c)] If [then someone objected again] by saying: «When [the arrow] moves, it attracts the fires of the air to itself by virtue of the quickness of its movement, so that they go in its interior and thus many fires gather in it», one [should] answer: «The exit of the parts of the fire from it to the air would be easier than their entrance in it. Then, it would have been necessary that it became colder, and stronger in coagulation, for the exit of the fire from it. Indeed the fire undoubtedly enters in its pores, but those pores [must] tolerate the exit of the fire from them, just as they tolerate the entrance in them. And rather, the escape of the fire in an extraneous spot is easier than its penetration in an extraneous spot. [D325] Thus, if the movement prevented the exit, it would [also] prevent the entrance».

[§343]

[(3.2) = (i)] As for the second division, and namely the entrance of the parts of the fire in the water and the wood, in the case of the proximity, its disavowal is not possible, since it is permitted that the mixing is one of the causes, and yet, once the permission of the transformation has been established, one is not far either from the fact that it transforms in itself, without the entrance in it of the parts of the fire.

[§344]

[(3.3) = (iii)] As for the third division, and namely the allegation that the rays are a hot body, it is false due to [various] matters.

[(3.3.1)] The first one is that if they were hot, like the flame of the fire, it would be

necessary that they shielded whatever they fall on, just like the fire shields. It is known, [however,] that they make things visible rather than shielding them, as opposed to the fire.

[(3.3.2)] The second one is that it would be necessary that they moved toward one [and the same] direction, while the brightness spreads in every direction.

[(3.3.3)] The third one is that it would be necessary that their attainment of a far spot were slower than their attainment of a close spot. Yet, if a lamp is lighted in the moment in which the eclipse of the sun is dispelled, the brightness of both reaches the earth at the same moment, without any variation.

[§345]

[(3.3.4)] The fourth one is that, when the house shines from the window, and then it is suddenly blocked all at once, it would be necessary that the house remained bright by virtue of those bodies that were in it, since they are prevented from escaping due to the blocking of the window. If then they maintained that their brightness withdrew when the window was blocked, [the rays] would be, therefore, a body which receives the brightness one time, and some other [time] the darkness, so that the brightness would become an accident for a body. Thus, there would be no need of it, and rather it would be necessary to acknowledge the true, and namely that the earth receives sometimes the brightness, and sometimes the darkness, due to the encounter with the sun and the separation from it.

[(3.3.5)] The fifth one is that if those bodies are scattered, how then would the brightness form an uninterrupted sequence in the whole of the air and the earth? If they were uninterrupted, not scattered, then how would the bodies interpenetrate with the air? And if they did not [D326] interpenetrate, being [rather] scattered, how then would the brightness form an uninterrupted sequence over the face of the earth?

[§346]

[(3.3.6)] The sixth one is that [(a)] if [some] bright bodies were transferred from the sun or the lamp, the parts of the sun would dissolve and its brightness would diminish in a second moment, for the separation of its bright parts. [(b)] If it were surmised, [by contrast,] that those bodies do not go out from [the sun], but rather they are established in it and inseparable from it, [that] they move together with it in the presence of its movement, and only fall upon the earth in its presence, then the answer to [this] has already come before from two passages, where we have said that [the rays] would then shield that which is behind them, and that they would interpenetrate the bodies of the air.

Then, it would be necessary that no one of them were in the air, because it is not permitted that one [and the same] body is far from the earth and close to it, and yet it would be necessary that the air is not devoid of it. Indeed, if a body went out in the air, [under that assumption] it would be necessary that the brightness did not fall upon it, since it is impossible to say: «The brightness which is on the earth knew the supervenience of a body, and thus it transferred [itself] to it».

[(3.3.7)] The seventh one is that if the brightness were a body, it would reflect against the hard things, like the stone, not against the soft ones, like the water.

By virtue of these marks it has then appeared manifestly that the rays are an accident,

whose meaning is that the sun is cause for the origin of an accident in it, which is opposite to it when between the two there is a diaphanous body. The brightened body is also a cause for the origin of the brightness in that which is in turn opposite to it, by virtue of the reflection or of the curving. Whenever the thing receives the brightness, while being receptive of the heat, the heat is originated in it. [The heat], then, is another accident.

[§347]

[D327] [(4)] The fourth allegation is that they receive a smaller or bigger measure without the addition of anything from outside, like the water sometimes gets big, and some other time gets small. Indeed, whenever it heats up it becomes bigger, and whenever it cools down it freezes and becomes smaller, its [standard] extent being [when] it is tepid, between the two [extremes]. It has already been said before that the measure is an accident in the matter, so it does not follow that there is a standstill according to one single measure. However, we will now draw conclusions regarding the correctness of that from the direct testimony [of the senses].

Indeed, the wine swells in the earthen jug until it tears it open, and the bulgy, long-necked bottle which is called 'crier' breaks when its top is tightened, being filled with water, and the fire is kindled under it. There is no cause for that but the fact that the water becomes bigger than it were.

[§348]

[(a)] If then [someone objected] by saying: «Maybe [the water] got bigger due to the entrance in it of the parts of the fire», one [should] answer: «How then did the parts of the fire enter in it, given that nothing exited of the water? And if something did exit from the water, its substitute would have entered, then it would be as it were, and then the 'crier' would not have broken».

[(b)] If then [someone objected again] by saying: «The fire searched for the upward direction by virtue of its nature, and because of that [the bottle] broke», one [should] answer: «Then, it would have been necessary that it lifted the vessel and made it fly, not that it broke it, because the lifting is sometimes easier than the breaking, when the vessel is sturdy and its weight is light. Moreover, it would have been necessary that [every] spot that [the fire] encounters broke. However, the cause in [this case] is that the water expands in all sides, so that it weakens the surface of the vessel from every side, [D328] and thus the spot of the vessel which was weaker, in whichever side it is, is ripped open».

Therefore, the measure is an accident which increases and diminishes, while the nature determining the measure does not cease, but receives a proper accident, as long as there is not a violent [agent]. If rather a violent [agent] was found, then it might force the action [of the nature] to the utmost degree of what is determined.

[§349]

[(5)] The fifth allegation is that these four elements transform themselves in one another, so that the air is transmuted in water or fire, and the water in air or earth, and likewise the

remaining [elements].

A group has already disavowed this, although its demonstration is the direct testimony [of the senses], namely [(5.1)] that the air which is in the bellows of the blacksmiths, when it is inflated for a long time and strongly, becomes hot, burns and becomes fire. There is indeed no meaning for «fire» but «burning air».

[(5.2)] If for instance a mug of glass were set tidily in the middle of the snow, the air which is in its interior would cool down and it would transform into water, and [some] drops would gather on its surface. When then they are abundant, they gather in its lower [part], and that not by means of the entrance of the water in it from the pores, because the external water does not diminish. If there were hot water in the place of the cold one, it would be worthier of the entrance from the pores; that, however, is not found with the hot, but it is only found with the excessive cold or the snow. And again if that were by virtue of the entrance of the water, the drops would not be found but in the spot where there is the water; rather, sometimes they are found at the extreme of the mug, which is above the snow. In the excessively cold countries, it has already been witnessed [D329] that the cold seizes the clear air close to the earth, when it is serene, transmutes it in snow, and makes it fall on the earth, so that an abundant quantity is gathered, without clouds.

[§350]

[(5.3)] As for the transformation of the water in air, it is apparent when the fire is kindled under it, and the vapour rises as air.

[(5.4)] As for the transformation of the water in earth, that is sometimes witnessed in the drops of clear water [coming] from the rain. When they fall upon spots which have in themselves a petrifying, coagulating faculty, they coagulate on the spot in stones, and this has already been seen.

[(5.5)] As for the transformation of the stone in water, by liquefaction, it is perceived in the practice of the discipline of alchemy, in dissolving the stones.

All this is because the matter [of the four elements] is common, and no form among these forms is specified for it for its own essence. Rather, it receives the form according to the cause which it encounters. When then the cause changes, the form [also] changes, and its predisposition to another form only results due to the origination of accidents which correlate to that form, as the heat when it is predominant over the water. Indeed, by means of it [water] gets more predisposed to the aerial form. The heat then does not cease to strengthen, but the form of the wateriness remains until its potency is perfected. Then, the form of the airiness becomes worthier, and thus [matter] divests itself of the form of the wateriness and garbs itself in the [form of the] airiness, the form of the airiness flowing from the bestower of the forms.

[§351]

[(6)] The sixth allegation is that these inferior [things] are susceptible of being influenced by the celestial [things]. The most apparent of the stars in influencing are the Sun and the Moon, since by virtue of these two the ripening [D330] of the fruits results, as well as the rising of the seas. Indeed, due to the increase of the Moon there is the increase of the rising

[of the sea], as well as the increases of the fruits and other things, whose detailed exposition is made known in the particular books. The most apparent influence of these two on the inferior [things] is however the brightness, and then the heat by the mediation of the brightness.

The Sun's being hot, [however,] does not follow. Even though it produces the heat from itself by the mediation of the brightness, [this is] like the fact that the Sun, when it heats up the water, moves it upwards by means of the evaporation, that not being a sign of the fact that the Sun is moving upwards. Likewise, the heat of [the water] is not a sign of the heat of [the Sun]. Rather, the celestial [things] have a fifth nature, external with respect to these [four elemental] natures, as it was said before.

Yet, these accidents are mutually loving, interwoven, and mutually hating. Then, the heat is accompanied by the movement, and the brightness is accompanied by the heat, with the meaning that one of the two gives to the subject-matter its predisposition to the reception of the other, so that the other flows from the bestower of the forms. Therefore, it does not follow by necessity that the effect of the thing is of its [own] genus, but rather it prevails that what results in the body is of another genus, which corresponds to the agent. Thus, the heating up is from the fire, the coldness from the water, and the brightness from the Sun.

[§352]

The action of the body on the body is sometimes [(a)] by virtue of the contiguity, as the fact that [(a.1)] the cold cools another body down by virtue of the contact, and [(a.2)] the wind [D331] moves another body by virtue of the contact; and sometimes [(b)] by virtue of the opposition, as the fact that [(b.1)] the green, when it is opposed to a white wall in the spot of the radiance of the sun, necessitates the resulting of the greenness on the wall, like the reflection, and as the fact that [(b.2)] the form, in the opposition to the mirror, necessitates the impression of its likeness in it, while, if it were touching [the mirror], it would not necessitate it.

In the same way, the opposition of the coloured [thing] to the eye necessitates the resulting of the like of its form in the eye, despite the distance. As for [what is] with the contact, [this] does not [happen]. The true nature of this is not the extension of a part from the bright [thing] [(i)], nor the exit of one of the forms toward the eye or the mirror [(ii)], since that is impossible. Likewise, the existence of the bright [thing] in opposition to the thick body is a cause for the resulting of the likeness of its form in it, by the way of the renewal whenever a diaphanous body stands in the middle of the two.

When the brightness is originated in [the body] by a cause, it predisposes [it] to the heat. [The body] then becomes hot, and then it is sometimes predisposed to the movement by virtue of the heat. Indeed, when that [happens] in [some] water, it ascends with the vapour.

The burning mirror only burns inasmuch as it is concave and conic, so that the point which is its centre receives the brightness from all the parts of the mirror, by virtue of the repercussion and the reflection to it. Thus, its brightness and its predisposition to the heat are strengthened, and thus its heat is [also] strengthened, and hence it burns.

[§353]

The heat is predominant in the summer, because the brightness of the bright body is only corroborated with the perfection of the opposition, since it only acts by the opposition. Then, when the opposition is stronger, the brightness is more abundant. The perfect opposition is only according to the perpendicular, and in the summer the Sun is in the northern side close to the middle of our heads. Hence, the day [D332] of the summer is brighter than the day of the winter, and it is undoubtedly hotter. In the winter the perpendicular relative to the inclination of the Sun with respect to us deviates to the south, so that the brightness weakens, and thus the heat weakens [as well]. With «perpendicular» I mean the line that exits from the centre of the Sun to the earth, according to two right angles from both sides, since that which is inclined for the variation of the angles is not perpendicular.

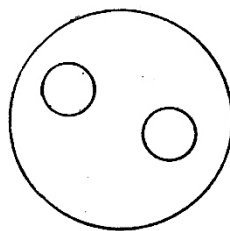
[§354]

[(7)] The seventh allegation is that it is necessary [(7.1)] that these elements are in the middle of the celestial [things], while it is not conceivable that they are external with respect to them, [(7.2)] nor is it conceivable that they have two natural places within the skies. Rather, it is necessary that the place of every one of the elements is one.

[(7.1)] As for the fact that it is not permitted that they are external with respect to these skies, inasmuch as these bodies have a relation to two different directions, as it was said before concerning their reception of the rectilinear movement, then it is not conceivable that they are unless inasmuch as a body which delimits their direction surrounds them.

If indeed they were presupposed as external with respect to the superior surface of the world, and not as surrounded by a body, [this] would be impossible.

If another sky were presupposed, in order for two worlds to be presupposed, contiguous or removed from one another, it would be impossible because between the two there would be an extension which is void, and the void is impossible. Indeed, that extension would be endowed with two directions, between which a rectilinear movement would be conceivable, and then that which necessitates the differentiation of the direction would be needed. [D333] We have already clarified that the body does not necessitate the direction from outside. Then, there would be need of a third body which surrounds the [first] two and encircles them, but that as well is impossible, since it [is tantamount to] the fact that there are two earths in two spots, encircled by a surrounding [body], like the body of the Moon and the body of the elements. [These] two, indeed, are together in the sphere of the Moon, but the like of that is impossible.



[FIGURE 8]

[(7.2)] Hence, we say that it is necessary that the place of the simple element is one, because if two places were presupposed, and the water, for instance, were left, and [if] a place between the two places had already been presupposed for it, and [then the water] were removed [from the intermediate place], then one of the two: either it would incline by nature toward one of the two, so that it would be the natural place for it, as opposed to the other; or some of it would tend to one of the two, and some to the other, which is however impossible, because the water is a simple [body] whose parts are homogeneous. Then, it is necessary that its movement is homogeneous. Indeed, there is no[thing] specified for one of [the watery particles] in order to necessitate the fact that one of them [should] separate from another.

[§355]

Then, the natural place for the body is the place [such] that, when the parts of that body are surmised [to be] in separate spots, and their nature is left free, all move toward that spot, gathering in it. Therefore, the place of the universe is the place in which the parts of the universe gather; then, it does not lead to the impossible which we have mentioned. It has already been clarified from this, then, that the world is one, and it is not [D334] possible but to be like this, and that its bodies subdivide themselves into that which calls for the direction, and that which brings the direction. It is inevitable that what calls for the direction is in the middle of what brings the direction, so that its two directions are distinguished by virtue of the closeness and the distance. It is [also] inevitable that a part of what calls for the direction is internal to another, while it is not permitted that it is external with respect to [that which brings the direction].

[§356]

All this is built upon some roots, which are the fact that [(i)] these bodies are simple, and that [(ii)] every simple body has a natural shape, which is the sphere, and [(iii)] one [single] natural place. [(iv)] It has already been clarified that the void is absurd. According to the complex of these principles, then, that conclusion which we have mentioned is necessary. We have only said that every body has a natural place because, when it is devoid of the violent [forces], then it either rests in a place – so that we will say that it is the natural place for it –, or else it moves, turning then undoubtedly only in the direction in which its natural place is. We have only said that it is necessary that [the natural place] is one for what we have mentioned, so that the impossible does not follow, namely the scattering of the parts of the simple, when it is devoid of the two limits, in order for it to turn to two places, part to this and part to that. Indeed, whenever it turns to one of the two and leaves the other, the natural [place] is that to which it turns.

[§357]

[III]

THIRD TREATISE
ON THE BLEND AND THE COMPOUNDS

[D335] It is inevitable to speculate about five matters in [this treatise].

[(1)]

[FIRST SPECULATION. THE BLEND]

[(1)] The first speculation is about the true nature of the blend. The meaning of it is that these elements are mixed inasmuch as some of them act on some others, so that their quality changes until a homogeneous quality settles down in the whole. That settling down is called «mixture», and that because the hot breaks the coldness of the cold, and the cold the hotness of the hot, and likewise [do] the wet and the dry, so that the sensible qualities – which we have clarified to be accidents for the forms – become homogeneous, for their balance due to the interaction.

As for the forms, which are the potencies that necessitate these qualities, they remain with the permanence of the interaction, because, if all the forms were suppressed, that would be a corruption, not a blend. If the fiery form, for instance, were suppressed, and the aerial form remained, that would be the transmutation of the fire in air, not a blend. If the qualities did not change for the collision of the [reciprocal] influences, then it would be a [mere] contiguity, not a blend.

[§358]

Where Aristotle said that the potencies of the elements remain in the blends, he did not intend with them but the active potencies. Indeed, the denial of the potencies of the interaction is a sign of the corruption. He drew inferences from this only with regard to the fact that the blend is not a corruption. [D336] Moreover, how would a corruption happen, given that if they were equal, one would not corrupt the other; and if one of them were prevailing, the prevailing would remain, while the prevailed upon would be suppressed and would be transmuted in the prevailing? In sum, there is no mediation between the substances, and the forms are substances which do not receive increase or diminishment. It follows from that, then, that the true nature of the blend is firmly believed [to be] as we have mentioned it.

[§359]

The blend subdivides itself in the estimation in [(i)] balanced and [(ii)] inclining.

[(i)] The [actual] existence of the balanced [blend], however, is not possible, since if it existed, the [resulting] body would be neither resting nor moving. Indeed, if it were resting on the earth, then the earth would be prevailing upon it, and likewise if it were resting in

the air, since it would then be the air to be prevailing upon it. If it [rather] moved toward the fire, then the fire would be prevailing upon it, and if it moved to the earth, then the earth would be prevailing upon it. The true about it is then that it does not rest in [any] spot, nor does it move toward any spot, and that is impossible.

[§360]

[(2)]

[SECOND SPECULATION. INTERNAL STRUCTURE OF THE ELEMENTAL SPHERES]

[(2)] The second speculation regards the primary mixture between the elements, about whose attributes and simplicity the speech has come before.

[EARTH]

Let it be known, then, that it is necessary that the earth has three layers. [(a)] The inferior layer, and namely that which is around the centre, inclines to the simplicity, since it is unmixed dust. [D337] [(b)] Above it there is a layer with which the wetness of the waters drawn to it gets mixed up, so that it is similar to the clay. [(c)] Above it there is a layer which is the surface of the earth, and which subdivides itself into [(c.1)] that which is occupied by the sea and [(c.2)] that which is uncovered by it. [(c.1)] On that which is under the sea, then, the wateriness prevails, while [(c.2)] on that which is uncovered by it the dryness prevails, because of the heat of the sun.

[§361]

The cause of the fact that the water does not surround the earth is that the earth is transmuted in water, so that a lowland results in that spot, and undoubtedly the water is transmuted in earth, so that a hill results because of it. The earth is a hard [material] which does not resemble the water and the air, so that some of its parts raise with respect to others. Indeed, it removes the variation from itself and it is shaped in the circularity, as that is [also] in [the case] of the water and the air, [but] it declines from the raised [part] of it to the lowered one, so that it uncovers some spots to the air. This is that which the divine providence requires, since it is inevitable that the composite, noble animals have [their] nourishment from the air, for the continuation of their spirit. It is inevitable that the earthiness is excessive for them, so that they are solidly established. It has been inevitable, then, that the earth was uncovered [and exposed] to the air in some spots, for the existence of the noble animals to be perfected.

[§362]

[AIR]

As for the air, it also has four layers. [(a)] The layer which [immediately] follows the earth has wateriness in it, [coming] from the vapours which rise toward it from the contiguity of the waters, and it also has heat in it, because the earth receives the brightness from the Sun,

and thus it becomes hot, and passes on the heat to what is contiguous to it. [D338] [(b)] Above it there is a layer which is not devoid of vapourous wetness, and yet it [has] less heat, because the heat of the earth does not rise up to it due to its distance. [(c)] Above it there is a layer which is clear air, because the vapour and the heat reflected by the earth do not rise up to it. [(d)] Above it there is a smoky layer, because the smokes [coming] from the earth rise up in the air and tend to the world of the aether, I mean of the fire, so that it is as if they are propagated in the superior surface of the air until they ascend so [much] that they burn.

[§363]

[FIRE]

As for the fire, it is one burning layer, which has no brightness, but rather it is like the air, or finer than it. If it had a colour, it would prevent the sight of the stars during the night, and it would have a brightness like the ablaze fires have. The colour of the lamp and its brightness only result from the clinging of the clear fire to the dark smoke, so that that colour and brightness result from a complex [of factors]. Otherwise, indeed, the clear fire would have no colour. Where the fire strengthens itself in the lamp, as a matter of fact, it has no colour, so that it is believed that it is like the empty hole, which has no[thing] in it but void, or air. The fire in its true nature is only that, and when a colour results for it, it is for its being adulterated by means of the smoke. In truth, indeed, that is only the colour of the burning oil, not the colour of the fire, or the colour of the burning wood, while the fire is only like the air: it has no colour and no brightness because it is diaphanous, due to the fact that it is burning air.

[§364]

[D339] [(3)]

[THIRD SPECULATION. METEOROLOGICAL PHENOMENA
ORIGINATING FROM THE VAPOUR]

[(3)] The third speculation is about what is generated in the atmosphere from the matter of the vapour. It is not concealed that the Sun, when it heats up the earth by the mediation of the brightness, volatilizes a vapour from the wet, and a smoke from the dry, as we witness. From what of the two is retained in the interior of the earth, the minerals are generated, while from what of them escapes and ascends in the air [come] manifold matters, which it is inevitable that we mention.

As for that which is generated from the matter of the vapour, it is the clouds and the rain, the snow and the hail, the rainbow, the halo, and so forth.

[§365]

[CLOUDS]

Whenever something that thickens and coagulates by virtue of the cold rises from the hot

layer of the air up to the cold one, it becomes clouds, because the cold has a quicker influence on the thickening of the hot vapour in the air, and that for the fineness of the vapour due to the heat. Don't you see that, when the winter arrives and the heat in the bath is strengthened, the air in the bath darkens and the vapour thickens like the clouds? Hence, the water is left in the sun during the afternoon for refining [it] thanks to the heat of the Sun, whenever its cooling down is wanted by means of the northern wind during the night. Likewise, when cold and hot water are poured on the earth during winter, the hot one freezes more quickly than the cold one. The matching of that is in him who performs the ritual ablutions with hot water in the cold countries: it, indeed, freezes instantly on his hair, while the cold one does not [behave] like this.

[§366]

[D340] [MINERALS]

These vapours only ascend from the interior of the earth when [some] of the heat of the Sun penetrates in them. However, they break through and strengthen according to the exit from the pores of the earth, with the exception of what falls under the hard mountains. Indeed, their breaking through [in that case] is prevented since the mountains, concerning them, work as an alembic which holds the vapour. Then, when they are retained within them, they become matter for the minerals.

[§367]

[RAIN, SNOW AND HAIL]

When they strengthen, they later find a breakthrough in the gorges of the mountains, a substantial quantity [of vapours] rises from it, and then it differentiates. [(a)] If it is weak, the heat of the Sun dissipates it in the mountains, and transforms it in air. Hence, it is rare that clouds gather from it in the day of summer, while it is more common that they gather in the night and in winter. [(b)] If, [by contrast,] it is strong, or the heat of the Sun is weak, or the two matters are gathered, the Sun does not influence it, and then it gathers. Sometimes the wind as well is specifically required for their union, for the fact that it pushes them toward one another, until they blend into one another.

[(b.1)] Then, whenever [the clouds] end up in the cold layer, they thicken and return water, they flock and are called «rain», [just] like the vapour ascends from the cooking pot, and then it ends up on its cover as soon as it encounters the slightest coldness upon it.

[(b.2)] If, then, an intense cold reaches [the clouds] before they gather and become big drops, they freeze and their parts separate and descend like carded cotton, and they are called «snow».

[D341] [(b.3)] If, [by contrast,] a coldness does not reach them, so that they gather in drops, later a heat would reach them from the side, so that their coldness would be defeated up to their internal [parts], and the cold of the atmosphere, which was dispersed in it, would be [then] entirely devoted to them, and [thus] they would coagulate and be called, in that moment, «hail». Hence, there is no hail but in autumn and spring, since the coldness gathers in their internal [parts] because a heat surrounds what is in their external [parts].

[§368]

[RAINBOW]

Whenever the air becomes wet by virtue of the rain, a wetness, with the slightest polishing, becomes like the mirror, so that the one who is facing it, when the Sun is behind him, sees the Sun in the air as he sees the Sun in the mirror when he stands opposite to it with [the mirror]. That brightness combines with the wet vapour, so that from it a rainbow, which has three colours, is generated. Sometimes there is not the middle colour and it is round, so that the distance of the parts of the mirror from the Sun is one [and the same]. Indeed, the mirror only shows the form when it is in a proper relationship of seeing and seen, and that is examined in the science of optics. The circle [however] is not complete, since if it were complete, then the half of it would fall under the earth. Indeed, the Sun is in the back of the observer, as the pole for that circle, and it raises from the earth with a close raising. If it is before noon, the rainbow is seen in the west, while if it is after [noon] it is seen in the east. If the Sun is in the middle of the sky, it is not possible to see but a small bow, in the winter, if [ever] it happens.

[§369]

[HALO]

As for the halo, and namely the circle surrounding the Moon, it [comes] as well from the like of this cause. Indeed, the air intermediate between the sight and the Moon is polished [and] wet, so that the Moon is seen in a part of it, which is the part within which the Moon would be seen, if there were [D342] a mirror. Moreover, the thing which is seen in a mirror from a spot – if there were many mirrors surrounding the sight, and they were subject according to that relation –, [that] thing, then, would be seen in each one of the mirrors. When then the mirrors form an uninterrupted sequence, it is seen entirely, and then undoubtedly a circle is seen.

As for its middle, it is only seen as dark, because the intermediate vapour is fine. When, then, it gets close to the bright [body], it is effaced and becomes invisible, while when it gets far from it it becomes visible. It is not like the tiny particle which is seen in the Sun and not in the shade, but rather it is like the stars which are concealed during the day, and appear during the night. Hence, then, in the middle of the circles one sees as if it were an empty [space] from the clouds. This circle sometimes results from the mere coldness of the air, even if there has not been rain, since it results in the air by virtue of the slightest wetness, [provided that] there has not been a dust cloud, nor smoke, which prevent the polishing of that wetness.

[§370]

[(4)]

[FOURTH SPECULATION. METEOROLOGICAL PHENOMENA
ORIGINATING FROM THE SMOKE]

[(4)] The fourth speculation is about that which is generated from the matter of the smoke, namely the wind, the lightnings, the shooting stars, the comets, the thunder, and the flash.

When, then, the smoke ascends, it rises from the middle of the vapour, because it is more inclined to the superior direction, and stronger in movement than the vapour. [(i)] If then the cold strikes it in its rising, it gets heavy, it thickens, and it sinks, struggling at once against the air and moving the air with violence, like the setting into motion that a great fan would [provide] to the air. The wind, then, results from that, since it is an expression referring to the moving air.

[(ii)] If, [by contrast,] the cold has not struck it, it ascends up to the aether and there the fire is kindled, so that a fire that can be witnessed results from it. Sometimes it elongates commensurate with the length of the smoke, and then it is called «falling star».

[§371]

Moreover, [(a)] if [the smoke] is fine, [D343] it is either [(a.1)] [such] that it transmutes itself into sheer fire or [(a.2)] [such that] it is extinguished, so that it is not seen – it is effaced, indeed, because the fire extracts it from its being visible. Thus, either because it is [(a.1)] [such] that it becomes sheer fire, that is, pure fire, or else [because] [(a.2)] it is extinguished by means of the cold in its rising, so that it transmutes itself into air, it becomes then diaphanous. If then what it encounters is the cold that has an influence over the extinction, it transforms itself into air [(a.2)]; if rather the fire is strong, it will have an influence over the clearing from the tarnishing of the smoke, and then all of it will transform into fire [(a.1)], since it will not cool down later.

[(b)] If [rather] the smoke is thick and [(b.1)] it kindles, and yet it does not transform itself according to the closeness, that remains for some time, so that it is seen that it is a comet. Sometimes it rotates with the sphere, since the fire clings with [its] parts to the parts of the concave of the sphere, so that [the sphere] rotates in partnership with [the parts of the fire], and then it [also] rotates around the smoke resulting in its domain.

[(b.2)] If, [by contrast, the thick smoke] does not kindle, yet it is like the charcoal in which the kindled fire was extinguished, then [in that case] it will be seen as red, so that red marks will appear from it in the atmosphere. The redness will however quit part of it, so that [this] will be like the charcoal whose fire was effaced, and then it will be seen as a dark hole in the air.

[§372]

Moreover, if something of the smoke remains within the clouds and cools down, it becomes a wind in the middle of the clouds. It then moves in them with violence, and from its movement a sound called «thunder» results.

If its movement and its setting into motion strengthen, the air and the smoke are kindled together from the heat of the atmosphere, and then they become a bright fire, which is then called «flash».

If the kindled [material] is thick, heavy and burning, it will dart off toward the earth by virtue of the collisions of the clouds, and thus it is called «lightning». Yet it is a fine fire which penetrates in the clothes and the loose things, while it collides with the hard things

like the iron and the gold, and actually melts them, so that the gold melts in the bag, although the bag does not burn; [D344] and it melts the gold of the gilded [thing], although the thing [itself] does not burn.

A flash cannot be devoid of a thunder, since the two [come] together from the movement. However, the sight is sharper in perceiving, so that sometimes the flash is seen when the sound of the thunder has not yet ended up to the hearing, because the sight perceives without time, while the hearing does not perceive until the air which is between the hearer and the heard has not been set into motion, in order for its influence to end up in the hearing. Likewise, when the fire of the fuller is observed from a distance, his movement is seen before hearing his sound, [after] a certain time.

[§373]

[(5)]

[FIFTH SPECULATION. MINERALS]

[(5)] The fifth speculation is about the minerals. They are generated only from the vapour and the smoke which are concealed in the earth. As a matter of fact they mix up, and then they are predisposed, because of their differentiated blends, to the receptions of different forms, which flow upon them from the bestower of the forms.

If then the smoke prevails, what results from it will be like the sal ammoniac and the sulfur, while sometimes the vapour prevails in some of them, so that they become as clear water, from which, coagulated and petrified, [there come] the corundum, the quartz, and so forth. The melting of this species [of minerals] with the fire is difficult, and they [cannot] be forged under the hammers, because the forging and the melting are by virtue of a sticky wetness which is called oleosity, but the wetness which was in them is depleted, since they are frozen and coagulated.

[§374]

As for that which melts and [can] be forged, as the gold, the silver, the copper and the lead, it is that from which the mixture of the smoke with the vapour is consolidated, [as well as] the paucity of the heat concealed in their substance. Wetness and oleosity remain in them, and that for the abundance of the influence of its heat on its wetness, so that by means of it its coldness is broken, the airness mixes up with it, and something of the earthness, together with the airness, remains in it.

This [kind of minerals], then, melts in the fire, because the sulfur which is in it determines the fire to melting, so that it liquefies the wetness, and it tends to ascend. The earthness clinging to it however draws them, so that it results, from the ascension of that and the attraction of this, a circular movement whose parts cannot be separated, for the solidity of their mixture.

If the mixture is weak, the vapour ascends, disjoining from the heavy [body] drawing it [D345] downwards. When then the fire is abundant on it, it diminishes for the disjoining of the vapour, thus becoming limescale, as the lead.

The farther from the coagulation is the oleosity within it, the more susceptible is [the metal] to be forged under the hammers.

[§375]

When the sulfur and the arsenic are thrown on that which is coagulated and is not susceptible of being melt, and both are mingled with it and penetrate into it, the melting hastens to it. [This happens] for instance [with] the iron filings, the talc and the zinc.

All that which the coldness coagulates, the heat softens, like the wax. All that which the hot coagulates, the cold melts, like the salt. Indeed, it coagulates for the hot with a participation of the dryness of the earth, because the heat determines the wetness and the dryness together, and increases both of them. All that in which the waterness prevails coagulates by virtue of the coldness, and all that in which the earthness prevails coagulates by virtue of the heat. Then, when earthness and wetness are in the thing, given that the earthness is stronger in correspondence with the heat, [the thing] coagulates for the cold, and its melting is difficult, as the iron. The detailed analysis of this would however call for a [certain] prolixity.

The discipline of the alchemy and many [other] disciplines apart from it branch out from [this].

[§376]

[IV]

[D346] FOURTH TREATISE
ON THE VEGETATIVE, ANIMAL, AND HUMAN SOUL

[I]

SPEECH ON THE VEGETATIVE SOUL

As the mixture of the smoke and the vapour necessitates a predisposition to the reception of the form of the minerals, likewise a more perfect mixture than that occurs sometimes to the elements, [a mixture which is] better, closer to the balance, and farther [removed] from the permanence of the contrariety about the mixed qualities. They are thus predisposed to the reception of another form, nobler than the form of the inorganic bodies, so that the growth which is not in the inorganic bodies results in them. That form is called «vegetative soul» and it is that which is in the herbs and in the trees.

This soul has three operations: [(1)] the first one of them is the nutrition, by virtue of a nutritive faculty; [(2)] the second one is the expansion, by virtue of a faculty of growth; [(3)] and the third one is the generation, by virtue of a generative faculty.

[§377]

[(1)] «Nourishment» is an expression referring to a body which is similar to the nourished body in potency, not in act. When it reaches the nourishing, the nutritive faculty – which is a faculty transforming the nourishment – has an influence on it, it takes off its form and clothes it with the form of the nourished, so that [the nourishment] spreads in its parts, it hangs on it, and takes the role of that which was dissolved among its parts.

[(2)] As for «growth», it is an expression referring to the increase of the body by virtue of the nourishment in its three dimensions, according to the symmetry appropriate for the growing [body], until it ends up at the end of the development, with the variation that is appropriate to it – I mean, relatively to what decreases, swells, gets round and elongates among the parts of the growing [body]. The potency to which this operation is proper is called «[faculty] of the growth». Actually, these faculties are not perceived by means of the sense, but there is sign of them by means of [their] operation, since it is inevitable that every operation has an operating agent, whence the name of «operation» is derived for it.

[D347] [(3)] The generative faculty is that which disjoins from a body a part similar to it in potency, in order to predispose it to the reception of the form of the like of it, like the sperm of the animals, and the seed of the cereals.

[§378]

[(1)] The nutritive faculty does not cease to be active until the end of life, and yet it weakens in its end for its incapacity in replacing what was dissolved, due to its weakness in transforming the body of the nourishment.

[(2)] As for the faculty of the growth, it acts until the moment of the maturity and the perfection of the development, while later it comes to a standstill. When then the growing [faculty] has come to a standstill with regard to the increase in the measure – not with regard to the time –, [(3)] the generative [faculty] arises and strengthens.

[§379]

[II]

SPEECH ON THE ANIMAL SOUL

If a blend closer to the balance, and better than what is before it, occurs, it predisposes to the reception of the animal soul, which is more perfect than the vegetative one, since in it there are the faculties of the vegetative, and the addition of two faculties.

[(1)] One of the two is the perceptive [faculty], and [(2)] the other is the moving [faculty], since «animal» is an expression referring to that which perceives and moves by virtue of the will. These two potencies are in one [and the same] soul and they come back to one [and the same] root. Hence, the operation of one of them is conjoined to the other.

As a matter of fact, whenever the perception results, a desire is provoked, so that the movement is generated from it, either toward the research [(2.1)], or toward the flight [(2.2)]. It is inevitable that the moving faculty [comes] from the will, and there is no will but from the desire.

[§380]

The striving is either toward the research, and [that] is needed for the research of the suitable [thing] thanks to which there is the permanence of the individual, [D348] like the nourishment, or the permanence of the species, like the sexual intercourse – and this species of striving is called «desiderative faculty» [(2.1)] –; or it is toward the flight and the repulsion, and [that] is needed for the repulsion of that which is incompatible and contrary to the continuation of the permanence, and is called «irascible faculty» [(2.2)].

«Fear» is an expression referring to the weakness of the irascible faculty [(2.2)], while «hatred» refers to the weakness of the desiderative faculty [(2.1)]. The two are moving with respect to the moving faculty, spread in the muscles and the nerves, according to the way of the dispatching and of the incitation to the practice of the movement. Then, the faculty which is in the muscles carries out the orders, while the striving [faculty] dispatches [and] orders.

[§381]

[(1)] As for the perceptive faculty, it subdivides itself into [(1.1)] external, as the five senses, and [(1.2)] internal, as [(1.2.2)] the imaginative faculty, [(1.2.4)] the estimative [faculty], [(1.2.5)] the memorative [faculty] and [(1.2.3)] the cogitative [faculty], as the verification about them will follow.

If the animal did not have an internal faculty apart from the senses, then when it conceives for instance the act of eating something which it has found repugnant one time, it would not abstain from it again as long as it has not tasted it another time by eating, since

it had eaten in the first place because it did not know that it was sour. Then, if that form did not remain in its reflection, it would not know, when it should see it again, that it is sour. That reflection is a matter which is behind the sight, the olfaction, and all the other senses.

[§382]

If then these five senses did not bring what they perceive among the forms to one [single] other faculty unifying all [of them], which is called [(1.2.1)] «common sense», then when we have seen something yellow, we would not perceive that it is sweet until we have not found the perception of that tasted in the first place, I mean of the honey. The eye, indeed, does not perceive the sweetness, while the taste does not perceive the yellowness. Then, it is inevitable that there is [something] judging, within which the two matters are gathered, in order for it to judge that the yellow is sweet. This judgment does not belong to the taste, nor to the eye, but it only belongs to another internal faculty, which is not [D349] one of the external senses.

If an internal faculty did not exist, the sheep would not perceive the enmity of the wolf, [such that] it flees from it, because the enmity cannot be seen.

These are the places where the faculties meet. It is [now] inevitable to analyse them in detail.

[§383]

[D350]

[II.1]

SPEECH ON THE VERIFICATION OF THE EXTERNAL PERCEPTIONS

[(1.1)] As for the touch, it is external, and it is a faculty unrolled in the entire epidermis and flesh, by means of which the heat and the coldness, the wetness and the dryness, the hardness and the softness, the roughness and the smoothness, the lightness and the heaviness are perceived. This faculty reaches the parts of the flesh and the skin by the mediation of a fine body, as the carrier for it, which is called «spirit» and which streams in the network of the nerves. It reaches [all the parts of the body] by the mediation of the nerves. That fine body only benefits of that power from the brain and the heart, as will be explained.

As long as the quality of the epidermis has not transformed in the resemblance of the perceived [thing], as for the coldness, the heat or the other [qualities], it will not be perceiving, and hence it will not perceive but what is colder or warmer than it. As for the equivalent to it in the quality, it has no influence on [the touch], and thus [the touch] does not perceive it.

[§384]

[(1.2)] As for the olfaction, it is a faculty [located] in two outgrowths of the brain, similar to the two nipples of the breasts. It only perceives by the mediation of a body acted upon by the odours, with which the parts of the [thing] endowed with the odour are mixed or mingled – and that is like the air and the water.

It does not follow that the parts of the [thing] endowed with the odour are mingled with the air, but rather it is not farfetched that the air is transformed and thus it receives the odour, and that it is predisposed to its reception by the bestower of forms because of the proximity to it, not due to the fact that the odour is transferred to it. Indeed, that is impossible in the accident, and we have already clarified the impossibility of the transfer of the accidents. If there were not the mingling of the parts of the odour with the parts of the air, the odour would not have spread for [various] parasangs.

The Greeks have already reported that – by virtue of the odour of the corpses which resulted from a war that had occurred among them – the vulture had travelled from an interval of two hundred parasangs to the battlefield in a region around which there were not a single vulture, and rather [D351] the vultures were at two hundred parasangs from it. And that by virtue of the potency of the senses of the birds, of the stimulation of the air, and of its reception of the odour of the corpses. As for the vapour ascending from the corpses, it is not possible that its parts spread up to that limit.

[§385]

[(1.3)] As for the hearing, it is a faculty located in a nerve spread out in the furthestmost [part] of the auditory meatus, extended on it for the extension of the skin over the [ear]drum, and it perceives the sound.

«Sound» is an expression referring to the vibration of the air by virtue of a violent movement, which results [(1.3.1)] for striking with harshness, or [(1.3.2)] for plucking out with vehemence. [(1.3.1)] If it is from a striking by means of which two bodies knock together, the air escapes with violence; [(1.3.2)] if it is from a plucking out, the air interposes between the two disjoined bodies with violence. The sound is originated in the presence of the vibration in the air, and it reaches as far as the movement of the vibration reaches. When then that movement ends up in the motionless air which is in the auditory meatus, that motionless air, adjacent to that nerve which is spread out along the furthestmost [part] of the auditory meatus, is disjoined by virtue of [the movement], so that that [same] ringing which originates in the skin of the drum originates in it, [as well]. Thus, by virtue of that ringing, the faculty located in that nerve can feel.

The movement is originated in the air as a circular wave, just like the circular wave is originated in the water when a stone is thrown in it. Indeed, little circles propagate from it, and those circles do not cease to widen and to weaken in their movement, until they are effaced. Likewise, then, [the movement] is originated in the air.

As – when there is some water in a cup, a stone is thrown in it, and a circle springs from it to the extremes of the cup which surround the water – that circle collides with them, and then it turns toward the middle, toward the point in which it had started, likewise the wave of the air, when it collides with a hard body, sometimes turns away, so that from it there [comes] the echo. By virtue of the continuous sequence of the turning and its extension by additions, there is the persistence of the sound in the tub, in the bath, and in the yelling under the mountain.

[§386]

[D352] [(1.4)] As for the taste, it is by virtue of a faculty located in the nerve spread out along the external [part] of the tongue, by the mediation of the salivary wetness, which has no flavour, spread along the surface of the tongue. As a matter of fact, it takes the flavour of [the thing] endowed with the flavour and it transforms itself in it, conjoining with that nerve, so that the faculty located in the nerve perceives it.

[§387]

[(1.5)] As for the sight, it is a faculty much-accomplishing as for the colours and the shapes, located in the cavity where the [nerves of the] two eyes intersect in the anterior [part] of the brain.

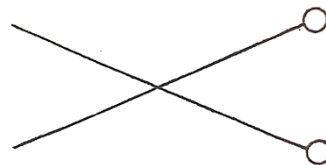
«Vision» is an expression referring to the taking of the form of the perceived [thing], I mean the impression of the like of its form in the glacial wetness of the eye, which resembles the hail and the frozen water, namely the ice.

[This wetness] is like the mirror, since when a coloured [object] is in front of it, the like of its form is impressed in it, just as the form of the man in front of the mirror impresses itself in it, by the interposition of a diaphanous body between the two, not by virtue of the fact that [(1.5.a)] something disjoins itself from the coloured [object] and extends itself up to the eye, nor by virtue of the fact that [(1.5.b)] [some] rays disjoin themselves from the eye and extend themselves up to the form [of the object], because both are impossible in the vision as well as in the mirror.

[§388]

However, the likeness of its form originates in the mirror and in the eye of the observer, and the predisposition to its resulting is by virtue of a proper opposition, with the interposition of the diaphanous. As for its [actual] resulting, it is from the bestower of the forms.

Every perception in the five senses – and rather [also] the other ones – is only an expression referring to the taking of the form of the perceived [thing]. Then, when the form results in the glacial [wetness of the eye], it pours out to the visual faculty, located in the intersection of the two nerves hollowing out and germinating in the anterior part of the brain, according to this figure.



[FIGURE 9]

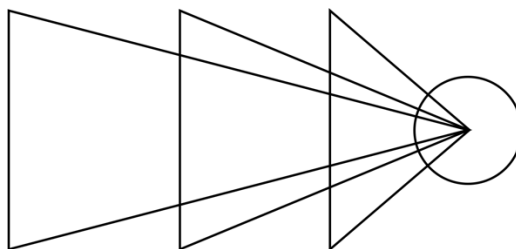
The soul, then, perceives it by the mediation of the common sense, like the exposition on [this] will follow.

If the mirror had a soul, it would perceive that which is in front of it, and the likeness of its form would result in it.

[§389]

As for the cause of the influence of the distance in the fact that the small is seen as big, it is that the glacial wetness is spherical, and the opposition to the sphere is only with the centre. Thus, when we presuppose a circular surface, like the shield, in the opposition to the sphere of the eye, the eye perceives the round surface thanks to the stimulation of the air which is between the surface and the eye, and to the stimulation of the [external] layer of the eye from [D353] the air, until it ends up in the seeing spirit. The stimulated [thing], and namely the air, is conic in shape, its basis being the surface of the perceived [object], while its vertex ends up in the seeing spirit. Its vertex is a three-dimensional angle, which is in truth the perceiver.

When then the surface of the seen [object], which is the basis of the cone, increases in distance from the eye, the cone lengthens and its angle becomes small, I mean its vertex which ends up in the pupil. The farther away is the surface of the seen [object], I mean the basis of the cone, the more the cone lengthens, and by means of its lengthening its vertex is made thin, namely the angle perceived in truth becomes smaller, until it ends in the smallness up to a limit [such] that the visual faculty is not strong [enough] for its perception, so that the seen [object] is withdrawn from the perception. This is its figure.



[FIGURE 10]

If the seen [object] were not circular, the stimulated air between it and the pupil would still be a conic shape, surrounded by sides and angles in conformity with the shape of the seen [object], and its vertex would end up in the pupil according to an angle or [more] angles. The science of that is inquired in the books whose subject-matter is the science of the optics, among the mathematics, but in this measure it is sufficient for our goal. This is what I establish in the view of Aristotle about the quality of the perception.

[§390]

As for [those] who were before him, they said: «It is inevitable that there is a conjunction between the sense and the sensed in order for the sensation to result». [D354] They [also] said: «Since it is impossible that a form disjoins itself from the visible [thing] and extends itself up to the eye, then it is inevitable that a fine body, and namely the rays, disjoins itself from the eye and it conjoins with the visible [thing], so that the vision results by its mediation». But this is impossible, since when would the eye be able to widen [enough] for bodies which stretch over the half of the world, and the half of the sphere of the sky?

[§391]

Indeed, a party among the physicians has found this repugnant. Thus, they employed artful means about it, and they said that the stimulation is originated in the air conjoined with the eye, because of the exit of the rays which travel with the eye and [because of] their combination with the rays of the air, so that they become as one thing in less than the blink of an eye. By the gathering of the two, [the air] becomes an instrument in the vision, which is also impossible for [various] respects.

[§392]

[(1.5.2.1.1)] The first one is that, if the air has become an instrument by means of which one sees, so that it produces vision as, for instance, the pupil [does], then at that time when a group of people endowed with the vision gathers, it would be necessary that the perception of the weak of sight who is with them strengthens, because – even if his [own] rays are too weak for transforming the air –, however these manifold rays have combined with the air, so that they [should] necessitate that the weak had recourse to the abundance of the rays of the vision, just as he has recourse to the potency of the brightness of the lamp.

If the visible form did not appear in the air, but rather in the eye, and yet it were conjoined to [the form] by the mediation of the air, then which need would there be for the exit of the rays, since the air is conjoined with the body of the eye, and the visible is conjoined with the air? Indeed, it is necessary that the air connected with the form without rays.

[(1.5.2.1.2)] The second respect invalidates the root [itself] of the rays, since, about the rays, one of the two holds true: [(a)] either they are an accident, so that the transfer is impossible about them, or [(b)] [they are] a body, so that an impossible follows from it, because [(b.1)] if they did not remain conjoined with the eye by extending themselves like lines, then that which disjoins itself from them would not influence the eye. [(b.2)] If, [by contrast,] it remained conjoined with it, it would then be necessary [(b.2.1)] [either] that it was scattered and that it perceived the thing as scattered, [as well]; [(b.2.2)] or it would be necessary that it were like an extended line, so that, when a wind fell down, it would make it incline toward another spot, and exclude it from the straightness. Then, it would necessitate to see what is not according to the opposition to it by virtue of the inclination of the wind about it, or else by virtue of the interruption of its conjunction. Thus, the vision would be prevented.

[(1.5.2.1.3)] The third [respect] is that, if something inclining to the visible disjoined itself from the eye, then the visible would be perceived [D355] as close and distant according to one and the same respect, without variation in the measure, because the encountered [object] is conformable to the encountering [one] in the two states, whenever an opposition was not surmised in the like of a cone, as it was said before.

It is not possible to say that the rays fall on one [part] of it, when it is far, because it sees all the seen [objects] as distant or close, and it may see more in some states [than in others].

[§393]

These are, then, the perceptions. Then, the proper perceived [objects] of them are the colours [(a.1.5)], the odours [(a.1.1.2)], the flavours [(a.1.4)], the sounds [(a.1.3)] and that which is perceived with the touch [(a.1.1)]. By the mediation of these things, five other matters are perceived, and namely [(b.1)] the smallness and the bigness, [(b.2)] the distance and the closeness, [(b.3)] the number of the things and [(b.4)] their shape – for instance their roundness and their squaredness –, and [(b.5)] the movement and the rest. The access that error gains in these appurtenances is greater than its access in those principles.

[§394]

[(II.2)]

SPEECH ON THE INTERNAL SENSES

[D356] [(2)] Know that the internal senses are also five: [(2.1)] the common sense, [(2.2)] the faculty of forms, [(2.3)] the imaginative faculty, [(2.4)] the estimative faculty and [(2.5)] the memorative faculty.

[(2.1)] As for the common sense, it is a sensing [faculty] from which those senses spread, to which their influence comes back, and in which they gather, as if it were a collector for them. Indeed, if we did not have that which gathers in it the whiteness and the sound, we could not know that that white is that [same] notion whose sound we have heard, because the union between colour and sound does not belong to the eye, nor [does it belong] to the ear.

[§395]

[(2.2)] As for «faculty of the forms», it is an expression referring to the retentive [faculty] of that which is impressed in the common sense, because the retention is different than the impression and the reception, and hence the water receives the form and the shape, which are impressed in it, but it does not retain them. The wax receives the shape by the faculty of the softness, but retains it by the faculty of the dryness.

Whatever harm happens to the anterior [part] of the brain suppresses the retaining of the images and thus the oblivion of the forms results.

[§396]

[(2.4)] As for the estimative [faculty], it perceives in the sensed that which is not sensed, like the sheep perceives the enmity of the wolf, since that is not by virtue of the eye, but rather by virtue of another faculty, which is for the beasts like the intellect for the man.

[§397]

[(2.5)] As for the memorative [faculty], it is an expression referring to that which retains these notions which the estimative has perceived. Thus, it is the coffer of the notions, [D357] just as the [faculty] of the forms, retentive for the forms impressed in the common sense, is the coffer of the forms. These two, I mean the estimative and the memorative, are in the posterior [part] of the brain, while the common [sense] and the formative are in the anterior [part] of it.

[§398]

[(2.3)] As for the imaginative, it is a faculty in the middle of the brain, whose business is setting into motion, not the perception, I mean that it inquires about that which is in the coffer of the forms, and about that which is in the coffer of the notions. Indeed, it is centred between the two and operates in them by means of the composition and the division alone. As a matter of fact, it conceives [for instance] a man who flies, and one single individual half of which is man and half of which is horse, and equivalents of that. However, it cannot contrive any form without a preceding example, but rather it composes that which was established in the imagination as separate, or else it divides the united.

[§399]

This [faculty] is called «cogitative» in the man. The thinking [part] in truth is the intellect, and this [faculty] is only its instrument in thought, not that it is the thinking [part in itself]. Indeed, just as the quiddities of the causes which are those by means of which the eye is moved in the hole from all sides, in order for the vision and the inquiry about the hidden [things] to be facilitated by means of them, likewise are [also] the quiddities of the causes by means of which the inquiry about the notions located in the two coffers stems.

[§400]

The nature of this faculty, then, is the movement, so that it does not abate, not even in the condition of the sleep. From its nature, then, there comes the quickness of the transfer from the thing to what corresponds to it either for the resemblance, or for the contrariety, or for the fact that it was connected with it in the casual occurring at the time of its resulting in the imagination. From its nature the assimilation and the exemplification [come as well], so that when your intellect divides the thing in divisions, it assimilates it to the tree endowed with branches, while if it arranges something according to ranks, it assimilates it to the stairs and the ladders, and by means of [these images] it is remembered what was forgotten. Indeed, it does not cease to inquire about the forms which are in the imagination,

and it transfers from a form to a form close to it, until it stumbles upon the form from which it perceives the forgotten notion, so that it remembers by its mediation what it had forgotten.

The relation of that form to the presence of what is simultaneous to it and depends on it is [like] the relation of the middle term to the conclusion, since by means of its presence it is predisposed to the reception of the conclusion.

[§401]

These, then, are the external and internal faculties, [D358] which, in their complex, are instruments. Indeed, the movement is not but for the procurement of advantages and for the repulsion of the damages, and the perceptive [faculties] are not but spies by means of which the news are hunted. The formative [faculty] and the memorative are [meant] to retain them, and the imaginative is [meant] for their fetching after [their] absence.

It is inevitable, then, that there is a principle for [the sake of] which all these [faculties] are an instrument, in which they gather, to which they are subservient, and by which they are caused.

One refers to that principle with [the term] «soul», and it is not the body, since every limb of the body is also an instrument, which is only prepared for a goal which gets back [eventually] to the soul. Therefore, it is inevitable that it is of a soul that these faculties and limbs are instruments.

[§402]

[(III)]

SPEECH ON THE HUMAN SOUL

[D359] When the blend of the elements is of a better and more perfect balance, it reaches to the utmost degree, of which it is not possible that there is [anything] more perfect, finer and better, like the sperm of the man, whose ripening results in the body of the man from foods which are finer than the foods of the animal and than the foods of the plants, and from faculties and minerals which are better than the faculties and the minerals of them both. Then, [this blend] is predisposed to the reception from the bestower of the forms of a form which is the best of the forms; and that form is the soul of the man.

The human soul has two faculties: [(1)] one of the two is the theoretical [faculty], [(2)] and the other is the practical [faculty].

[§403]

[(1)] The knowing faculty subdivides itself into [(1.1)] the speculative faculty, like the knowledge of the fact that God Most High is unique, and that the world has an origin in time, and [(1.2)] the faculty of practical reasoning, and namely that which produces a knowledge which depends on our actions – for instance, the knowledge of the fact that injustice is [something] shameful, which ought not to be done. This knowledge is sometimes

universal, as [in the case] we have mentioned, and sometimes particular – for instance our saying: «Zayd ought not to commit injustice».

[§404]

[(2)] The practical faculty is that which is provoked by the indication of the knowing faculty, which is speculative and dependent on the action. The practical [faculty] is called «practical intellect». However, it is called «intellect» only by ambiguity, since it actually has no perception, and it only has the movement alone – and yet, in conformity to what the intellect requires. Just as the animal moving faculty is not [meant] but for a research or a flight, likewise, then, is the practical faculty in the man, except that its pursuit is intellectual, which is better. The reward is conjoined with what is after it, and the avail is in the [remote] outcome, whereas if [something] is painful on the spot, the animal desire [immediately] stampedes away from it.

[§405]

[D360] The human soul has two faces: [(a)] a face toward the superior side, which is the lofty congregation, since she derives the knowledges from it – and only the speculative faculty of the human soul is in consideration of this direction, and its truth is that it is perpetually receiving –; [(b)] and a face toward the inferior side, which is the direction of the government of the body – and only the practical faculty is in consideration of this direction, and for the sake of the body.

The explanation of the human intellectual faculty is not possible but by mentioning the true nature of the perceptions and of their division, in order to clarify that this faculty is external and supervenient with respect to them.

[§406]

We will say, then, [that] we have already mentioned the fact that the notion of «perception» is the taking of the form of the perceived [thing], but this taking is according to [various] degrees.

The first one is the perception of the sight, because it perceives the man for example as riding, with its concomitants and its appurtenances, and it does not perceive him as abstract, but rather it perceives with him a proper colour, a proper position, and a proper measure. If these appurtenances were not their own selves, despite their non-existence he would [still] be a man, because he is not a man by virtue of them, but rather they are extraneous accidents which are attached to the man, and the sight has not the faculty to abstract the humanity from the extraneous appendages.

[§407]

Later, a form corresponding to his form in the vision results from [the seen man] in the imagination, I mean that his form in the imagination is also with the position, the measure, the colour and all his extraneous appendages, just as it were in the vision, without abstraction from the appendages at all. They do not differ from one another but in one matter,

namely that if the seen body were non-existent or absent, the vision would be suppressed, while its form remaining in the imagination – I mean in the faculty which is called formative – would not be suppressed. Then, it is as if it became a little farther removed from the matter, inasmuch as its existence and its presence have not been entrusted to the matter, as, [by contrast,] the vision is entrusted to.

When a form, with its measure, its position, its extremes and its middle, and all its parts, results in the imagination, it is not possible for it to result unless in a bodily instrument, because the parts of the [thing] determined by means of measure and extremes are not distinguished but in a body, just like the form is not distinguished but in a body which is a mirror, or water. These two faculties, then – I mean the sight and the imagination – are bodily.

[§408]

[D361] As for «estimative», it is an expression referring to a faculty which perceives non-sensible notions within the sensible [ones], for instance the enmity of the cat for the mouse and of the sheep for the wolf, or the suitability of the ewe for her lamb. It is also dependent on the matter, because, should the non-existence of the perception of the form of the wolf in the sense be surmised, the perception of this would not be conceivable. Thus, this faculty as well is corporeal, sticking to matters extraneous from the true nature of the perceived [thing], supervenient with respect to the quiddity, not abstracted from it.

It is known that we perceive the humanity in its definition and in its true nature, or as abstract, inasmuch as it is not connected to anything extraneous [with respect to it]. Indeed, if we did not perceive that as abstract, we could not judge, [based] on this, the fact that the measure, the colour, and the position are all extraneous with respect to it [in itself], being for it accidents which do not fall within its quiddity. Therefore, apart from it, there is in us a faculty which perceives the quiddity, not connected to anything among these extraneous matters, and rather abstracted from everything with the exception of the humanity [itself]. We perceive the absolute black as abstract from everything with the exception of the blackness. Likewise, then, for all the notions.

[§409]

This faculty is called «intellect», given that the imagination does not have the power to perceive these abstract [things]. Indeed, we do not have the power to imagine a man unless according to a distance or a closeness with respect to us, or according to a measure in smallness or bigness, either sitting or standing, either naked or dressed. These matters are extraneous from the quiddity of the man. Then, the imagination has not this perception, nor does the vision have it, and yet it results in us. Therefore, it is by virtue of another faculty, that faculty being our researched [object], called «intellect». By virtue of this faculty, man hunts the knowledge of the ignored [things], by the mediation of the middle term in the judgments, and by the mediation of the definition and the description in the conceptions.

[§410]

The perceptions resulting in it are universal, because they are abstracted. Then, their relation to the single particulars of the notion is one [and the same] relation. That thing is not in the remaining animals, with the exception of the man. Hence, they all [act] according to one [and the same] fashion, in their ignorance of the kind of artifice [useful] to be rescued from that which troubles [D362] them, despite the differentiation of their species. They do not have but the measure of their need, because they favour [something], by nature, according to the way of the instinct and of the subjugation. Therefore, the property of the man, in which the animals do not participate with him, is the conception and the judgment about the universals. The discovery of what is ignored by means of the known belongs to him, in the disciplines and in the other [activities]. These two faculties, together with all the remaining faculties, are in one [and the same] soul, as it was said before.

[§411]

Moreover, we say that the intellectual faculty has [various] degrees, and that it has [various] names in conformity with them.

The first degree, then, is that in which none of the intelligibles in act is contained, but rather it does not have but the predisposition and the reception, as in the youth. At that time, his intellect is called [(1)] material intellect and intellect in potency.

Later, after that, two species of intelligible forms appear in it. One of the two is the species of the primary, true [propositions], whose nature requires that they are impressed in it without a [proper] acquisition, and rather it receives them by virtue of the hearing, without speculation, as we have clarified. The second one is the species of the famous [things], which are clearer in the disciplines and the arts and techniques. When then that has appeared in it, it is called [(2)] intellect *in habitu*, namely, it has already taken over the acquisition of the speculative intelligibles by a syllogism.

If then, after that, something of the speculative intelligibles has resulted in it by virtue of its acquisition of them, it is called [(3)] intellect in actuality, like the knowing [man] unmindful of the knowledges, [and yet] having power over them whenever he wants.

If then the form of the known is present in his mind, that form is called [(4)] acquired intellect, namely knowledge acquired from a cause among the divine causes, which cause is called «angel» or [(5)] «agent intellect».

It is not permitted that these perceptions are by virtue of a bodily instrument, but rather the perceiver of these universal intelligibles is a self-subsisting substance, which is not a body nor is impressed in a body, and which does not perish with the perishing of the body, but rather remains alive forever and ever, either feeling pleasure or suffering pain. That substance is the soul.

[§412]

Ten things are a sign of the fact that the perception of the intellect is without a body. Seven are strong marks, persuasive by virtue of their non-existence [in the case of intellect], [D363] while three are decisive demonstrations.

[(1)] The first mark is that the senses perceiving by means of a bodily instrument, when the [ir] instrument is injured by some harm, then will either not perceive [anymore], or their perception will weaken, or they will commit a mistake concerning it.

[(2)] The second one is that they do not perceive their [own] instruments, since the sight does not perceive itself, nor its instrument.

[(3)] The third one is that, should a certain quality be in them, they would not perceive it, and only something different from them would always perceive it, to the point that, if the ill temperament – when it has become deeply ingrained in the body – is [like] a [single] substance with its instrument, like [in the case of] the hectic fever, then the faculty of the touch would not perceive that.

[(4)] The fourth one is the fact that they do not perceive themselves, since if the estimation wanted to estimate itself – since [this] is [the role of] the estimation –, it is not possible for it [to do so].

[§413]

[(5)] The fifth one is that when they have perceived something strong, the perception of the weak after it and immediately following it is not possible for them, but rather [only] after some time. Indeed, the secret sound is not heard immediately following the frightful sound, nor [is] the [thing] endowed with a weak colour [seen] immediately following the manifest brightness, nor [is] the flavour if the sweetness [tasted] immediately following the intense sweetness, because when they are acted upon by their intense perceived [objects], they do not receive quickly the stimulation of their weak perceived [objects], for their receptacle being occupied with that intense perceived and [for] their combination with it.

[(6)] The sixth one is that if an intense perceived [object] took them by surprise, the instruments would be weakened and corrupted. Sometimes, indeed, the eye is corrupted due to the potency of the rays, and the hearing is corrupted due to the frightful sound.

[(7)] The seventh one is that the bodily faculties weaken after the [age] of forty, and that [happens] in concomitance with the weakening of the temperament of the body.

All this that we have mentioned is reversed for what concerns the intellectual faculty, since it perceives itself, it perceives its [own] perception of itself, and it [also] perceives what has been surmised to be its instrument, like the heart and the brain. [Moreover,] it perceives the weak after the intense, and the concealed after the plain, [D364] and it might strengthen after the [age of] forty in most matters.

[§414]

If [someone objected] by saying: «The intellectual faculty as well sometimes falls short of perceiving due to the illness which appears in the temperament of the body», one [should] answer: «Its falling short or its inactivity in concomitance with the hindering of its instruments are not a sign of the fact that it has not an act [on its own], but rather it is permitted that the corruption of the instrument has an influence on it in two respects.

[(i)] One of the two is that, when [the instruments] are corrupted, the soul is occupied with governing it, and [thus] she turns away from the direction of the intelligibles. Indeed, when the soul is occupied with the fear, she does not perceive the pleasure; when she is

occupied with the anger, she does not perceive the pain; and when she is occupied with an intelligible kind, she does not arrive to the state of occupying herself with something other than it. Indeed, she [always] occupies herself with a thing as opposed to [another] thing. It is not farfetched, then, that the weakening of the instrument occupies her, given the need of its restoration.

[(ii)] The second respect is the fact that sometimes the [intellectual] faculty needs the bodily instrument initially, in order to complete [then] its action on its own, after its resulting, [just] like the one who tends to a [certain] country needs for instance a riding animal, whereas – when he has reached [his destination] – he can do without it. Therefore, one single action without an instrument is a sign of the fact that it has an action in itself».

The inactivity of the action with the inactivity of the instrument can be tolerated in the two respects which we have mentioned, but that is not a proof for it.

[§415]

[(8)] The eighth one is a demonstration of the fact that it is not permitted that the abstract universal knowledge inheres in a divisible body, because the universal knowledge is not subdivided, while the body is subdivided, and that which is not subdivided does not reside in that which is subdivided; but the knowledge is not subdivided, therefore the knowledge does not inhere in a body.

It is not possible that there is any controversy about these premises, because the single part which is not partitioned has already been invalidated. Then, there is no knowledge in it; [D365] but if [the knowledge] were in a divisible body, it would subdivide itself in it, as the heat and the colour [do]. Thus, when the body is divided, the knowledge of the ignored would subdivide itself, according to the claim of some. [However,] the one knowledge of the one known [thing] does not subdivide itself, since it has no parts at all. Thus, it is impossible that it resides in the body.

[§416]

[(8.1)] If [someone objected] by saying: «Why did you say that the one knowledge does not subdivide itself?», one [should] answer: «The abstract knowledge of the intelligible subdivides itself into [(8.1.1)] that in which it is not possible to estimate a multiplicity and the reception of a division, as the abstract knowledge of the existence and as the knowledge of the unity – since the known [here] has no parts, and thus the knowledge, which is a likeness corresponding to it, has no parts [as well] –, and [(8.1.2)] that in which a multiplicity [can] be estimated, as [(8.1.2.1)] the knowledge of the ten, and [(8.1.2.2)] the knowledge of the man, who is constituted by «animal» and «rational», which are his genus and his differentia.

[(8.1.2.1)] Sometimes it is believed that this species [of knowledge] has parts, since someone says: «The ten has parts, and the knowledge of it is an image of it, corresponding to it; then the knowledge of it has parts», [(8.1.2.2)] and likewise [for] the knowledge of the man. However, this is impossible, because the ten inasmuch as it is ten has no parts, since what is beneath the ten is not ten. Then, it is not like the manifold water, since when part of it is divided, it is [still] water. Rather, it is like the head, for instance, since it is one for

every man, and it has no parts inasmuch as it is a head, but rather it has parts inasmuch as it is skin, flesh, and bone. Its being skin, flesh, and bone is different from its being head, since being a head does not require to have parts. Then, the head inasmuch as it is a head does not subdivide itself.

Every known which is not united by this species of union is not one [and the same] known. As for the man, [however,] he is one [and the same] known, because, inasmuch as he is man, he is one single thing, and he has one universal form. He becomes intelligible for the sake of his unity, and then he is one [and the same notion], which is not susceptible of the division.

[§417]

[D366] [(8.2)] Let us raise, then, a demonstration of the impossibility of the division, which is the fact that, if the knowledge was subdivided by virtue of the subdivision of the body, one of the two divisions would be in a part, and this presupposed part would be the division of the one knowledge. [Then,] one of the two holds true: either [(i)] it differentiates itself from the whole, [(ii)] or it does not differentiate itself.

[(ii)] If then one of the two does not differentiate itself from the other in anything at all, the part would be like the all, and that is impossible, since it would thus exit from its being part.

[(i)] If it differentiates itself, one of the two holds true: [(i.1)] either it differentiates itself from it with the differentiation of the species from the species and the differentiation of the shape from the colour, which is impossible, since the shape does not fall within the colour, while every part falls within the whole; [(i.2)] or it differentiates itself from it after its falling within it, with the differentiation of the animal from the man, which is the differentiation of the genus from the species [(i.2.1)], and if it falls within it, or else with the differentiation of the one from the ten [(i.2.2)].

[(i.2.1)] It is false that it differentiates itself from it with the differentiation of the genus from the species, because this would lead to the fact that the knowledge of «animal» is in a part, and the knowledge of «rational» is in another part, so that the knowledge of the man would not be in any one of the two. Thus, it would lead to the fact that the knowledge of the man would not result. Rather – I wish I knew! –, when we have surmised two parts, one of which is above, for instance, and the other down, which one of the two would be marked by the knowledge of the genus? And why was one of the two entitled to be a receptacle for the genus and the other a receptacle for the differentia? Moreover, if the man is composed of «animal» and «rational», then «animal» is not composed of a number [of things] which has no end, but rather it will end up in one and the same principle. Otherwise, indeed, it would lead to the fact that one [could] not know anything but after infinite knowledges, and that is impossible.

[(i.2.2)] If it differentiates itself from it in the measure, with the differentiation of the one from the ten, then one of the two holds true: [D367] [(i.2.2.1)] either that part is a knowledge, [(i.2.2.2)] or it is not a knowledge.

[(i.2.2.2)] If then it is not a knowledge, that leads to the fact that it results from parts which are not knowledges, which is like saying: «It results from two parts which are shape and black», which is impossible.

[(1.2.2.1)] If, [by contrast,] that part is a knowledge, then if its known [(1.2.2.1.1)] is known of the whole, the part would be equivalent to the whole; while if [(1.2.2.1.2)] it is another known, it would be impossible for the whole to be a knowledge different from the knowledge of the parts, since the knowledge of the power, [for instance,] does not result from the knowledge of the shape and knowledge of the black.

If the knowledge of the part was the known of the whole, we have already presupposed that [situation] in one known which has no parts. Thus, it is a sign of the fact that the division is [altogether] impossible.

[§418]

[(9)] The ninth is a demonstration, as well. The abstract intelligible results in the soul of man, as it was said before, and it is abstract from the position and from the measure. Then, about its abstraction one of the two holds true: [(9.1)] either it is in consideration of its receptacle, [(9.2)] or it is in consideration of that from which it results.

[(9.2)] It is false that it is in consideration of that from which it results, because man receives the definition of the knowledge and its true nature, and its quiddity results in his intellect, only from an individual man, who has a proper measure. However, the intellect abstracts him from this measure and position. [(9.1)] It remains, then, that it is free from the position and the measure for its receptacle, not for that from which it is taken and results. That is the fact that its receptacle, I mean the soul of the man, distinguishes it from the measure and the position, and otherwise every state concerning those endowed with a position and a measure would undoubtedly have a position and a measure because of its receptacle.

[§419]

[(10)] The tenth. Know that the intellect has power over the perception of all that which an instrument of the intellect can do, be it heart or brain. Thus, when it perceives it, its perception is not but by virtue of the resulting of a form in it, since this is the notion of every perception. About the resulting form, then, one of the two holds true: [(10.1)] either it is the form itself of the instrument, [D368] [(10.2)] or it is other than it by the number, and yet it resembles it.

[(10.1)] It is false that it is the form itself of the instrument, because it is always present in it: thus, it would be necessary that it were always perceived in it, while it is not like this, since one time it intellects it, and [another] time it turns away from its perception – but turning away from the present is impossible.

[(10.2)] If it is other than it by the number, then [(10.2.1)] it either resides in the faculty itself, without communication with the body – and that would then be a sign of the fact that it is subsisting by its own essence –; [(10.2.2)] or it is in communication with the body, so that this form different in the individualization is in potency in the body which is the instrument, and it is the like of the body. This would lead to the gathering of two resembling forms in one and the same body, and that is impossible, just like the gathering of two blacknesses in one and the same receptacle is impossible. Indeed, we have clarified that the duplicity is not but by virtue of a species of separation, while here there is no separation, since

every accidental which is mentioned for one of the two forms will be existent in the other form, and hence the two would become correspondent, the impossibility of which has already appeared manifestly.

[§420]

[(11)] The eleventh sign is that we have already mentioned in what precedes that every bodily faculty is not but a faculty according to [something] finite, while the faculty according to that which has no end is not in the body at all. The intellectual faculty is a faculty according to intellectual, bodily, and other forms which have no end. Indeed, that which it is possible that the intellect perceives of the sensibles and the intelligibles is not circumscribed, and thus it is impossible that the intellectual faculty is bodily.

[§421]

As for a demonstration of the fact that it does not perish at the perishing of the body, one should premise to it the fact that it has an origin together with the body, because if it were existent before the body, then the souls would be [(1)] either one [and the same], [D369] [(2)] or manifold.

[(2)] It is false that they are manifold, because the multiplicity is not but with the differentiation and the heterogeneity by virtue of the accidentals, and when there are not material [bounds] and accidentals by means of which the differentiation [may come to be], then the differentiation is not conceivable.

[(1)] If, [by contrast,] they were one, that would also be impossible, since they are manifold in the bodies, and the one does not become manifold, just as the manifold does not become one, except when it has a volume and a measure, since they conjoin one time, and disjoin another time.

[§422]

The sign of their multiplicity in the bodies is that what Zayd knows is not that which ‘Amr knows, whereas if there were one single soul, there would not be anything known in a soul while the very same is ignored in another soul, since the thing would [in that case] be known in the one [and only] soul while [also] being ignored in it, and that is impossible.

However, we say that, although they have an origin together with the bodies, they have not an origin by virtue of the bodies, since it has already been said before that [the body] is not a cause for the contrivance of anything at all, and especially [not] for that which is not a body. Rather, their cause is the bestower of the forms, which is an eternal intellectual substance, and the caused remains with the permanence of the cause. That substance [as well, then,] is everlasting.

[§423]

If [someone objected] by saying: «Just as its origin needs the body, likewise also her permanence», one [should] answer: «The body is a condition for the origin of the soul, not its cause, being like the net by means of which this caused is hunted from the cause, or it is

extracted from this cause. After the occurrence in the existence by the mediation of the net, however, there is no [more] need of the permanence of the net».

The way of its being condition and not cause is the fact that, if a soul proceeded from it, then it would [(a)] either be one, [(b)] or two, [D370] [(c)] or an infinite number in every moment. But all that is impossible, since a number is not worthier of a[nother] number, and thus there is no preponderance of one over the [rest of the] numbers.

[(a)] If [the number of the emanated souls] were limited to one, it would not have [something] apportioned either, because the possibility of the second [(b)] [coming] from it is like the possibility of the first. Thus, when the possibility of the existence is not preponderant over the possibility of the non-existence, the non-existence would remain settled up to the predisposition of the sperm, for it is an instrument for the soul, with which it is engaged. At that time, indeed, the existence of the soul becomes worthier than her non-existence, and her number is individualized on the basis of the number of the sperms predisposed in the wombs. This is the condition of the beginning in order for the existence to be preponderant over the non-existence. However, after the existence, its permanence is by virtue of its cause, not of the selectively determining factor.

[§424]

As for the demonstration of the falsity of the metempsychosis, when the soul leaves the government of the body because of the corruption of the temperament and its exit from the reception of the government, then one of the two holds true: [(1)] either she will be occupied with the government of a stone or a piece of wood, and she will become a soul for that which is not predisposed to the reception of the government, which is impossible; [(2)] or she will be occupied with the government of a sperm which is predisposed to the reception of the government, regardless whether it is the sperm of a man, of an animal, or of something else.

[This] is what a group believed, and that is impossible, because every sperm which is predisposed to the reception of the soul requires the origination of a soul from the intellectual substance which is the principle of the souls, with a requirement by nature, not by inclination or choice. This would then lead to the gathering of two souls in one [and the same] body, which is impossible. As a matter of fact, the predisposition of the sperm to the reception of the light of the soul from the bestower of the souls is face to face to the situation of the predisposition of the body to the reception of the light of the Sun when the veil is lifted from its face. Indeed, if at the lifting of the veil there is a lamp present, the light of the lamp and the light of the Sun shine together, and the light of the Sun is not prevented by the light of the lamp. Likewise, then, the influence of the sperm for the reception of the soul from her principle is not prevented by the existence in the world of the soul which is not occupied with a body. Indeed, that would lead to the gathering of two souls in one [and the same] body, but there is no one who does not intuitively know [to have] one single soul. Thus, the metempsychosis is false.

[§425]

[V]

[D371] FIFTH TREATISE

ON WHAT FLOWS UPON THE SOULS FROM THE AGENT INTELLECT

There is no doubt that the speculation on the agent intellect is appropriate for metaphysics, and [indeed] its establishment and its description have already been anticipated. There will [then] be no need now of a speculation about it as for its essence, but [only] as for its influence on the souls; and neither [there will be need] of a speculation about its influence [in itself], but rather only about the soul, inasmuch as it is influenced by it.

We will then mention in this treatise: [(1)] the way in which the soul is a sign for the agent intellect; [(2)] then the modality of the flowing of the knowledges upon [the soul] from [the agent intellect]; then [(3)] the manner of the happiness of the soul thanks to it, after death; and [(4)] the manner of the misery of the soul veiled from it due to blameworthy behaviours; then [(5)] the cause of the truthful vision and [(6)] that of the deceptive one; [(7)] then the cause of the attainment of the soul of the knowledge of the unknown, and then its conjunction with the world of the knowledges; [(8)] then the cause of its witnessing and of its vision, in the wakefulness, of forms that do not have external existence. Then [(9)] the meaning of the prophecy, of the miracles and of their degrees; eventually [(10)] the existence of the prophets and why they are needed. These, then, are ten matters.

[§426]

[(1)]

The first [matter] is the way in which the soul is a sign of the agent intellect, and the manner in which the human soul knows in potency the abstract intelligibles and the universal concepts during youth, and then it becomes knowing in actuality.

[D372] Now, it is inevitable that everything that passes from potency into actuality has a cause that makes it pass to actuality. Therefore, it is inevitable that the soul has a cause for its passage, in the state of youth, from potency to actuality, and it is also inevitable that this [cause] has [in turn] a cause. It is impossible that the cause is a body, because the body is not a cause for that which is not a body, as it was said before.

The intellectual knowledges subsist in the soul, which is not a body and is not impressed in a body. Thus, she does not fall within the place and the domain so that another body may be adjacent to her, or be opposite to her, so that it [may] influence her. Therefore, the cause [of the soul] is a substance abstracted from the matter, which is [precisely] the meaning of agent intellect, because the meaning of «intellect» is its being abstract, while the meaning of «agent» is its being acting in the souls in perpetual. There is no doubt about the fact that this [agent belongs] to the intellectual substances, whose establishment has come before in *Metaphysics*. The worthiest of them to correlate to it is the last intellect among the ten intellects which we have mentioned. The revealed law too makes it clear

that these knowledges are in the people and in the prophets by means of the angels.

[§427]

[(2)]

The second [matter] is the modality of the resulting of the knowledges in the soul. That is the fact that the universal, abstract notions do not result from the imaginative, sensible [things] as long as they did not result in the imagination. However, at the beginning of the youth they are in the state of a darkened form. When then the predisposition of the soul is perfected, the light of the agent intellect shines on the forms which are present in the imagination. Thus, the abstract universal [notions] fall from them in the souls, so that one takes from the form of Zayd the form of the universal man, and from the form of this tree the form of the universal tree, and so forth, until, from the forms of the generated [things], in concomitance with the shining of the Sun upon them, their likeness does not fall in the faultless visions.

The Sun is the image of the agent intellect, the insight of the soul is the image of the faculty of the vision, and the imagined [things] are like the sensible ones: indeed, they are sensed [things] seen in potency in the darkness in the eye, discerned in potency. [D373] Indeed, they do not pass into actuality but by virtue of another cause, which is the shining of the Sun. This [kind of knowledge,] then, is likewise.

Whenever this light shines, the intellectual faculty distinguishes, among the forms painted in the imagination, the accidental from the essential, and it distinguishes the true natures from the extraneous matters, which are not essential. Thus, they are abstracted, and they are also universal, since the existence of the intellect has suppressed the particularity by means of the curtailing of the characteristics which are accidental, external from the essence. Then, it remains one abstract thing, whose relation to all the particulars is one [and the same] relation.

[§428]

[(3)]

The third [matter] is the happiness, and namely the fact that the soul, when it is well predisposed to the reception of the flux of the agent intellect, and accustomed to the conjunction with it in perpetual, interrupts her need toward the body and [toward] what is required by the senses, [which takes her] away from the speculation. However, the body does not cease to contend with her and to keep her occupied, preventing her from the completion of the conjunction. When, then, the occupation of the body declines from her with the death, the veil is lifted and the obstacle ceases, then the conjunctions lasts, because the soul remains, and the agent intellect remains forever. The flux [coming] from its direction is given generously, because it is for its essence.

The soul is predisposed to the reception by virtue of her substance, when it is not prevented. As soon as the impediment has ceased, the union persists, because – although the soul has in the beginning need of the body for the senses and the faculties which are in it, in order to obtain by its mediation the imaginative [notions], so that she [can] take from

th[os]e images the abstract universal [intelligibles], hunting them by means of [those], since the acquisition of the intelligibles is not possible for her in the beginning unless by the mediation of the senses, and then the sensation is useful in the beginning as a net, and as a ride carrying to the destination – later however, after the arrival at the destination, it becomes just like what was a condition and obsolete for her, in such a manner that the utility is in the liberation from it, for its being an impediment and an object of concern for the soul in the enjoyment of the intended [object] after the arrival [at it]. Likewise this.

This is happiness only because it is a magnificent pleasure, which does not fall under [any] description; [D374] and it is a pleasure only for what we have clarified before, namely that the meaning of «pleasure» is the perception, on the part of every faculty, of that which is required by its nature, without harm.

[§429]

The proper characteristic of the nature of the soul are the knowledges, and the science of the true natures of the things according to what they are in themselves, since these intelligibles are not for the sense at all. It has already appeared manifestly that the pleasure of the intellectual faculty has no proportion to the pleasure of the sensible faculty; and it has [also] appeared manifestly that the cause of our being devoid of the perception of the pleasure of the knowledges, while we are [taken] in the occupation of the body, is [precisely] the occupation of the body. This has already been said in *Metaphysics*.

When, then, the knowledges that are required by the natures of the intellectual faculty and by its prerogative – the knowledge of [(1)] God, [(2)] His angels, [(3)] His books, [(4)] His messengers, [(5)] the modality of the emanation of existence from Him, and [(6)] the other knowledges – are present, so that the soul gets engaged in them, while being in the body, [to the point that she is distracted] from her becoming fully occupied with the body and its accidents [and from her becoming] all-encompassed in the zeal for those while her conjunction [with the body still] lasts, then her state will be perfect after the detachment from the body, and she will draw from [those intellectual knowledges] a pleasure whose utmost degree cannot be described.

The desire and the appetite about this [kind of pleasure] are not intense only now, for the [present] non-existence of the taste of it, just as, if the pleasure of the sexual intercourse has not been produced in the youth, then he will not have longing for it, he would not have appetite for it, and rather he might [even] loathe the form of the sexual intercourse.

This intellectual pleasure is only in a soul which is perfected [already] in this world. If, indeed, she is free from the vices, and yet she is disjoined from the knowledges, and her concern is directed to the imaginative [things], then it is not farfetched that the pleasant form is imagined as if during sleep. For [that form], then, a description of the paradise is modelled from the sensible [things]. Indeed, some of the celestial bodies are subjected to their act of imagining, since the act of imagining is not possible but by virtue of a body.

[§430]

[(4)]

The fourth [matter] is the speech on the misery, which is the fact that the soul is veiled from

this happiness which is the required [aim] of her nature. Indeed, when there is an obstacle between her and that which she desires, then she is miserable. She only becomes veiled inasmuch as she follows the longings, she confines the zeal to that which is required by the bodily nature, and she is influenced by this vile and corruptible world. With the habit, then, that appearance gets deeply rooted in her, and her desire for [that appearance] gets urgent. Thus, the instrument of the attainment of the desired and of the hunting of the knowledges will pass away with the death, while the desire and the striving will remain, and they will [thus] be a tremendous pain, which has no limit.

That prevents the union and the conjunction with the agent intellect, because the persistence of the conjunction of the soul is not prevented in this world by her being impressed in the body – although she is not [properly speaking] in the body, as we have clarified –, [D375] but her being occupied is [rather] by virtue of its accidentals, its longings, its striving, and its natural love, which are interposed between the soul and what is required by her nature. Yet, in this world she does not sense that because of her distraction with the body, as the one occupied with the fight or the fear is not aware of the pain. We have already commented on the causes of that.

When then she separates from the body with the death, that distracting [element] is lifted, but the desire remains; the instrument passes away – I mean the bodily senses and faculties, by means of which the intelligibles flow – and the vehicle which made attain the destination is [now] non-existent, but the desire proceeds [however] to that of the sense to which it was accustomed and with which it was acquainted, turning itself to that which has passed away and thus preventing the conjunction with what is required by its nature. It is [thus] a tremendous, everlasting affliction, and this soul is imperfect for the loss of the knowledge, and sullied by the pursuit of the longing.

[§431]

As for the one who has brought the intellectual faculty to perfection, has thus obtained the knowledges, and yet he pursues the longings, in the soul of that [one] there will remain the appearance of the longings and the striving toward them – so that [such striving] will attract [his soul] to the direction of the inferior nature –, while that which has resulted from the knowledges in his substance will draw his soul to the lofty congregation. A tremendous, dreadful pain results [then] from the collision of the two attracting [poles]. However, [that pain] is interrupted and does not last forever, because the substance is already perfected, while this [exterior] appearance is accidental. Its causes have been interrupted with the death, that which made it urgent and renewed it has not remained, and thus it will be effaced after a time. He will not suffer punishment forever, being [rather] the closeness to the ceasing or the distance from it in conformity to the potency and the weakness of that attribute. From this, the revealed law apprised you that the sinful believer will not abide forever in the fire.

[§432]

As for the one who has acquired the desire of the perfecting in the science by virtue of the practical application of its principles, after having left [such a path] his punishment redoubles, because his regret for what has escaped him, together with his being covetous of it, is

annexed to his pains. Actually, that of which the measure is not known, is not coveted, and thus one does not perceive its passing away, nor is it regretted. Just as if a king were killed and the kingdom taken from his descendants, and he had two descendants, one of whom is a youth who does not know what the reign is, while the other is older and has already known what the reign is, having had practice of it, although he has not come then to its perfection and its continuous exercise – indeed, [in that case] there would be no doubt that [the latter] is greater in grief and stronger [in it] than his brother, who is indifferent with respect to the measure of that which has painfully escaped him.

The Prophet – be the peace upon him – already said about this: «He who will be tormented the most in the day of judgment will be the knowing man whom God has not helped with His knowledge». The Prophet – be the peace upon him – also said: «He who is increased in knowledge, but is not increased in true religion, will not be increased from God unless in the distance [from Him]».

[§433]

[(5)]

[D376] The fifth [matter] is about the cause of the truthful visions. Let it be known in the first place that the meaning of «sleep» is the obstruction of the spirit from the external to the internal [parts]. «Spirit» is an expression referring to a fine body composed of the vapour of the humours bound to the heart, which is the vehicle of the psychic and the animal faculties. By means of it, the sensible [and] moving faculties conjoin to their instruments. Hence, whenever a block occurs in its channels from the nerves leading to the sense, the sense is suppressed, and the epilepsy and the apoplexy result.

Likewise, when the hand of the man is tightly fastened, he feels a numbness in the extremes of the hand, whence the formication follows closely, and his sense is suppressed on the spot, until he is untied, so that the sense returns after a time.

This spirit, by the mediation of the arteries, spreads toward the external [parts] of the body, but sometimes it is arrested in the internal [part] by virtue of [various] causes, like the research of the relaxation after the abundance of the movement, like the occupation of the internal [part of the body] for the digestion of the food – and hence the sleep is predominant in concomitance with the repletion –, and like the fact that the spirit is little and imperfect, so that its influence does not remain simultaneously in the internal and the external [parts] – and for its diminishment and increase there are medical causes.

[§434]

The meaning of «tiredness» is the diminishment of the spirit due to the dissolution, because of the heat, and the inclination [produced by] the wetness and the weight which are manifest in it. [These] two, indeed, prevent it from the quickness of the movement, just as its reduction is appreciated by the one who prolongs [his] stay in the bath, and after the exit from it, he takes something refreshing for the brain. Indeed, [only] when the senses are motionless because of the obstruction of the spirit carrying [information] from them to the faculty of the sense, for one of these reasons, does the soul remain empty from the occupation of the senses, since she [normally] does not cease to be occupied with the thought

about that which the senses bring to her.

[§435]

When [the soul] finds an occasion to empty herself out and sets away from herself what hinders her, she is then predisposed to the conjunction with the spiritual, noble, intellectual substances, in which all existent things are depicted, and which are designated in the revealed law with [the name of] «well-preserved Table». Thus, that which is in those substances of the form of the things is impressed in her – I mean in the soul –, [D377] especially that which corresponds to the goals of the soul and is important to her.

The impression of that form in the soul from them in concomitance with the conjunction is like the impression of the form of a mirror in another mirror which is in front of it in concomitance with the lifting of the veil between the two. All that which is in one of the two mirrors will appear in the second, in proportion to it. If then that form is a particular [form] which falls in the soul from the conception, [if] the retaining [faculty] retained it according to its way, and [if] the imaginative faculty, which imitates the things by virtue of the representation, has not acted without restriction, then this vision is truthful and does not need an interpretation, since it is what he saw in itself.

[§436]

If, [however,] the imaginative [faculty] is predominant, and the perception of the form on the part of the soul is weak, the imaginative is quick, by virtue of its nature, to replace that which the soul has seen with a likeness – like the replacement of the man with a tree, and of the enemy with a snake –, or to replace it with what resembles it and corresponds to it with a certain correspondence, or [else to replace it] with what is contrary to it, just as he who has seen that a son was born to him, while actually a daughter was born to him, and likewise viceversa. This vision needs an interpretation.

The meaning of «interpretation» is that the interpreter thinks, regarding that which remains in his retention of the forms that he has seen, about what it was possible that the soul had already seen in order for the imagination to be transferred from it to this remaining [image] in the retention. That [happens] to [the one] who thinks about a thing, [and] thus his imagination is transferred to another [thing], later from it to another one, until he forgets that which he had thought of in the first place. It is then his way of recalling and imagining, and that is by virtue of the fact that he says: «How is this present imagination recalled?». Thus, he will recall the necessitating cause of it, and later he will consider that carefully, until he will recall its cause, and so forth. He might then stumble, in his imagining, in the first [thing] by means of which he was driven toward this last [one]. When the transitions of the imagination are not grasped by virtue of a proper species, the ways of the interpretation ramify and they start to differentiate themselves on the basis of the individuals, the states, the disciplines, the parts of the year, and the health and the sickness of the sleeping [person]. [The interpretation] is not given but by virtue of a kind of intuition, so that there is error in it, and the dubiousness is predominant over it.

[§437]

[(6)]

The sixth [matter] are the confused dreams, and namely the dreams which do not have a root. Their cause is the movement of the imaginative faculty and the intensity of its perturbation. Indeed, in most states it does not abate in the imitation and in the transitions, [D378] and likewise it does not abate either in the state of the sleep, in most states, so that whenever the soul is weak, she remains occupied with its imitation, just as she is occupied with the senses in the state of wakefulness, so that she is not predisposed to the conjunction with the spiritual substances.

When the imaginative [faculty], with its restlessness, has already strengthened for a [certain] cause, then it does not cease to imitate and contrive forms which have no existence and which remain in the retaining [faculty] until the sleeping [person] wakes up. He will then recall that which he saw in the sleep. Its imitation has also some causes among the states of the body and its temperament. Indeed, if the yellow bile is predominant over his temperament, he will imitate them with yellow things; if there is an excess of heat in him, he will imitate them with the fire and a hot bath; if [rather] the coldness is predominant in him, he will imitate them with the snow and the winter; and if the black bile is predominant, he will imitate them with black things, and frightful matters.

If the soul is occupied with a thought, she forgets because of the imagination the remainder of the thought. Indeed, the imagination does not cease to shift repeatedly as for what depends on the zeal about her. The form of the fire, for instance, results in the imaginative [faculty] only in concomitance with the predominance of the heat, because the heat which is in a spot passes on to another one when it is adjacent to [the first] and corresponding to it, just like the light of the Sun passes on to the bodies, with the meaning that it is a cause for their origin, when you have intellectually understood that the things are existent of an existence flowing, by virtue of the [things] similar to it, toward what is other than i. Thus, the imaginative faculty is impressed in the hot body and it is influenced by it with an influence which is appropriate to its nature. However, it is not a body – I mean the imaginative [faculty] –, in order to receive the heat itself, but it will receive, of the heat, the measure whose reception is [possible] in its nature, and namely the form of the hot, the form of the fire, and the [things] similar to [these]. This is the cause about it.

[§438]

[(7)]

The seventh [matter] is about the cause of the knowledge of the unknown in the wakefulness. Know that the cause of the need of the sleep for the perception of the knowledge of the unknown by means of the vision is what we have adduced about the weakness of the soul, and the senses being an occupation for her, so that, when the senses are motionless, the soul conjoins with the intellectual substances and is predisposed to the reception from them. [However,] it is possible that that [happens] for some souls in the wakefulness, for two respects.

[§439]

[(a)] One of the two is that the faculties of the soul have a potency which the senses do not occupy nor overcome in such a way as to absorb her and to prevent her from her occupation, but which rather widens and strengthens her for the speculation toward the superior side and the inferior side [D379] simultaneously, just as some souls are strengthened so that they [are able to] gather, in one [and the same] condition, the [act] of speaking and writing. Indeed, in some states it is permitted that the occupation of the senses is caused to subside by the like of these souls, and [it is also permitted] that they [thus] ascend toward the world of the unknown. Thus, some matters [coming] from it will appear manifestly to them, but it is like the fleeting flash. This species [belongs] to prophecy.

Then, if the imaginative [faculty] weakens, that which was unveiled of the unknown remains in itself in the retention, and it is thus an unadulterated revelation. If [rather] the imaginative [faculty] is strengthened, it will be occupied with the nature of the imitation. This revelation, then, will be in need of the allegorical interpretation, like that vision is in need of the [dream] interpretation.

[§440]

[(b)] The second cause is that the dry and the heat are predominant over the temperament, so that, by virtue of the predominance of the black bile, he is turned away from the sources of the senses. Then, while his eyes are open, he is as [if he were] astonished, inadvertent and absent from that which he sees and hears, and that for the weakness of the exit of the spirit toward the external. This as well, then, is not impossible, [namely] that something of the unknown, [coming] from the spiritual substances, is unveiled to his soul, so that he converses about it and that he utters [it] according to his tongue, even as if he is inadvertent of what he is speaking about. This is found in some possessed and epileptic [people], and in some soothsayers of the Arabs, as what they report is conformable to what will happen.

This [second] species [(b)] is an imperfection, while the first cause [(a)] is a species of perfection.

[§441]

[(8)]

The eighth [matter] is about the cause of man's vision, in the wakefulness, of forms which have no existence. That is the fact that the soul sometimes perceives the unknown with a strong perception – and then what she has perceived remains identical in the retention –, and sometimes she [rather] receives it with a weak reception, of which the imaginative [faculty] takes possession – and then she imitates it with a sensible form. When then that form is strengthened in the formative [faculty], the common sense takes [it] as companion, and the form is impressed in the common sense, travelling to it from the formative and the imaginative [faculties].

The vision is the falling of a form in the common sense. Indeed, the form existing from outside is not sensed [as such], but rather it is [sensed] because of a form which resembles it in the common sense. Then, the sensed in [its] true nature is the form which has an origin

in the sense because of the external form, [D380] so that the external [form itself] is called «sensed» with another meaning.

There is no distinction, then, between the fact that the form falls in the common sense from outside or from within, since however it may be sensed, its obtainment is a vision. Indeed, whenever that falls in the common [sense], its possessor becomes a seer for it, even if the eyelids are shut, or if he is in darkness, as well.

[§442]

That which the man sees in the wakefulness is not impressed in the common sense, so that it becomes seen, only because the common sense is occupied with that to which the senses lead from the external [world], as they are predominant, and [also] because the intellect breaks against the imaginative [faculty] its invention and falsifies it, so that its conception does not [normally] strengthen in the wakefulness. Indeed, whenever the intellect weakens with respect to its [capacity of] refutation and to its [capacity of] falsification because of an illness, it is not farfetched that what falls in the imaginative [faculty] gets impressed in the common sense, so that the ill [person] sees forms which have no existence.

Rather, when the fear prevails, and the acts of estimating and imagining of the fearful [person] are strengthened, while the soul and the falsifying intellect are weakened, the form of the [thing] feared by him might be assimilated in the sense, so that he directly witnesses and sees what he fears. Hence the fearful coward sees dreadful forms, and this is [also] the cause of the speech he tells himself in the deserts, and of what is heard of its words. Sometimes, the longing of this weak ailing [person] is strengthened [to the point] that he directly witnesses what he desires and extends his hand toward it, as if to eat it, and [to the point that] he sees forms which have no existence because of that.

[§443]

[(9)]

The ninth [matter] is about the roots of the miracles of the prophets and of the saints. These are three properties.

[(9.1)] The first property is in the faculty of the soul, in her substance, inasmuch as she has an influence on the matter of the world by means of the removal of a form and the production of [another] form, by virtue of the fact that she has an influence on the transformation of something other than herself – given that she has an influence [for instance] on the transformation of the air in clouds, and she originates a rain like the flood, or in the measure of the need for the irrigation, or what is analogous to that, which is possible.

Indeed, it has already been established in *Metaphysics* that the matter is subdued to the souls and influenced by them, and that these forms follow one another upon it from the traces of the souls of the [celestial] spheres.

[§444]

[D381] This human soul is of the [same] substance of those souls, and strongly resembles them, although she is such that her relation to it is like the relation of the lamp to the

Sun. That, however, does not prevent [her] from having an influence, just as the weakness of the lamp does not prevent it from having an influence on the heating and the brightening, [just] like the Sun [does]. Likewise, then, the soul of the man has an influence on the matter of the world. However, what is predominant over her is the fact that her influence is limited to her proper element, and that is her body. In the same way, when a hated form results in the soul, the temperament of the body is transformed, and the wetness of the perspiration is originated; when the form of the victory is originated in the soul, the temperament of the body warms up, and the face reddens; and when a desired form results in the soul, an evaporating heat, exciting for the wind, is originated in the vessels of the semen, so that the veins of the instrument of the coition are filled with [that wind], thus being predisposed to [the coition].

[§445]

These heat, coldness, wetness, and dryness which are originated in the body from these conceptions are not from another heat, coldness, wetness, and dryness, but rather from the abstract conception. When, then, the abstract conception becomes a cause for the origin of these changes in the matter of the body, given that that is not for the being impressed in it of the soul – since it is not in the body –, then it is permitted that she has an influence on a body other than [her body], [with] the like of these influence or beneath it. However [this influence] is worthier and greater in it, since she has an inclination toward her [own] body, by virtue of the bound of deputation due to her being originated together with it, and [by virtue] of the love [that she has] for it by nature.

The like of this natural love is not unfamiliar. Indeed, if the youth should fall in a fire, or in a [body of] water, then his mother will throw herself in the fire behind him, by nature. When it is not farfetched, indeed, that her soul loves another body which derives from her body, then from where would her love by nature for her [own] body be farfetched, given that [her proper] condition is neither in her body, nor in the body of the child? Now, this loving bound is that which limits her influence to it.

[§446]

Sometimes, [however,] the influence of some souls passes over toward another body, so that it corrupts the spirit by means of the estimation, and by means of the estimation it kills the man. That is referred to with [the expression] «evil eye» and because of that [the Prophet] – be the peace upon him – said: «The eye is [meant] to the entrance of the man in the grave, and of the camel in the cooking pot». [The Prophet] – be the peace upon him – also said: «The eye is true», the meaning of which is that the one injuring with the eye comes to like, for instance, the camel, and is amazed over it; but it happens that his soul is wicked and envious, so that he estimates [D382] the falling of the camel, the camel is influenced by the estimation [of the soul], and at once it falls.

If this is possible, it is not farfetched that one of the souls rarely strengthens with a greater potency than this, so that she [may] have an influence on the matter of the world, originating heat, coldness, and movement. The complex of the dissimilarity of the inferior world branches out from the heat, the coldness, and the movement, as it was said before in the cases of the substance and so forth. The like of this is referred to with [the expression]

of «miracle of saint» and «miracle of prophet».

[§447]

[(9.2)] The second property [of the prophecy] is of the speculative faculty. It clears the soul with such clarity that it [gets] strong in the predisposition and the conjunction with the agent intellect, in order for it to pour the sciences upon her.

Indeed, the souls are divided into those who need teaching and those who can do without it. Among those who need teaching, there are some upon which the act of teaching has an influence only with a long labour, whereas others learn quickly.

Sometimes you can find someone who discovers things on his own, without a teacher; and indeed, all the sciences, if they were considered carefully, could be discovered on their own, since the first teacher has not found himself in the condition of learning from a teacher; but it is possible to climb up again this [stair] until the one who has known from his own soul.

[§448]

What [would be] of a speculator if he does not recall many inferences which he has inferred from his [own] soul, without a teacher? And that because the conclusion occurs to his mind, and thus he becomes conscious of the middle term as if it were in his soul without him being aware [of it]. Or else, he anticipates the middle term, so that the conclusion becomes present, as he who speculates about the downward falling of the stone, and then it occurs to him that, if there was not the differentiation of the two directions, the stone would not descend downwards from above, and then it occurs [to him] that the differentiation of the two directions is not but in the distance from a body and the closeness to it, and that is not conceivable but with a surrounding [body] and a centre; and thus, by means of that, it is unveiled to him that the sky is surrounding and that its existence is inevitable. Or [again], he speculates on the origin of the movement, then it occurs to him that it is inevitable that every originated has an originating cause, and that that chains up to the infinite; [D383] and he knows that that is not possible but by virtue of a circular movement; then he will have experienced before that the circular movement is not by nature, since it is the returning to that from whose position it had separated.

[§449]

These examples are not absurd, and if [these things] have reached the mind, then it is not absurd that one could reach the least of intelligibles, in a long or short time. The one to whom all these intelligibles were revealed in a short time and without teaching, it would be said that he is a prophet or a friend of God, and this fact would be called wondrous, or miracle of the prophet. This is possible and not absurd. If it is conceivable even to be impeded from understanding when starting from a learning process, it will [also] be possible to climb up again [the stair] of perfection to the point of knowing without being taught.

And how could this be impossible, since how many times of two students [learning] a same subject the one precedes [the other] about the truths of sciences, even if his dedication is lesser than the dedication of the [student who has been] surpassed, but the might of

the intuition and the strength of the acumen have given this [excellence to the first student] – so that the increase in this topic belongs to the things which are possible?

[§450]

[(9.3)] The third property [of the prophecy], about the imaginative faculty, is that the soul sometimes strengthens herself, as it was said before, and she conjoins while awake with the world of the unknown, as it was said before. The imaginative [faculty, then,] copies what it has perceived [of that world] by means of beautiful forms and well-ordered sounds, so that it sees and listens while awake what it was seeing and listening while asleep, for the cause that we have mentioned. Therefore, the form copied [by] the imaginative [faculty] from the noble substance is a wonderful form, extremely beautiful – and it is the angel that the prophet, or the friend of God, see –, or it is the knowledges that reach the soul from her conjunction with the noble substances, which become similar to the good, well-ordered words falling in the common sense, and thus are heard. This as well is possible, not impossible.

[§451]

These, then, are the classes of the prophecy. He who gathers in himself these three is the most excellent prophet, being in the utmost degree of the degrees of the man, which is conjoined with the degrees of the angels. [D384] However, the prophets in this differ in excellence. One of them has two properties among these three; sometimes he has one property; sometimes he has not but the abstract visions; and sometimes he has something weak of each one. By virtue of it, their situations differ as for the closeness to God Most High and to His angels.

[§452]

[(10)]

The tenth [matter] is about the establishment of the fact that it is inevitable that the prophet falls under the existence, and that one [should] assent to his falling within the existence. That is the fact that the world is not ordered but by virtue of a rule listened to among the totality of the creation, by virtue of which [all beings] are judged with justice. Otherwise, they would kill each other, and the world would be wrecked. Just as the rain, for instance, is inevitable for the [good] ruling of the world – and thus the divine providence has not restricted herself from letting the sky shower abundant rain –, [likewise] then the ruling of the world cannot do without one who makes them know the way of the prosperity of this world and of the hereafter. Not everyone [can] occupy himself with that, but this ruling is existent in the world; therefore, the cause of the ruling is [also] existent.

[§453]

He who is the cause of the order in the world is the vicar of God on His earth, since by means of him the guidance [of God], [directed] to the affairs of this world and of the hereafter,

becomes complete in the creation of God Most High. Otherwise, the creation, without the guidance, would not reach the good. Hence the Most High said: «[He] destined and guided», and the Glorious and the Majestic said [as well]: «He gave each thing its creation and then guided [it]».

The angel is the medium between God Most High and the prophet; the prophet is the medium between the angel and the knowing [men]; and the knowing [men] are the medium between the prophet and the common people. The world is close to the prophet; the prophet is close to the angel, and the angel is close to God Glorious and Most High. Then the ranks of the angels, the prophets, and the knowing [men] differ in countless ways as for the degrees of closeness.

[§454]

[*Epilogue*]

[D385] This, then, is what we wanted to account for of their sciences – the *Logic*, the *Metaphysics*, and the *Physics* – without occupying [ourselves] with the distinction of the meager from the fat and of the true from the false.

Let us begin then, after this [one], with the book *The Incoherence of the Philosophers*, in order for the falsity of what is false among these opinions to be made clear.

[§455]

God gives success in attaining the true, by virtue of [what is] from Him and around Him. Praise be to God, Who praises those who extol [Him]. Prayer and peace upon the master of those who have been sent, Muḥammad, and upon the whole of his family. Amen.

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ABŪ ḤĀMID AL-ĠAZĀLĪ

The Intentions of the Philosophers
[*Maqāṣid al-falāsifa*]

Introduction, Translation, and Commentary

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Prologue

[§1] D31-32

The *Prologue* of the *MF* deals with the scope and aims of the philosophical encyclopaedia in an abridged, and yet very dense and subtle, way. After the initial, elaborate eulogy, al-Ġazālī begins by stating that he has been requested to write a work against the philosophers, capable of showing their incoherence, their mistakes, and their self-deceit. However, he deems it impossible to comply with this task without expounding at first the actual doctrines of the philosophers, with a neutral and programmatically uncommitted account. He declares, therefore, that in the following book he will discuss the *Intentions of the Philosophers*, qualifying this expression as the title of the book. The discussion will consist in dealing with the philosophical sciences, four of which are named soon afterwards: mathematics, logic, physics, and metaphysics. Al-Ġazālī then goes on to classify these four sciences on the basis of their relative truth-value and trustworthiness. Whereas mathematics is completely true, and it is therefore unnecessary to deal with it in this book, logic, physics and metaphysics all contain some element of falsehood, and thus need a supplement of inquiry. In particular, logic is all but true, and as such it is broadly accepted by Aš‘arite theologians, as well. On the polar opposite, metaphysics is all but false. Physics is located in the middle ground between the logical and the metaphysical sciences: its statements are partially true and partially false, and it is thus particularly tricky to tell the ones apart from the others. The prologue ends by stating that the falsity of the three dubious philosophical sciences (having excluded mathematics as perfectly true) will be discussed properly in the book on the *Incoherence of the Philosophers*, which is presented as logically subsequent to the *MF*.

The classification of the philosophical sciences on the basis of their content, or ‘level’, of truth is intriguing as well as problematic, especially given al-Ġazālī’s insistence, throughout this same prologue, on his entirely non-committal attitude toward the philosophical pieces of doctrine he is preparing to discuss. One might wonder, indeed, whether the absence of commitment is not denied *ipso facto* by the clear-cut, and somewhat *a priori*, distinction between a true science (mathematics) and various degrees of falsity in the other sciences, as this distinction is laid down by al-Ġazālī as a given, without any further elaboration. I discuss this, together with other structural aspects of the *MF* and of the *DN*, in the Introduction, §1.4.2.

The reference to the well-known *Tahāfut al-falāsifa* tightly links the *MF* to that work, but also opens unavoidable questions concerning the relative chronology of the two writings, and their actual doctrinal relationship. Cf. the Introduction, §1.2, for an attempt at systematization of what we know on the topic. The situation is further complicated by other not negligible philological circumstances, the most prominent of which is the absence of the prologue in the greater part of the Latin tradition of the *MF*; see the edition provided in SALMAN 1935-1936: 125-127, based on MS Paris, BNF lat. 16096, the sole known manuscript to transmit the prologue in Latin translation. For the persisting doubts concerning the authorship of the translation of the prologue (which might not coincide with that of the extant translation of the core text of the Latin *MF*) see HASSE-BÜTTNER 2018: 356. Moreover, there exists a part of the Arabic tradition (distinct from the antigraph of the Latin translation) transmitted without the prologue and also deprived of all references to the *TF*; this situation, instantiated by MS Dublin, Chester Beatty Library, Ar. 5328, is discussed in great detail by SHIHADDEH 2011. For a more comprehensive analysis of the available information, and of the role played by the prologue in determining the relation of *MF* and *TF*, see the Introduction.

Previous translations of the Arabic prologue are available in MUNK 1857: 369-372; BEER 1888: 21-23 (reproduced in HANA 1972); ASÍN PALACIOS 1901: 138 ff.; MACDONALD 1936: 11; VAJDA 1960: 21 fn. 1; ALONSO 1963: 3-4; LOHR 1965: 223-224; GRIFFEL 2021: 430-431.

SLIPPERY PLACE WHERE THE STEPS OF THE IGNORANT STUMBLE | Arabic *mazilla* (or: *mazalla*) *aqdām al-ḡuhhāl*, Latin *a lapsu ignorantium*. The term *mazilla* is not registered in WEHR, but see the entry in LANE 1863: 1243^a, *sub voce* لُج. Cf. also *infra*, *Logic* III, §26 and *Logic* IV, §54 for further occurrences of this same, rare word.

FOR THE ACCEPTANCE AND THE RESPONSIVENESS | Reading *bi-l-qabūl wa-l-iqbāl*, as in BĪĠŪ 2000: 10.3, instead of *bi-l-qayūl* as in DUNYĀ.

YOU REQUESTED | Reading *fa-inna-ka iltamasta* as in BĪĠŪ 2000: 10.5; the correction *fa-innī ultumistu* accepted by DUNYĀ («I was requested») does not seem strictly necessary. This might also be confirmed by the reading of the Hebrew translation of the prologue contained in the commentary on the *MF* written by Moshe Narboni, edited and translated as for the logical part in CHERTOFF 1952: 2 (1b/11), which reads: «You have asked me, my brother [...]», thus explicitly referring to an interlocutor, and by the Latin translation: «Petisti a me [...]» (cf. SALMAN 1935-1936: 125). The interlocutor of the prologue of the *MF* is in all likelihood a fictional one.

AN UNEQUIVOCAL SPEECH | Arabic *kalām^{am} šāfi^{am}*, Latin *sermonem sufficientem*. It might be historically significant that the Arabic adjective *šāfi* is rendered here with the Latin *sufficiens*, since this mirrors the translation of the *maṣdar* with the same root *šifā'*, in the title of Avicenna's best-known encyclopaedia *Book of the Cure/Healing* [*Kitāb al-Šifā'*], with the Latin *sufficientia*. Cf. SALIBA 2017 for a defense of the Latin translators' lexical choice, against the common understanding of Avicenna's title as a reference to philosophy as intellectual medicine.

INCOHERENCE OF THE PHILOSOPHERS | Arabic *tahāfut al-falāsifa*, Latin *philosophorum controversiam*. The expression, here employed as generic, becomes of course the title of the best-known of al-Ġazālī's works. The *maṣdar* of the VI form *tahāfut* conveys the proper meaning of the reciprocal destruction and mutual annihilation of the doctrines of the philosophers, whence also the Latin rendering of it as *destructio* in the title of the Latin translation of Averroes' *Tahāfut al-tahāfut* (see ZEDLER 1961). However, I choose to render the term simply with «incoherence», in conformity with the most common translation of the title of al-Ġazālī's *TF* – and of Averroes' *Tahāfut* – in English and other modern western languages (see e.g. MARMURA 2000, CAMPANINI 1997, Lammer 2022).

DOCTRINE | Arabic *maḏhab*, Latin *ipsorum viam credulitatem*; later also in the plural, *maḏāhib* («doctrines»).

WHAT THEY FIRMLY BELIEVE | Arabic *mu'taqad*. Cf. for the same verbal root the title of one of al-Ġazālī's most relevant theological works, *al-Iqtīṣād fī al-i'tiqād* [*Moderation in Belief*] (Arabic editions in CUBUKÇU-ATAY 1962 and ABŪ AL-ILA 1972; Spanish translation in ASÍN PALACIOS 1929; French translation in HAKIM 1985; most recent annotated English translation in YAQUB 2013). The attribution to the *falāsifa* of adherence to a *mu'taqad* can also be seen in connection with the charge of uncritical emulation [*taqlīd*] addressed by al-Ġazālī to the philosophers, as well as with his understanding of *falsafa* as a «quasi-religious» movement (see GRIFFEL 2021: esp. 79-84; cf. also GRIFFEL 2005).

INQUIRY | Arabic *wuqūf*. But cf. *infra*, §110, for a translation of the same term with «cognizance».

ATTAINMENTS | Arabic *madārik*. The term is mostly used to indicate the 'mental faculties, mental powers', or specifically the faculty of perception (WEHR 323^a). I translate however according to the generic meaning of the verbal root in the IV form (*adraka*), which conveys the sense of 'to attain, to reach' (WEHR 322^b), since the context encourages an interpretation less involved with the psychological and intellectual abilities of the individual philosophers, and more focused instead on the results of their cultural enterprise as a whole. In this sense, the meaning of *madārik* is similar to that of *maqāṣid* itself, for which see *infra* and *supra* in the Introduction, §1.1. *Title*. The expression *madārik al-ūqūl* (translated by MARMURA 2000: 9 as «Cognitions of the Intellects») is said to be a possible alternative name for philosophical logic in the Fourth introduction of the *TF*.

RATHER IT IS TO THROW IN BLIND FOLLY AND IN ERROR | A very similar methodological *caveat* is also to be

found in al-Ġazālī's apologetic autobiography, the *Deliverer from Error* [*Munqid min al-Ḍalāl*], ed. SALĪBA-‘AYYĀD 1939³: 84-85 = BIĠŪ 1992: 41.14-15; transl. WATT 1964: 29: «I was convinced that a man cannot grasp what is defective in any of the sciences unless he has so complete a grasp of the science in question that he equals its most learned exponents in the appreciation of its fundamental principles, and even goes beyond them and surpasses them [...]. I realized that to refute a system before understanding it and becoming acquainted with its depths is to act blindly». On the basis of this – indeed striking – similarity, GRIFFEL 2006: 8-9 has suggested that the Arabic prologue dates from a later phase of al-Ġazālī's life with respect to the main text of the *MF*, *i.e.* the time period in which he composed the *Munqid* (around 1107), but cf. the Introduction, §1.2, for some observations on this interpretation.

BEFORE THE CLARIFICATION OF THEIR INCOHERENCE | Arabic. The Latin translation «Memorate igitur intentioni, premittendum duxi...» (SALMAN 1935-1936: 125.14-15) rephrases the Arabic reference to the clarification of the *tahāfut* of the philosophers in a more generic way, as an 'aforementioned goal (or intention)' (*memorata intentio*, in the dative in the text). This is somewhat puzzling, because it adds to the text a further occurrence of *intentio* absent in the Arabic, *i.e.* of the term used to render *maqāṣid*, the key-word of the title of the work (for which cf. *infra* in the commentary).

ACCOUNT | Arabic *ḥikāya*, which could also be translated in this context with «report». Al-Ġazālī aims here to stress the noncommittal character of the following discussions of the philosophical doctrines; cf. also *infra* the use of the same term in the proper description of the aim of the book. A similar plea to an uncommitted account of philosophical doctrines is to be found in the prologue of al-Mas'ūdī's *Šarḥ al-Ḥuṭba al-ġarrā'* [*Commentary on (Avicenna's) Glistering Homily*]: cf. the translations in SHIHADDEH 2016: 21 and GRIFFEL 2021: 463. See *supra*, Introduction, §2.1.4.2 for a brief discussion.

INTENTIONS | Arabic *maqāṣid*. Here, the keyword of the title of the work makes its first appearance in the text, although only soon afterwards will al-Ġazālī make it clear that *Maqāṣid al-falāsifa* is indeed the title of his book (cf. *infra*). The translation of the term is more problematic than it would seem at first glance, as witnessed as well by the great number of alternative translations adopted in scholarship so far (cf. Table 1 in the Introduction, §1.1. *Title*). In particular, the suggestion contained in SHIHADDEH 2011: 90, to the effect that the title of the work would be best translated with «doctrines» as opposed to «intentions», is worthy of serious consideration, since it is clear that al-Ġazālī's aim is precisely to address the doctrines of the philosophers, which are indeed discussed substantially in the three ample sections that follow the prologue. The word «intentions», however, is not incapable of capturing that desired meaning, if taken broadly to designate the goals of the philosophical analysis, *i.e.* the actual theses that the philosophical effort is finalised to corroborate and to make tenable. A similar semantic shift can indeed be observed in the title of al-Fārābī's treatise *On the Goals of Aristotle's Metaphysics* (cf. *supra*, §1.1. *Title*). Furthermore, translating *maqāṣid* with «intentions» allows one to preserve a teleological allure, which is certainly conveyed by the Arabic root *q-ṣ-d*, and which is moreover in keeping with one of the Latin translations of the title, that transmitted by MS Paris, BNF lat. 16096, the sole to preserve the prologue of the work in Latin (see *supra*): «Incipit Liber Algazelii quem intitulavit *De philosophorum intentionibus* et primo de Logica» (SALMAN 1935-1936: 125); «Ponam itaque titulum: *De Philosophorum Intentionibus*» (*ivi* 126). The other, more common Latin translation of the title is rather *Summa theoricæ philosophiæ*, which is syntactically quite different from the Arabic title, but is on the contrary very descriptive of the contents of the work: cf. again SHIHADDEH 2011: 90 for a discussion.

THE TRUE FROM THE FALSE | The opposition of true [*ḥaqq*] and false [*bāṭil*] is the first of a series of couples of contraries adduced by al-Ġazālī in the prologue and in the epilogue of the *MF* in order to reaffirm his programmatically uncommitted account of philosophy, which makes a point of not distinguishing between the truth-value of the expounded doctrines at all. As will become apparent in what follows, this agnostic stance will be undermined several times, although never explicitly, in the actual discussion of the arguments of the philosophers in the continue of the work, and it seems already questioned, in a way, by the classification of the sciences in terms of truth and falsity that

immediately follows. The other polar couples within which al-Ġazālī declares that he will not try to discriminate are genuine/corrupt (cf. *infra* in the Prologue) and the more imaginative opposition between meager and fleshy, thin and fat (cf. *infra*, the Epilogue of the work at §454, where the standard couple true/false also resurfaces).

THE AIM OF THE BOOK [...] TITLE | The sentence with which al-Ġazālī officially titles his book is somehow a wordplay, since the «aim» [*maqṣūd*] of the work, which is said to be «the account [*ḥikāya*, cf. *supra*] of the intentions of the philosophers [*falāsifa*]», has in D-Altrabic the same root of those «intentions» [*maqāṣid*] (despite not being the singular corresponding to that plural: hence the difference in the English translation). The designation of the philosophers, whose doctrines will be analysed, with the plural of the Greek calque *ḥaylasūf* undoubtedly frames the *MF* within the cultural enterprise of the Greek-Arabic Aristotelian *falsafa*, also helping to confirm the pivotal role played by Avicenna – the undisputed leader of that tradition – in the origin of the work. This notwithstanding, the programmatic declaration of non-commitment in describing the main teachings of *falsafa* also shows the transitional role played by the *MF* in the shaping of the subsequent tradition of *ḥikma*, i.e. a discursive tradition of philosophy distinct with respect to Avicennan *falsafa*: on this crucial issue cf. GRIFFEL 2021: *passim* and the Introduction, §1.10.

DIVISIONS | The use of the term «divisions» [*aqsām*] for the parts of philosophy is Avicennan, as witnessed by the title of Avicenna's *Epistle on the Divisions of the Intellectual Sciences* [*Risālā fi aqsām al-ʿulūm al-ʿaqliyya*]. The «divisions» named by al-Ġazālī are four: [(1)] mathematics [*riyāḍiyyāt*], [(2)] logic [*manṭiqiyyāt*], [(3)] physics [*tabīʿiyyāt*] and [(4)] metaphysics [*ilāhiyyāt*]. The lexical form chosen to designate those sciences is always the relative adjective in the feminine plural (hence my decision to supply '[sciences]' in the translation). This is a standard way of referring to mathematics, physics, and metaphysics, but not to logic, which is rather called more commonly with the noun *manṭiq* (just as al-Ġazālī himself does in the section on logic of the *MF*), while it is attracted here, in analogy to the other sciences, to the form *manṭiqiyyāt*. The same atypical form appears in the *Munqid*, ed. BĠŪ 1992: 48.3.

AS FOR THE MATHEMATICAL [SCIENCES] [...] WITH THEIR ALLEGATION. | The section with which al-Ġazālī dismisses the treatment of mathematics in the Prologue has a partial parallel in the *Munqid*, ed. SALĪBA-ʿAYYĀD 1939³: 90 = BĠŪ 1992: 46.4-6, transl. WATT 1964: 33:

Mathematics. This embraces arithmetics, plane geometry and solid geometry. None of its results are connected with religious matters, either to deny or to affirm them. They are matters of demonstration which it is impossible to deny once they have been understood and apprehended. Nevertheless there are two drawbacks which arise from mathematics.

While the reduction of mathematics to the sole propaedeutic parts of it – i.e. arithmetics and geometry, without mention of their applied counterparts, i.e. music and astronomy – is common to both the *MF* and the *Munqid*, and likewise the demonstrative value of mathematics is explicitly acknowledged in both works, in the *MF* – as opposed to the *Munqid* – there is no mention of any drawback of the mathematical disciplines, which are merely set aside from the discussion and programmatically not treated in the actual realization of the *summa*. On the issue of the absence of mathematics from the *MF*, as opposed to the presence of it in the *DN* (due to the work of Avicenna's disciple al-Ġūzġānī), cf. the *Introduction*, §1.4.2.1.

AGAINST THE TRUTH | Arabic *ʿalā ḥilāf al-ḥaqq*, Latin *dissonum veritati*.

AŠʿARITES | Arabic *ahl al-ḥaqq*. The expression, literally «the people of the true/of the truth», is used to indicate the Ašʿarites and the Ašʿarite school in many texts by authors akin to al-Ġazālī as for times and doctrines. A first occurrence of this circumlocution is to be found in al-Ašʿarī himself, who contrasts the expression *ahl al-ḥaqq wa-l-sunna* with the expression *ahl al-zayġ wa-al-bidʿa*, employed to designate altogether the Muʿtazilites, the Qadarites, the Murġiʿites and the Šiʿa, as opposed to al-Ašʿarī's own doctrines, which are considered by him to be faithful to tradition (and of

course to be true, as well). Cf. for instance his *Kitāb al-Ibāna ‘an uṣūl al-diyāna*, ed. MAḤMŪD 1977, Chapters 1 (*al-bāb al-awwal fi ibāna qawl ahl al-zayg wa-al-bid’a*) and 2 (*al-bāb al-tānī fi ibāna qawl ahl al-ḥaqq wa-l-sunna*). Other occurrences can be found in later theological texts: see for instance AL-ŠAHRASṬĀNĪ, *Kitāb Nihāya al-aqdām fi ‘ilm al-kalām*, ed. GUILLAUME 1934, Chapter 16 (pp. 356-369) and Chapter 17 (pp. 370-396). In the first chapter al-Šahrastānī chooses the expression *al-aš‘ariyya* to designate the Aš‘arites, while in the second he employs *ahl al-ḥaqq* to the same purpose. I wish to thank Francesco Omar Zamboni very much for having brought these useful parallel texts to my attention.

THE TECHNICAL TERMS [...] THE INTENTIONS | The Aš‘arites are said to be at variance with the demonstrations of logic only as for linguistical, lexical matters – the «technical terms» [*iṣṭilāḥāt*] and the «adductions» [*irādāt*] –, while they agree with logicians as for substantial matters of doctrine – the «concepts» [*ma‘ānī*] and the «intentions» [*maqāṣid*] (again, the word here employed is the one used in the title of the work, which appears thus to be dealing, in al-Ġazālī’s intent, with the ‘substance’ or ‘gist’ of the philosophers’ views). This is the first occurrence of a crucial *Leitmotiv* in the *MF*, as al-Ġazālī insists many times, and in many different places along his exposition of Avicennan philosophy, on the mere linguistic character of several disagreements – which could be seen *prima facie* as genuine doctrinal differences – between the philosophers and other groups of thinkers, especially theologians (this aspect of conventionality is very well captured by the Latin translation: *in conveniendo inter se super rerum nominationibus*). This ‘dissolution’ of the disagreement is a prominent feature of al-Ġazālī’s attitude towards philosophy in general, as witnessed as well by analogous claims advanced in the *TF*. See Introduction, §1.7.1. *What’s in a Name? Technical Usage and Lexical Convention*, for a conspectus of all the relevant cases of usage of *iṣṭilāḥ* in the *MF*. For a perfectly parallel passage in al-Ġazālī cf. *Munqid min al-Ḍalāl*, ed. SALĪBA-‘AYYĀD 1939³: 93-94 = BĪĠŪ 1992: 48.3; 48.6-9; transl. WATT 1964: 35:

Nothing in logic is relevant to religion by way of denial or affirmation. [...] There is nothing here which requires to be denied. Matters of this kind are actually mentioned by the theologians and speculative thinkers in connection with the topic of demonstrations. The philosophers differ from these only in the expressions [*‘ibārāt*] and technical terms [*iṣṭilāḥāt*] they employ and in their greater elaboration of the explanations and classifications.

REFINEMENT OF THE METHODS OF THE ARGUMENTATIONS | Arabic *tahdīb ṭuruq al-istidlālāt*. The term *tahdīb* often carries a moral sense (as for instance in the title of Miskawayh’s *Kitāb tahdīb al-aḥlāq wa-taḥhīr al-a‘rāq*, English transl. in ZURAYK 1968) linked with the cleansing of the soul, which might seem to be entirely out of place here. However, a very characteristic turn of logic towards moral considerations is expressed by al-Ġazālī *infra* [§3], while discussing the utility of logic.

THAT IS THE THING TO THE SAKE OF WHICH | Reading *mā* instead of *mimmā*.

ALL THE SPECULATORS COLLABORATE | The idea that all those who conduct a theoretical activity (Arabic *nuzzār*, Latin *speculatores*) are part of a community of learning characterised by shared goals, despite possible differences in assumptions and style of inquiry, is adumbrated here in a condensed but compelling way. The claim that all speculators do collaborate in the refinement of the ways of the argumentation is indeed to be seen in connection with al-Ġazālī’s well-known – and historically crucial – engagement to philosophical logic (on which see LOHR 1965: 227 fn. 27; MARMURA 1975; AL-SAYYED AHMAD 1981; FRANK 1987-1989: 275; AL-‘AĠAM 1989; EL-ROUAYHEB 2004; STREET 2004; STREET 2015), but also with his persuasion of the merely linguistic nature of the disagreement between thinkers of different schools of thought (see *supra*). The remote source of the notion of philosophical collaboration for the attainment of truth is to be found in Aristotle’s *Metaphysics* (α (II) 2).

WHAT IS NECESSARY TO CONSIDER FALSE IN THEM | *scil.* in the doctrines of the philosophers, or more specifically in the aforementioned philosophical sciences.

WHAT IS SOUND AND WHAT IS CORRUPT | The claim of not willing to distinguish between *ṣaḥīḥ* and *fāsid*

concludes the second series of statements with which al-Ġazālī displays in the prologue his programmatic uncommitted stance, while it introduces the prospective drawing-up of a separate book, called *The Incoherence of the Philosophers*, which will finally provide an evaluation of the doctrines of the *falāsifa* according to their truth-value.

LOGIC

المنطق

Preface

[§2] D33-35-15

The preface to *Logic*, the first of the three main sections of the *MF*, consists of an introduction to logic which clarifies some key-notions of its presupposed theory of knowledge [§2], complemented by sections on the utility of logic [§3] and on its parts and their relative order [§4].

The first part of the introduction, which is contained in the present paragraph [§2], consists in a full-fledged analysis of the notions of «conception» and «judgment», and of their subdivision on the basis of the need of a research to get to know them (or lack thereof). Concepts and judgments which need research to be clarified (*i.e.* which are not immediately present to the mind) are known respectively by virtue of a definition and by virtue of a proof. Knowledges, then, always depend on other knowledges, until one necessarily comes to a standstill, *i.e.* to undemonstrated first notions, known without research.

PREMISE CONCERNING THE INTRODUCTION TO LOGIC | Arabic *muqaddima fī tamhīd al-manṭiq*; the entire expression might be rendered with «introductory preface». The proper meaning of *tamhīd* can be conveyed by the English «easing the path to» (cf. STREET *s.d.*: 1).

CONCEPTION | Arabic *taṣawwur*, Latin *imaginatio*. To avoid the possible ambiguity with the rendering of *maʿnā* elsewhere in the course of the treatise, and to capture the idea of process implied in the *maṣdar* of the *v* stem, I have chosen here «conception» as the best translation of *taṣawwur* (cf. STREET *s.d.*: 1), instead of the more static word «concept». In the section devoted to psychology (cf. *infra*, *MF*, *Physics* IV), however, the best translation of *taṣawwur* will sometimes be «imagination». As it is made clear by the following explanation and examples, the *taṣawwur* is properly speaking the act of perceiving [*idrāk*] those essences which are referred to by means of singular expressions; while the trace of those essences in the mind might be best captured by the word «concept», the act of perception itself is probably better understood under the label «conception».

JUDGMENT | Arabic *taṣdīq*, Latin *credulitas*. Literally, the term conveys the assertion of the truth of a knowledge. For a general and still valuable study on the Arabic usage of *taṣawwur* and *taṣdīq* cf. WOLFSON 1943^a.

LIKE THE JUDGMENT | Here: *ḥukm*.

INSTRUCTION AND VERIFICATION | Arabic *tafhīm* and *taḥqīq*. Instruction and verification are meant to specify the way in which the singular expressions refer to essences perceived through conception [*taṣawwur*].

«DEMON» | Arabic *ǧinn*; one of the examples of singular essences to which conception applies (the others being «body», «tree», «angel», and «spirit»). As opposed to the other four, it is omitted in the Latin translation, this probably being the first of a series of cultural acclimations performed by Dominicus Gundissalinus and Iohannes Hispanus in the making of the Latin version of the *MF*. For a list of these passages, in which Arabic and Islamic characteristic cultural aspects are molded, reworked or downright omitted to fit into a Christian-Latin framework, see the Introduction, §2.2.1.

LIKE YOUR KNOWLEDGE THAT THE WORLD HAS AN ORIGIN | This is the first one of a consistent series of no less than 24 examples, in which al-Ġazālī surreptitiously affirms the world's origin in time, in

contradiction to Avicenna's theory of the coeternity of the world with God. Despite the fact that the Arabic *al-'ālam*^u *ḥādīt*^{um} («the world has an origin»), or its cognates, might also be used in Avicennan contexts, expressing there something closer to logically being originated than to a proper temporal beginning, the series of the examples added by al-Ġazālī confirms that his attempt at undermining the crucial Avicennan (and Aristotelian) doctrine of the eternity of the world is indeed conscious, and systematic. Cf. Introduction, §1.8.2 and Table 16, and SIGNORI 2020^b (esp. the Appendix) for a *conspetus* of the various occurrences of this phenomenon in the Arabic and Latin *MF* and a discussion of its implications for al-Ġazālī's reception in Albert the Great.

OBEDIENCE | The corresponding Arabic expression, *ṭā'a*, is a technical term of Islamic law, which could also mean «pious act». I translated with «obedience» for necessity of symmetry with the following word, *ma'siya*, which means «disobedience». The example of disobedience is omitted in the Latin translation (cf. LOHR 1965: 239.11).

«HAVING AN ORIGIN» [...] «HAVING AN ORIGIN» | While explaining that every judgment [*taṣdīq*] needs (at least) two pre-existing conceptions before being formulated, al-Ġazālī uses again as an example the knowledge of the origin in time of the world. In order to make explicit that without a proper conceptualization of its terms every judgment is empty, al-Ġazālī says that «having an origin» [Arabic *ḥādīt*, Latin *c(o)epit*], if one does not know its meaning, is like a nonsensical word such as *mādīt* (meaningless in Arabic, and different from *ḥādīt* for just the initial letter; cf. Latin *cebit*). I have thus translated with «having an oripin», which mimics the Arabic with a similarly nonsensical English expression, yet based on the meaningful «having an origin».

HOW COULD ONE NOT IGNORE IT? | The sentence requires the introduction of a negative particle before the verb, as Dunyā's text would translate to «how could one ignore it», which is the opposite of the desired meaning. I therefore emend the text supplying *lā* before *yankaru*.

CAREFUL INQUIRY | Arabic *ta'ammul*.

LIKE THE JUDGMENT [...] AND SO ON | The examples of judgments passed after careful inquiry are a particularly significant (and already well-studied) instance of the peculiar introduction of anti-philosophical or frankly 'theological' themes – as present, for instance, in the *TF* – within the seemingly purely philosophical text of the *MF*. These examples, as a matter of fact, coincide with the three doctrines for the rejection of which al-Ġazālī accuses the philosophers of unbelief [*kufṛ*] in his refutation work, thus implying the necessity of their estrangement from the community of the believers. The three doctrines are the origin in time of the world [*ḥudūt al-'ālam*], the resurrection of the bodies [*ḥašr al-aḡsād*], the rewarding of the acts of obedience and disobedience. As noted by SHIHADÉH 2011, the third doctrine is not perfectly coincident with the denial of God's knowledge of particulars, which al-Ġazālī imputes to his opponents in the *TF* (see in particular Discussion 13), but it is clear, however, that the theoretical stake of the second piece of doctrine is precisely the first one (since should God not know the particulars of human actions, He could not provide punishment or reward for those acts). Cf. SIGNORI 2020^b: 170-171.

TO THIS [...] AT THEIR OWN PLACE | While dealing with the judgments known at first glance, without careful inquiry, al-Ġazālī gives at first two examples of primary, intuitive knowledges («two is greater than one», and «things equal to the same thing are equal to each other», the latter being one of Euclid's five axioms). He later names «sensible» and «received» knowledges as further categories of knowledges which are known at first, and goes on to conclude that their kinds are globally thirteen. This anticipates the analytical list of the thirteen kinds of propositions which can be employed as premises of a syllogism, for which see *infra*, *Logic* IV, §§60-68 (and following paragraphs for their specific use within the syllogistic argumentation).

DEFINITION | Arabic *ḥadd*, Latin *definitio*. «Definition», a key-term in Peripatetic logic, is defined to be that by means of which the non-primary conception [*taṣawwūr*] is obtained. Further analysis on this notion is to be found *infra*, *Logic* II, §19.

PROOF | Arabic *ḥuġġa*, Latin *argumentatio*. In symmetry with the preceding role of «definition», «proof» is defined to be that by means of which the non-primary judgment [*taṣdīq*] is obtained. The

same analogy (conception : definition = judgment : proof) is expounded again *infra*, *Logic* IV, §34. NATURAL DISPOSITION | Arabic *ġarīza*. For the use of this notion in Avicenna, precisely in the context of his discussions on the natural intelligence of the rational soul, and thus on its «natural operation» as well, see GUTAS 2012^a: esp. 411 (later also in GUTAS 2014^b: Part VII, 20), and GUTAS 1988: 73 = GUTAS 2014^a: 69 fn. 4. For a the use of the same notion in classical Islam see OULDDALI 2019: 178 and fn. 4, who quotes al-Muḥāsibī's (d. 857) definition of reason as «a natural disposition [*ġarīza*], which God put in men» (AL-QUWWATLĪ 1978: 202). OULDDALI 2019: 184 goes on to quote al-Ġazālī's own *Iḥyā' 'ulūm al-dīn* to the effect that «la raison est avant tout une disposition (*ġarīza*) par laquelle l'homme est préparé à obtenir la connaissance spéculative». For further information on the Ġazālīan use of a notion akin to *ġarīza*, namely that of «original human disposition» [*fiṭra*], cf. GRIFFEL 2012.

[§3] D35-15-37.12

The second section of the introduction to logic deals with the utility of the discipline. Al-Ġazālī starts with a summary of the Aristotelian theory of knowledge, clarifying that the aforementioned [§2] ways of getting to conception and judgment – namely, definition and proof – are susceptible of error. He argues, then, that it is through logic that one is able to discriminate between true and false (but seemingly true) intellectual knowledge, and through intellectual knowledge that the highest degree of human happiness can be attained. Since this intellectual happiness is the highest goal for mankind, logic can rightly be considered to be most useful in itself. As «rule» and «balance» to distinguish what is (gnoseologically, but also ontologically) right from what is wrong, logic as an instrument of philosophy thus receives a remarkable turn towards the domain proper to ethics. While present *in nuce* in the late antique tradition of commentary on Aristotle's *Categories* (see for instance AMMONIUS, in BUSSE 1895: 13.5, who says that logic distinguishes τὸ ἀληθὲς ἀπὸ τοῦ ψεύδους καὶ τὸ ἀγαθὸν ἀπὸ τοῦ κακοῦ), the emphasis on the ethical shift is all but absent from Avicenna's *DN* and from other Islamic discussions on the utility of logic (see for instance AL-FĀRĀBĪ, *Iḥṣā' al-'ulūm*, ch. 2, ed. BŪ MALḤAM 1996: 29.7-33.8), and is thus to be seen as a properly Ġazālīan addition. It will have lasting consequences in the Latin reception of al-Ġazālī's treatise, as well: see for instance the implicit quotation of this very characteristic line of reasoning in Albert the Great's *Super Porphyrium de V universalibus, Tractatus de antecedentibus ad logicam*, ch. 3 (ed. SANTOS NOYA 2004: 6.16-25), for which cf. SIGNORI 2019: 481 and fn. 41.

UTILITY OF LOGIC | Arabic *fā'ida al-mantiq*.

THE UNKNOWN ONLY RESULTS THROUGH THE KNOWN | This is a very general principle of Aristotelian theory of knowledge. One can get to what is still unknown [*maǧhūl*] only through something already known [*ma'lūm*]. However, as it is made clear in what follows, only a specific known can lead to the «adduction» [*irād*], the «procurement» [*iḥḍār*] and the «unveiling» or disclosure [*kašf*] of a specific unknown in the mind. There is only one way, or method [*ṭarīq*], for getting to know each unknown. «DEFINITION» OR «DESCRIPTION» | As opposed to the first occurrence of the idea of «definition» [*ḥadd*] as that which makes present the conception in the mind [§2], here the notion of «description» [*rasm*] is added. As for the difference between the two, cf. *infra*, *Logic* II, §19.

PIECES OF KNOWLEDGE HAVING THE FORM OF JUDGMENTS | Arabic *'ulūm tašdiqīyya*, literally 'judgmental sciences' or 'knowledges'.

SYLLOGISM | Arabic *qiyās*.

INDUCTION | Arabic *istiqrā'*. Cf. also *infra*, *MF, Logic* 4, §34, §47 and, specifically, §49.

EXEMPLIFICATION | Arabic *tamṭīl*. Cf. also *infra*, *MF, Logic* 4, §34, §47 and, specifically, §§50-54.

BOTH THE DEFINITION [...] WHAT IS CORRECT. | The ways of access to both conception and judgment may

be «correct» [*ṣawāb*], and thus lead to «certainty» [*yaqīn*], but they may also be «wrong» [*ġalaṭ*] (and have only a resemblance to the *ṣawāb*). The opposition *ṣawāb* vs. *ġalaṭ* is another couple of contrary terms to be added to the oppositions described in the Prologue [§1].

RULE | Arabic *qānūn*. Being a «rule», the «science of logic» [*ʿilm al-mantiq*] distinguishes «sound» [*ṣaḥīḥ*] and «corrupt» [*fāsid*] (cf. again Prologue, §1), and the «certain knowledge» [*ʿilm yaqīnī*] from the «uncertain». The role of logic is instrumental to the discernment of other knowledges.

BALANCE | Arabic *mīzān*. The idea of logic as a «balance» [Persian *tarāzū*] is already to be found in the prologue to the *DN* (Persian in MEŠKĀT: 2.7; French translation in ACHENA-MASSÉ I (1955): 21), and it appears again in the chapter *On the Aim and Utility of Logic* [*Bāz-numūdan ġaraḍ andar ʿilm-i mantiq va-fāydaḥ-i andar-vī*] (starting at MEŠKĀT: 5.1, corresponding to ACHENA-MASSÉ I (1955): 21). The term *tarāzū* appears again *infra*, at MEŠKĀT: 10.1 (Persian *va-ʿilm-i mantiq ʿilm-i tarāzūst*; cf. the French translation in ACHENA-MASSÉ I (1955): 25). The connection between logic and the metaphor of the balance (or scales) was already present in the famous debate between the Baġdād Aristotelian philosopher Abū Bišr Mattā (d. 940) and the grammarian Abū Saʿīd al-Širāfi, which can be read in various translations in modern Western languages (English translation in MARGOLIOUTH 1905; German in ENDRESS 1986; Italian in FERRARI 2005: 374-378). Avicenna himself employs the term again in the *Sylogism* [*Qiyās*] of the *Kitāb al-Šifāʾ*, in particular at I.2, ed. ZĀYID 1964: 11.9-10, in the context of a critique he is addressing to «the virtuous one among the modern thinkers» [*fāḍil al-mutaʾaḥḥirīn*], whose identification is still debated (cf. STREET 2001 for the proposed identification with al-Fārābī, and DI VINCENZO 2021: xxiv fn. 34). For some quick but important remarks on the relevance of this understanding of logic for al-Ġazālī's usage of it as an instrument, not only in philosophy but also in *kalām* and *fiqh*, cf. SABRA 1980: 748. The simile of the scales of reason also enjoys an important aftermath in post-Ġazālīan Arabic thought, as it appears in an introductory passage of Abū l-Barakāt al-Baġdādī's *al-Kitāb al-Muʿtabar*, ed. anon. 1938-1939 (1): 4.13-18 (cf. the English translations in WISNOVSKY 2014: 333-334 and GRIFFEL 2021: 490, from the latter of which I quote the most relevant excerpt): «[Finally] I submit this to [my] careful consideration, adopting in all questions that are subject to reason that which makes one side of the scale preponderate». The same imagery, with partially different lexicon, is also to be found in the preface to Faḥr al-Dīn al-Rāzī's *Compendium on Philosophy and Logic* [*al-Mulaḥḥaṣṣ fi l-ḥikma wa-l-mantiq*] (ed. QARAMALIKI-AŞĠARINIZHĀD 2002: 4, English translations in SHIHĀDEH 2017: 300-301 and GRIFFEL 2021: 327 and 517, from which I quote with minor modifications): «If both sides of the scales, [however,] are balanced [*takāfaʾat al-kaffatāni*] and profit is not distinguishable from loss [...]». Remarkably, the jargon of 'profit' and 'loss' also recurs later on in this passage of the *MF*, which thus appears as a close antecedent of those methodological statements by al-Rāzī.

STANDARD | Arabic *mīyār*. Paired with the preceding *mīzān* ('balance') and analogously formed (both are names of instrument with prefix *mī-*), *mīyār* ('standard' or 'standard measure', 'norm', 'criterion': see WEHR 774^b) emphasises once more the instrumental role of logic, operating on every (other) science for discerning what is true and what is false in it. It is perhaps not without significance that the two terms here employed by al-Ġazālī appear again in the titles of two most relevant works of his, namely the *Balance of Action* [*Mīzān al-ʿamal*] (ed. DUNYĀ 1964; see also JANSSENS 2008^a) and the *Standard of Knowledge in the Art of Logic* [*Mīyār al-ʿilm fi fann al-mantiq*] (ed. DUNYĀ 1965). The idea of «balance», although expressed with a different Arabic term, appears once more in another of al-Ġazālī's titles, *The Just Balance* [*Al-Qistās al-Mustaqīm*] (English translations in BREWSTER 1978 and MCCARTHY 1980, Appendix III: 287-332).

ABUNDANCE [...] LOSS | The balance is a good simile for logic, since it is used to discriminate between the states of «abundance» [*ruġḥān*] and «profit» [*riḥḥ*], on the one hand, and «lack» (or imperfection) [*nuqṣān*] and «loss» [*ḥusrān*], on the other hand. These oppositions are once again to be compared to those present in the Prologue, in the Epilogue and in this preface, building altogether a rich series of semantic contrasts.

KNOWLEDGE FROM IGNORANCE | Leaving metaphors aside, in the question of the hypothetical objector

logic is said plainly to distinguish «knowledge» (or ‘science’) [*‘ilm*] from ignorance [*ǧahl*]. The roots of the two words are the same employed *supra* to express the opposition of known [*ma‘lūm*] and unknown [*maǧhūl*], making it clear that the objector is here reprising that line of argument. The question of the opponent shifts the stake of the argument from the utility of logic to the utility of knowledge (or science) itself: if logic is useful in order to acquire science, what is, then, the specific utility of science *per se*? What follows, therefore, is a demonstration of the utility of science [*fā‘ida al-‘ilm*], given which the utility of logic [*fā‘ida al-mantiq*] as an instrument for the acquisition of that science immediately follows.

ETERNAL HAPPINESS [...] THE SOUL | Al-Ġazālī’s answer to the question about the utility of knowledge starts apparently from afar, mentioning the «eternal happiness» [*al-sa‘āda al-abadiyya*] as most useful in itself. This eternal bliss coincides with the «happiness of the hereafter» [*sa‘āda al-āhira*] and is said to depend on the perfecting of the soul [*manūta bi-takmil al-nafs*].

PURIFICATION | Arabic *tazkiya*. Two things are needed to get the «perfecting» [*takmil*] of the soul. The first one is the «purification», which coincides with the «cleansing» [*taḥhūr*] and the «sanctification» [*taqdis*] of the soul. The lexicon here employed by al-Ġazālī is clearly moral, and the presence of the root *qds* of ‘sacrality’ hints at a deeply religious theme which starts here to be displayed.

EMBELLISHMENT | Arabic *taḥliya*. The second thing needed to perfect one’s soul is the «embellishment», namely the impression in the soul of «the clear picture of the truth» [*ǧaliyya al-ḥaqq*], in order to reveal, by this means, the «divine truths» [*ḥaqā’iq ilāhiyya*] and the «hierarchical order» [*tartīb*] (a key lemma of Avicennan cosmology) of the «entire existence» [*al-wuǧūd kull^h-hu*]. The couple of «purification» and «embellishment» is expressed in Arabic with two feminine verbal nouns of the II form, showing a typical literary predilection for couples of consonant words.

THE EXAMPLE [...] MIRROR | As an example of what has been said [or: of the soul in this state, Arabic *maṭāl^h-hā*], al-Ġazālī offers the «mirror» [*mir‘ā*], which perfectly reproduces the «beautiful forms» [*al-ṣuwar al-ǧamila*] only when it is «cleansed from malice [*ḥubt*] and rust [*ṣada’*]». The imagery of the mirror, or looking glass, also appears at the beginning of *Metaphysics* (*infra*, *First Premise*, §93) and then again at the very end of the *MF* (cf. *infra*, *Physics* V, §435), in the ethical and prophetological section which concludes the entire work. That passage is globally the closest parallel to this one, and together they constitute two very distinguishable ethical insertions in a work that is predominantly overtly theoretical, and gives little space to practical philosophy (another exception might be represented by the section on the happiness or misery of the intellectual soul in the afterlife in *Physics* V.3-4, §§428-432). For the image of the mirror, and its quality of best reproducing other things when polished, see also *Mizān al-‘amal*, ch. 7 (cf. *infra*, *Physics* V.5, §435). For its Ṣūfī implications at an epistemological level, and its overall importance in al-Ġazālī’s oeuvre, cf. JANSSENS 2008^b; see also the remarks by GRIFFEL 2021: esp. 427-428.

THE UTILITY [...] EXTREMELY USEFUL | The final clause summarises very clearly the preceding argument, explaining once more that the utility of logic is «to make use of the science» [*iqtināṣ al-‘ilm*], namely to avail oneself of it and to take advantage from it, while the utility of the science [*fā‘ida al-‘ilm*] is to «take possession» [*ḥiyāza*] of the aforementioned eternal happiness. Playing a crucial role in the attainment of the ultimate goal of humanity, logic can rightly be considered most useful, and must therefore be studied.

[§4] D37.12-38

The third and last section that can be individuated in the introduction to logic deals with its divisions, or parts, and their reciprocal order (which structurally depend on the intent of logic), and provides in conclusion a table of contents of the subsequent treatises. Since logic chiefly deals with definition and syllogism, and syllogism is the most important of the two, the understanding of syllogism is a priority. However, syllogism is a compound, and it is therefore necessary to lay out all its components

in order to properly explain it. These components include subject and predicate, expression and meaning (or concept). The ordering of the topics within the section devoted to logic will follow, then, this principle: the first treatise will deal with (simple) linguistic expressions and their way of signifying a concept; the second with the concepts themselves; the third with the proposition, which is the basic unit of the syllogism but is in turn composed of subject and predicate; the fourth with syllogism, in two chapters, one devoted to its matter (material content of the premises), and the other to its form (formal validity of the consequence). In this summary there is no mention, however, of the topics dealt with in the actual fifth treatise of *Logic*, which expounds material concerning demonstration, roughly corresponding to the Arabic and Avicennan reception of Aristotle's *Posterior Analytics*. A parallel case for this omission is the table of contents provided in the Preface to the *Physics* of the *MF*, where the material contained in the fifth and final treatise is similarly omitted from the preliminary conspectus: cf. *infra*, §315.

THEY ARE EXPLAINED BY THE MENTION OF ITS INTENT | Arabic *yatabayyanu bi-dikrⁱ maqṣūd^h-hi*, Latin *cognoscuntur ex ostensione intentionis suae*. According to WEHR 106a, the verb *tabayyana* is construed with *min* both in the sense of 'follow from' and in that of 'be explained by'. The Latin rendering *ex ostensione* [...] might indeed mirror an Arabic *min*, as opposed to *bi-*. However, given the construction with the *bi-* of the means chosen by Dunyā, the sentence might also be translated with a slightly more generic sense of the verb: «They become clear through the mention of its intent», without any hardship of meaning. The past participle *maqṣūd* is not the singular of the plural *maqāṣid* that appears in the title, and I choose therefore to render it with the English «intent» (as opposed to «intention»; the Latin translation, which usually titles the work *Summa theoricæ philosophiæ*, has here *intentionis*).

DISCERNING | Arabic *tamyīz*. As will become apparent throughout the text of the *MF*, Arabic lexicon of difference is extremely rich, and its manifold nuances quite difficult to fully capture in English. Here, the *tamyīz* is that provided by logic between «sound» and «corrupt» (cf. *supra*, Prologue and §3, for previous occurrences of the same opposition between *ṣaḥiḥ* and *fāsid*). This differentiation, applied to definitions and syllogisms, is said to constitute (together with them) the «intent» [*maqṣūd*] of logic.

COMPOUND | Arabic *murakkab*. Syllogism [*qiyās*], which is said to be «the most important» [*aḥamm^u-humā*] of the two parts of the intent of logic (the other being, as mentioned, definition), is a «compound». This entails the necessity of dealing at first with its parts, the premises, which are in turn composed of a predicate and a subject.

FROM TWO PREMISES, AS WILL BE [EXPLAINED] | Arabic *min muqaddimatayni*, Latin *ex duabus propositionibus*. The forward reference is to *Logic* IV, entirely devoted to the discussion of the syllogism; cf. *infra*, esp. §§34-48.

EVERY PREDICATE AND [EVERY] SUBJECT | Reading *wa-kull^u maḥmūlⁱⁿ wa-mawḍū^{an}*, as in D-Alt, as opposed to *wa-kull^u mawḍū^{an}* chosen by Dunyā. As a matter of fact, what differentiates itself in linguistic «expression» [*lafẓ*] and conceptual «meaning» [*ma'na*] is obviously not only the subject, but also the predicate.

EITHER IN BEING OR IN KNOWLEDGE | Arabic *immā fi l-wuḡudⁱ aw fi l-'ilmⁱ*. The impossibility of grasping the compound without the parts is both ontological and gnoseological, as will be made apparent as well through the following simile of the builder of a house.

AS THE BUILDER [...] IN THE FIRST PLACE. | The long simile compares the «builder of the house» [*bānī al-bayt*] (Latin *fabricator domus*) to the man who researches knowledge [*ṭālib al-'ilm*] (Latin *inquisitor scientiæ*), on the ground that both need to deal in the first place with the single and simple components of their respective endeavours, and only after having those components at hand can they move to the task itself they wish to undertake (the building up of the house, the 'construction'

of knowledge). Similes concerning the building of a house, in connection with the necessity of taking first into account the simple, and only afterwards the compound, appear in the late antique tradition of commentary on Aristotle's *Categories*: cf. for instance PHILOPONUS, 11.5-29 (see SIRKEL-TWEEDALE-HARRIS 2015: 49), where the «housebuilder» is compared with the Philosopher himself; SIMPLICIUS, 14.3-27 (CHASE 2003: 29-30). In these commentaries, the simile is also linked to the axiom according to which 'the first in thought is the last in action', which also explicitly appears in the *MF* at the beginning of *Logic* IV (*infra*, §34).

THE WOOD, THE BRICKS | Arabic *al-ḥaṣab wa-l-libn* (or *labin*, WEHR 1005^a: «unburnt brick(s), adobes»). The order of the two materials is inverted in Latin: «laterum, lignorum» (LOHR 1965: 243.111).

CONFORMABLE | Arabic *muṭābiq*. The doctrine of knowledge as «conformable image of the known» assumes a correspondence between mind and reality.

THE WAY IN WHICH THEY SIGNIFY THE CONCEPTS | Arabic *waḡh dalālat-hā 'alā al-ma'ānī*. Cf. *infra*, *MF*, *Logic* I, §§5-9.

PROPOSITION COMPOSED OF SUBJECT AND PREDICATE | Arabic *al-qaḍīyya al-murakkaba min mawḍū^{an} wa-maḥmūlⁿ*. Although according to WEHR 904^b, s.v., the term *qaḍīyya* has the philosophical technical meaning of premise of a syllogism, the technical usage of the *MF* has *muqaddima* for 'premise', and *qaḍīyya* for the more generic 'proposition', in accordance with the Persian terminological choice in Avicenna's *DN* [*qaziyeh*]; cf. also *infra*, §36. The Arabic *qaḍīyya* is rendered here with *enuntiatio*, which *infra*, §22 will rather translate *ḥabar* ('notification').

CHAPTERS | Arabic *funūn* (sg. *fann*), Latin *maneriae*. As opposed to the other sections, which are divided in «treatises» [*maqālāt*] (Latin *tractatus*), each of the five subdivisions of *Logic* is called *fann*, «chapter». The term is also typical of Avicennan works. For reasons of symmetry with the subdivisions of *Metaphysics* and *Physics*, in the commentary I have sometimes used the term «treatise» when referring to the subsections of *Logic* as well, while translating *fann* with «chapter» wherever it appears in the text of the *MF*.

Treatise I

[§5] D39

The first treatise of *Logic* deals with the signification of the expressions [*dalāla al-alfāz*] in five subsections, called «subdivisions». The first one of them, which constitutes the bulk of the present paragraph, presents three ways in which linguistic expressions can signify concepts (or meanings), providing short examples for each of them and clarifying which ways are suitable for the scientific endeavour. While the ways of «conformity» and «inclusion» can be, and are, profitably used in the sciences, «concomitance» cannot fit in scientific speculation, since it might lead to an indeterminate number of concomitants, and of the indeterminate there cannot be science (for Aristotle's concern about the scientific unknowability of the infinite particulars cf. *Rhet.* I 2, 1356^b30-1357^a1, which could be read in connection to *Soph. El.* 9, 170^b5-8). The beginning of this paragraph corresponds to the *incipit* of the decurated text of the *MF* transmitted by Arabic MS Dublin, Chester Beatty Library, Ar. 5328, for which cf. the *Introduction*, §2.1.1.

SUBDIVISIONS | Arabic *taqṣīmāt*. The five «subdivisions» of the general matter of the treatise (*i.e.* the signification of the linguistic expressions) are here just hinted at, as they will be expounded one by one in this (first subdivision) and the next four paragraphs.

THE FIRST [SUBDIVISION] | I suppose that the implicit noun is here *taqṣīm*, as witnessed by the Latin *divisio prima*, as well. *A* reads here *al-awwal isāgūḡī*, with an Arabic transliteration of the Greek εἰσαγωγῆ, as in the title of Porphyry's *Isagoge* (the addition is not however in *Y*).

CONFORMITY | Arabic *muṭābaqa*, Latin *paritas* (lit. 'equality'). The example of signification by conformity is the way in which the word «house» directly signifies its concept (the Latin translation has here a slight variation, since it repeats 'house' instead of having an equivalent of *ma'nā*: «sicut hoc nomen 'domus' significat domum», cf. LOHR 1965: 243.6-7).

INCLUSION | Arabic *taḍammun*, Latin *consequentia* (lit. 'consequence', or technically 'inference'). The example of signification by inclusion is the way in which the word «house» signifies a specific «wall» (*i.e.* a part of the house). The word «wall» [Arabic *ḥā'it*, Latin *paries*] signifies wall by way of conformity, while «house» in the sense of 'wall' is significant by inclusion (rhetorically, this would be understood as a case of synecdoche – the whole for one of its parts).

CONCOMITANCE | Arabic *iltizām*, Latin *comitantia*. The example of signification by concomitance is the way in which the word «roof» [Arabic *saqf*, Latin *tectum*] signifies «wall».

IT WAS NOT POSSIBLE [...] [FOR IT] | The way of concomitance is conceptually different from both conformity and inclusion, and then it was inevitable [«it was not possible to do without», *fa-lam yakun budd^a*] to coin another name to distinguish it from the other two. This idea is expressed with the term «invention» [*ihṭirā'*], and is an instance of al-Ġazālī's keen attention to the technical jargon of the philosophers. The clause «it was not possible [...] third name» [*fa-lam yakun [...] ism tālit*] is not translated into Latin.

THAT WHICH IS EMPLOYED [...] ACTS OF UNDERSTANDING | The way of concomitance is kept apart from the other two, inasmuch as it is less suitable to be employed in the «sciences» [*ulūm*] and in the «acts of understanding» [*tafhīmāt*] than them. Both these references are not translated into Latin, being substituted by the expression «de significatione dictionum», which would presuppose an Arabic text like **min dalāla al-alfāz*, which is however not attested in *Dunyā*, nor in *A*, nor in *Y* (cf. LOHR: 244.16-17: «Quae autem magis in usu est de significatione dictionum, est significatio secundum parilitatem et secundum consequentiam [...]»).

EVOKE ONE ANOTHER | Arabic *yatadāʿī*. Latin has here the trivializing reading *pervenitur*, which does not capture the nuance of reciprocity of the Arabic VI stem.

[§6] D40.1-17

The second division announced in §5, and expounded in the present paragraph, is the distinction of the expressions in simple and composed. Simple expressions are defined as those whose parts do not convey the meaning of the parts of their referent; composed expressions, conversely, are those whose parts do convey the meaning of the parts of their referent.

DIVISION | Arabic *qisma*.

SIMPLE | Arabic *mufarrad*.

COMPOSED | Arabic *murakkab*. The syllogism was described *supra*, §4, as a «compound», using the same Arabic expression. The level at which the composition takes place is however much more fundamental here, as becomes apparent by the examples given: it is not indeed a composition of larger expressions into propositions (and higher forms of organization of language), but rather of parts of an expression to denote a single referent.

AS FOR THE SIMPLE [...] «HUMAN» | The definition of «simple» expression considers the parts of the linguistic utterance. It is simple that expression by means of whose phonetic parts (for instance, its syllables) «the parts of the concept are not intended» [*yurādu bi-*]. The example given is the word «human» [*insān*].

AS A MATTER OF FACT [...] CONCEPT | The parts «hu» and «man» of the word «human» do not convey on their own any meaning concerning the parts of the actual human being. In Arabic the word is analogously resolved into the two syllables *in* and *sān*, and the Latin translator renders in the same way, with the word *homo* articulated in the meaningless syllables *ho* and *mo* (cf. LOHR 244.24-25). This situation is contrasted with two other expressions in which one could identify parts: «Zayd's slave» (or 'lad') [*ḡulām Zayd*] and «Zayd walks» [*Zayd yamšī*], which are on the contrary composed, since the linguistic parts «Zayd», «slave» and «walks» all point to distinguishable concepts, which are part of the general concept or meaning of the composed expression taken as a whole. The Latin translation replaces in both examples the name of Zayd with that of *Petrus*, with an analogous function of generic name of person: «servus Petri», «Petrus ambulat» (cf. LOHR 1965: 244.25-26).

«'ABD ALLĀH» | This example is the crucial one for the distinction between simple and composed expressions, as «'Abd Allāh» may be taken either in the generic sense of «servant [*abd*] of God», being thus a composed expression, or as a «proper noun» [*ism laqab*], i.e. a theophoric name of person. In this latter sense it is to be considered as a simple expression (equivalent to «Zayd»), since its referent is only one (and in that case '*abd* and *Allāh* do not refer, of course, to parts of the concept of the man called 'Abd Allāh). The issue is perfectly translated into Latin with the analogously formed name *Adeodatus*, which can mean «given by God» or else be a name of person (it was, for instance, the name of Augustine of Hippo's son). The generic sense in which «'Abd Allāh» means «servant of God» is for al-Ġazālī a «characterization» [*naʿt*], later glossed also as «descriptive feature» [*wasf*].

AMBIGUOUS | Arabic *muštarik*, Latin *commune vel ambiguum*. Since every man called 'Abd Allāh is actually also a '*abd Allāh*, i.e. a God's servant, it can be considered as an instance of ambiguity (or polysemy). The notion of *ištirāk*, with the different meaning of 'act of participating', appears *infra* in §7, while five kinds of «expressions of the concepts», among which the ambiguous ones, are distinguished *infra* at §9. This short gloss, which perfectly applies in Latin as well (since every man called Adeodatus is likewise also «a Deo datus», 'given by God': cf. LOHR 1965: 244.31), is thus an anticipation of the coming discussions on the classes of the expressions.

[§7] D41.18-42.7

The third division announced in §5, and expounded in the present paragraph, distinguishes between particular and universal expressions, participation in which is respectively impossible and possible. Universals thus can have individual instances under themselves, which participate in them, while particulars cannot. Universal expressions become particular when specified by a deictic like «this».

NOTION | Arabic *mafhūm*. The past participle of *fahima*, in this passage used consistently as a noun, cannot be rendered literally as «understood», and requires thus an alternative translation.

PARTICULAR | Arabic *ǧuzʿī*, Latin *singulare*. The provided examples are «Zayd» (Latin *hic Petrus*, with the redundant introduction of a deictic even for the proper noun), «this horse», «this tree».

PARTICIPATION | Arabic *širka* (or *šarika*). Other options of translation include ‘partnership’, ‘communion’, and ‘association’.

UNIVERSAL | Arabic *kullī*, Latin *universale*. The provided examples are «horse», «tree», and «man» (corresponding, although in a different order, to the three examples of particular expressions given *supra*). Universality is not determined by the actual existence of more individuals of a kind. Two examples of this are given: «horse» would remain universal even if there were just one horse in the whole world, being particular only if specified with a deictic («this horse»); «Sun» is universal, albeit being in actuality what can be called a monadic species.

PARTICIPATING | Arabic *ištirāk*.

THEY WOULD FALL UNDER | Arabic *daḥalat taḥta*.

[§8] D41.8-42.6

The fourth division, expounded in the present paragraph, concerns an aspect of grammar. It distinguishes expressions in three classes – verb, name and particle –, making use of a specifically Arabic classification of the parts of speech. While present as such in Avicenna’s *DN*, which is certainly al-Ġazālī’s direct source, this logical distinction, with its clear grammatical echo, is also reminiscent of some passages of al-Fārābī’s *Iḥṣāʾ al-ʿulūm*, ch. 2, ed. BŪ MALḤAM 1996: 35.3 («and the simple [expressions] are ‘name’ [*ism*], ‘verb’ [*kalīma*], and ‘particle’ [or ‘affix’, *adā*]»), with the further specification of the peculiar Arabic character of this distinction at 35.7 («and these and many others are peculiar to the tongue of the Arabs [*yaḥuṣṣu lisān^a al-ʿarab*]»). The lexicon chosen by al-Fārābī is even closer to the one employed in this passage of the *MF* shortly *infra*, BŪ MALḤAM 1996: 35.10-11: «like the speech of the grammarians among the Arabs [*qawl al-naḥwīyyīna min al-ʿarab*] that the Arabic words [*kalīm*] are ‘name’ [*ism*], ‘verb’ [*fiʿl*], and ‘particle’ [*ḥarf*]».

VERB | Arabic *fiʿl*. However, al-Ġazālī notices shortly after that the «logicians» [*manṭiqīyyūna*] call the ‘verb’ with another term, literally «word» [*kalīma*]. An analogous distinction is to be found in Avicenna’s *DN* (MEŠKĀT: 29.7), may be drawing on passages like those of al-Fārābī listed *supra* in the presentation of §8.

NAME | Arabic *ism*. In traditional Arabic grammar, adjectives as well fall under the label of *ism*, ‘name’.

PARTICLE | Arabic *ḥarf*. In traditional grammar, the label «particle» includes any word which is neither a name nor a verb. The term *ḥarf* may also indicate a letter of the alphabet, as in the title of al-Fārābī’s *Book of Letters* [*Kitāb al-ḥurūf*].

MOREOVER [...] CONCEPT | The verb, here again expressed with the ‘logical’ word *kalīma*, has an

intrinsic temporal value: it expresses not only a concept (like a name does), but also the time of that concept. It is moreover distinguished from adverbs of time like «yesterday» or time-expressions like «first year» because in a verb the temporal reference is distinguishable from the concept signified by the word itself, while temporal ‘particles’ only express the concept of the time, without additions.

[§9] D42.7-43

The fifth and last division, expounded in the present paragraph, is the most complicated of the five subdivisions of the expressions, as it entails a pentapartition of words into five classes: [(i)] synonymous; [(ii)] polyonymous, [(iii)] heteronymous, [(iv)] ambiguous, and [(v)] homonymous expressions. A most apparent difference with respect to the remote origin of this distinction, namely the first chapter of Aristotle’s *Categories*, is that the division pertains here to linguistic «expressions» – although the link with mental «concepts» is highlighted –, and not to the real things bearing those names, as in D-Altristotle. An application of these distinctions to linguistic objects also seems to surface, however, in Aristotle’s *Sophistical Refutations* (see for instance the passages of *Soph. El.* 17, 175^a36-37, and 22, 178^a25-28, quoted to this effect by FAIT 2007: 110), and some scholars have attributed this linguistic use to Speusippus: cf. BARNES 1971 for a critical discussion. Examples of each class of expressions are given in the present paragraph, with a particular emphasis on the intermediate status of homonymous expressions, which are particularly relevant since the metaphysical key-concept of «existence» pertains to their domain. Similar structures are to be found in Avicenna’s *Categories* [*Maqūlāt*], I.2 (*On the utterances of homonyms, synonyms, heteronyms, paronyms, and the like*, cf. CAMINADA 2019: 11 ff.), but also in texts more focused on linguistic analysis like al-Tawḥīdī and Miskawayh’s *Book of Rambling (Questions) and Comprehensive (Answers)* [*Kitāb al-hawāmīl wa-l-šawāmīl*] (ed. AMĪN-ŠAQR 1951: 5-10), for which see BETTINI 2016: 373. While classes (i), (ii), (iii), and (v) are common to all these discussions, class (iv) (ambiguous expressions) is absent from both Avicenna’s and Miskawayh’s text, being replaced in the first one by the faithfully Aristotelian notion of paronyms (*al-muštaqqa asmā^h-hā*, cf. CAMINADA 2019: 11 fn. 454), and in the second by the case that «consonnes et significations en partie se correspondent et qu’elles divergent dans le reste» (as paraphrased by BETTINI 2016: 373). The notion of *muštarika* however resurfaces in the actual discussion of Avicenna’s *Categories*. An analysis of this complicated terminology can be found in ALONSO 1963: 15-17 fn. 7bis (see also ALONSO 1954: 117-123 and ALONSO 1955). See also, for the linguistic underpinnings of these expressions and a parallel text in al-Ġazālī’s *Mi’yār al-‘ilm*, SHAH 1999: esp. 45 n. 57.

SYNONYMOUS | Arabic *mutawāṭi’a*, Latin *univoca*. Literally «in mutual agreement», from Iṣḥāq ibn Ḥunayn’s Arabic translation of Aristotle’s *συνώνυμα* as *al-mutawāṭi’a asmā^h-hā* in *Cat.* 1^a6. I derive these and the following pieces of information on the Greek-Arabic translation of Aristotle’s logical terminology from CAMINADA 2019: 11 fn. 454. In Aristotle, homonyms, synonyms, and paronyms (here not considered) are divisions of things (ὄντα), while all the classes distinguished here – according to Avicenna’s doctrine – are divisions of the «expressions of the concepts» [*al-alfāz min al-ma’ānī*]. Synonymous (things) have in common both name and definition (cf., for a useful synoptic diagram, EVANGELIOU 1988: 38). The examples given by al-Ġazālī are «animal» for «horse, bull, and man» (the Latin translation has no equivalent for «bull»), and «man» for «Zayd, ‘Amr and Ḥālid» (Latin has only two, acclimated names of person: «Petro et Iohanni»).

POLYONYMOUS | Arabic *mutarādifa*, Latin *diversivoca*. Literally «successive», «synonymous» (in modern sense, as opposed to the Aristotelian one, for which cf. *supra*), from the Arabic translation of *πολύωνυμα* [*al-mutarādifa asmā^h-hā*], not used by Aristotle but present in later Greek

commentators on the text of the *Categories*: cf. for instance AMMONIUS, in BUSSE 1895: 16.11-14, where πολώνυμα are contrasted with ὁμώνυμα as the first differ for the name but not for the definition, while the latter differ for the definition but not for the name. Polyonymous things thus have in common only the definition (EVANGELIOU 1988: 38). The examples given by al-Ġazālī are *layt* and *asad*, i.e. two words for «lion» (ALONSO 1963: 16 erroneously translates them as «lobo», ‘wolf’; *rectius* BEER 1888: 31 has «der Löwe» and «der Leu», the former a common word, and the latter a poetic German form for ‘lion’), and *hamr* and ‘uqār, i.e. two words for «wine» (ALONSO 1963: 16 has «vino» and «bebida alcohólica», ‘alcoholic drink’, which is however not a perfect synonym for ‘wine’; analogously, BEER 1888: 31 renders as «Wein» and «Rauschtrank», partially missing the required synonymy). More on the point, the Latin translators have supplied here the typical examples of synonyms (in modern sense) of the Latin tradition: *ensis*, *muco*, *gladius*, i.e. three words for «sword». LOHR 1965: 247 fn. 80 remarks that in different, previous Latin authors the class of expressions of which *ensis*, *muco* and *gladius* are examples receives different names: *plurivoca* in Martianus Capella’s *De nuptiis*, *multivoca* in Boethius’ commentary to the *Categories*, *polyonyma* in Alcuin’s *De dialectica*. Perfect synonymy (in modern sense) is an issue discussed in linguistics; however, possible English examples might be found in botanical alternative terms like «aubergine» and «eggplant», «yellowroot» and «turmeric», or «courgette» and «zucchini», which are however far from the meaning of the Arabic words provided by al-Ġazālī, and would have made for a rather weird, and all the more anachronistic, addition to the translation.

HETERONYMOUS | Arabic *mutabāyina*, Latin *multivoca*. Literally «mutually different», from the Arabic translation of ἑτερόνυμα [*al-mutabāyina asmā^h-hā*], not used by Aristotle but present in later Greek commentators on the text of the *Categories*: cf. for instance AMMONIUS, in BUSSE 1895: 16.15-16, where ἑτερόνυμα are contrasted with συνώνυμα as the first differ for both name and definition, while the latter have both in common. Heteronymous (things) thus have in common neither the name nor the definition (EVANGELIOU 1988: 38). A attests the variant reading *mutazāyila*, which has the possible meaning of ‘disjoined’, ‘inconsistent’, but is certainly worse than *mutabāyina*. The examples given by al-Ġazālī are «horse», «bull» and «sky» (for the different actual things which are called with those terms). Latin examples are *equus* (rightly translating «horse») and *asinus* (‘donkey’).

AMBIGUOUS | Arabic *muštārika*, Latin *aequivoca*. Ambiguity is intended here as homonymy (or aequivocity) in its narrowest sense, and thus (from the point of view of language) as pure polysemy. As a matter of fact, the example given is that of the Arabic polysemous word *par excellence*, ‘ayn, of which four meanings (among the many more possible senses) are given: «gold», «sun», «balance» and «water-spring». The example given in the Latin translation is «‘canis’, quod dicitur de latrabili et de caelesti sidere» («‘dog’, which is said of the barking one and of the celestial star», see LOHR 1965: 246.84). LOHR 1965: 246 fn. 84 refers for this example to Boethius’ *De interpr.* (pr. I 5 (PL 64. 302): «Canis enim cum sit aequivocum, semel totum latrabilem, secundo totum caelestem, et rursus totum marinum significat»); but the notion of ‘dog’ (κύων), as barking animal, constellation of *Canis maior*, and shark – ‘dogfish’, cf. Italian ‘pescecane’) as properly ambiguous expression is already to be found in Aristotle (*Soph. El.* 4, 166^a15-16), together with the concurring example of ‘eagle’ (ἀετός, as the flying animal, sea-eagle, and pediment). Both words were possible answers to a Greek riddle, attested in Aristophanes’ *Wasps* (20-23), which asked about things which can be in the sky, on the earth, and in the sea. For a history of the example up to Spinoza cf. LICATA 2021. For the absence of the notion of «ambiguous» expressions in lists similar to this one by Miskawayh and Avicenna cf. the introductory presentation to this paragraph.

HOMONYMOUS | Arabic *muttafiqa*, Latin *convenientia*. Literally «concordant», from Ishāq ibn Ḥunayn’s Arabic translation of Aristotle’s ὁμώνυμα as *al-muttafiqa asmā^h-hā* in *Cat.* 1^a. Homonymous (things) have in common only the name (EVANGELIOU 1988: 38). The example given by al-Ġazālī is the word «existence» [*wuġūd*] for the substance and the accident. This cursory reference to the ‘focal meaning’ of existence anticipates at in least in part the discussion about the categories, which in the *MF* (as in its model, the *DN*) is characteristically moved from *Logic* to

Metaphysics (cf. *infra*, *Metaphysics*, I.1, and in particular §§127-138).

«MODULATED» | Arabic *mušakkik*. The use of the verb *šakkaka*, in the II form, to express the peculiar status of existence is typical of Avicennan discussions on the issue, as thoroughly illustrated in TREIGER 2010. Cf. also *infra*, *Metaphysics*, I.1, §137, for a further occurrence and more in-depth discussion of the same term.

AS REGARDS THE EXPRESSIONS | Dunyā chooses the reading *min fann al-alfāz*, while *A* omits *min fann*, as it is reasonable since the intended meaning is that al-Ġazālī will limit himself, as for the expressions, to the present chapter [*fann*] (which appears in the following complement '*alà al-fann*'). However, the omission of the *min* is unwarranted, and I thus read, and translate, the text *min al-alfāz 'alà al-fann*.

Treatise II

[§10] D44.1-14

The second treatise (literally «chapter», *fann*) of *Logic* deals with universal concepts. The present paragraph introduces the key-concepts of «essential» and «accidental» by means of an example concerning man's being animal (an essential property), and man's being white (an accidental property).

UNIVERSAL CONCEPTS | Arabic *al-ma'ānī al-kullīyya*.

DIFFERENCE OF THEIR RELATIONS | Arabic *ih̄tilāf nasabⁱ-hā*. The relation of the concepts to their subjects is intended.

SEPARATION | Arabic *tafriqa*.

THAT WHOSE RELATION [...] «ESSENTIAL» | Arabic *dātī*. The text as it is presupposes that after «animality» [*hayawānīyya*] one supplements the specification 'to the man', which would otherwise remain implicit. However, *A* has the alternative reading: «that whose relation is the relation of the animality to [its] subjects», in which the clause «to [its] subjects» [*ilā al-mawḍū'āt*] might be taken as specifying, together with the second, also the first occurrence of «relation» [*nisba*]. A similar position of the specification *ilā al-mawḍū'āt* seems to be also presupposed by the Latin translation, although the Latin text reads «ad subiectum», in the singular (LOHR 1965: 247.8).

THAT WHOSE RELATION [...] «ACCIDENTAL» | Arabic *'araḍī*. It is accidental that whose relation (supposedly to its subjects; cf. *supra*) «resembles» [*tušbihu*] the relation of «whiteness» [*abyaḍīyya*] (supposedly to man). *A* omits the verb *tušbihu*, reading *wa-mā nisbat^u-hu nisbat^u l-abyaḍīyya*, in symmetry to the case of essential properties. It can be argued, however, that this is a pejorative reading, as in the ontology of categories there are many ways to be accidental, and whiteness represents only one kind of accident, *i.e.* a quality. It seems reasonable, thus, that all accidental concepts bear a resemblance to it (taken here as a paradigmatic example), but not so much as to have their relation to their subjects strictly identified with the relation that whiteness has to man.

EVERY UNIVERSAL CONCEPT WHICH IS IN RELATION | Arabic *kull^u ma'n^{an} kullīyyⁱⁿ nasaba* [...].

[§11] D44.15-45.18

The present paragraph illustrates the first of three necessary features of the essential concept: it is necessary that the essential is always thought together with the thing that has got that essential property. The conclusion highlights the accidental nature of existence, with a characteristic shift from Avicenna's predominant stance on the topic.

«ESSENTIAL» | Arabic *dātī*.

«THAT WHICH HAS AN ESSENTIAL» | Arabic *mā huwa ḍātīyy^{an} la-hu*, Latin *id cui est essenziale*.

UNDERSTAND | Arabic *fahīma*. All voices of the root *fhm* in this paragraph are rendered with corresponding voices of «understand», with the exception of the *maṣḍar* of the V form *tafahhum*, which I translated as «comprehension» as to distinguish it from the *maṣḍar* of the I form *fahm*, «understanding».

NOR IS IT POSSIBLE [...] BEFORE. | The examples given are «man» [*insān*] (as «that which has an essential», the bearer of an essential property) and «animal» [*ḥayawān*] (as the «essential» property considered), and then respectively «four» [*arbaʿa*] and «number» [*ʿadad*]. In both cases, al-Ġazālī argues that it is not possible to think of the «subject» of the property [*mawḍūʿ*] ('man', 'four') without thinking of the essential property itself ('being an animal', 'being a number'). The Arabic determinative article *al-* is used in this context as a tool to mark the mention, as opposed to the use of a word, much like what happens with τó in Greek.

IF YOU REPLACED [...] ANIMAL | The essentiality of 'animal' and 'number' for their respective subjects is made apparent through the hypothesis of their substitution with other predicates, like «existent» [*mawǧūḍ*] and «white» [*abyaḍ*]. In this case, indeed, missing conceptualization of the predicate does not entail missing conceptualization of the «essence» [*dāt*] subject (one could think of the essence man without thinking of it as white, or as existent, but cannot do without thinking of it as animal).

IF YOUR MIND [...] OTHER THINGS | The sentence expresses a didactic concern. Al-Ġazālī is worried that his reader might not understand properly the preceding example, because man is apparently existent (and there are many actual instances of men: «because of the multiplicity of the existence in “man”»). It might seem hard, then, to ask for a complete suspension of such a self-evident belief. Al-Ġazālī suggests therefore to use instead the concept of «crocodile» [*timsāḥ*] («or what you prefer among the animals and the other things»). The crocodile is the first appearance in a fairly crowded philosophical bestiary, which enriches the pages of the *MF* with many examples, and for which cf. the Introduction, §1.8.1.2. While *infra*, §49 and §51, the crocodile is quoted for an Aristotelian zoological notion, taken from the *Historia animalium* but fraught with logical consequences, here and further in §188 (in *Metaphysics*) the *timsāḥ* seems to indicate a more mysterious animal, about the very existence of which doubts can arise. This 'double standard' is quite subtly mirrored by the Latin translation, which replaces the crocodile with the mythical «phoenix» here and in §188 (LOHR 1965: 247.30-31: «sicut de phoenice vel de aliquo alio extraneo»; and cf. *infra ad loc.*), while using by contrast a transliteration of the original Arabic («*temza*») in §49 and §51.

THE EXISTENCE IS ACCIDENTAL TO ALL QUIDDITIES | Arabic *al-wuǧūd ʿaraḍī li-l-mahiyyāt kullī-hā*. The Latin rendering, «omnibus quae sunt» (LOHR 1965: 247.32), is inaccurate as it omits the important reference to the quiddities [*māhiyyāt*]. This is the first of a series of clear-cut affirmations of the accidentality of existence, which separate the text of the *MF* from Avicenna's more nuanced position (at least in the original Arabic of his works; the Latin version of the *Metaphysics* of the *K. al-Šifāʿ*, the *Philosophia prima*, seems rather keener on attributing accidentality to the concept of existence): cf. on all this BERTOLACCI 2013^a: 256-259. Parallel passages on the accidentality of existence in the *MF* include *Logic* II, §16; *Metaphysics* I.1, §137; *Metaphysics* II.4, §179; *Metaphysics* II.7, §182; *Metaphysics* II.11, §189, and *Metaphysics* V, §295.

[§12] D45.19-46.8

The paragraph illustrates the second necessary feature of the essential concept, *i.e.* its priority with respect to the particular subject(s) underneath it.

IN THE FIRST PLACE | Arabic *awwal^{mn}*.

IT IS INEVITABLE [...] A FOUR OR A FIVE | The examples of priority here given – «animal» for «man» and «horse», «number» for «four» and «five» – reproduce with a slight extension those provided *supra*, §11.

A LAUGHING [ONE] | Arabic *ḍaḥḥāk*, Latin *risibile*. As an example of non-essential property, which does not have a priority with respect to its subject, al-Ġazālī gives here man's 'laughability', or capacity to

laugh. The example is apt, since the ability to laugh is an «inseparable concomitant» [Arabic *lāzim^{im} lā yufāriqu*, Latin *comitans inseparabile*] of man, just like the animality. Despite being equal under this respect, the two properties differ inasmuch as the concept of «man» presupposes that of «animal», while it is the concept of «laughing» to presuppose that of man, and not viceversa. This difference would not be captured by the first requisite of essentiality listed *supra* in §11.

THE CONJUNCTION OF THE SPIRIT WITH THE BODY | As a prerequisite for the existence of man, al-Ġazālī names the «conjunction» [*ittiṣāl*] of *rūḥ* and *ġasad*. This terminology is fairly atypical, since in the technical context of Aristotelian Arabic psychology the spiritual and the material part of every living being are rather called *nafs* and *ġism* (or *badan*, which seems to be the preferred variant for the human body in the *MF*). Cf. *infra*, *Physics* IV, *passim*. For the couple *rūḥ*/*badan* cf. *infra*, *Metaphysics* IV.b.3.1, §283.

DO NOT MEAN A TEMPORAL ORDERING, BUT RATHER AN INTELLECTUAL ORDERING | The «priority» [*awwalīyya*] of the essential over what is not essential is not chronological (*i.e.* according to a «temporal ordering» [*tartīb zamānī*]), but rather logical (*i.e.* according to an «intellectual ordering» [*tartīb ‘aqlī*]).

DESPITE ITS BEING ACCOMPANIED IN TIME | I translate the sentence following the reading *musāwīq^{am}* of Dunyā’s text (which is given without variants). The Latin translation seems however to presuppose a different reading, possibly the very similar *musāwⁱⁿ* («equivalent»; see *supra* D46.2), as it renders the clause with the expression: «quamvis sint *paria* in tempore» (Lohr 1965: 248.48, emphasis added).

[§13] D46.9-47.5

The paragraph illustrates the third necessary feature of the essential concept: it must not be caused.

RATHER, YOUR SAYING | I restored the reading *qawl^l-ka* of *A* against *qawl^l-hu* chosen by Dunyā, both because of the general *usus* of this kind of examples throughout the *MF* (a small exception just *infra*), and because of the necessary symmetry with the second part of the comparison, where the suffix pronoun is again *-ka*, with no variants given («is like your saying...» [*ka-qawl^l-ka*]).

DISTINCTION | Arabic *farq*.

CAUSED | Arabic *mu‘allal*, Latin *positivum* (in the sense of susceptible of being ‘posited’ by something else).

HIS SAYING | Arabic *qawl^l-hu*. In the absence of variants here, there is no reason to correct the text, despite the usual predominance of direct references to the reader in the second person in the *MF*.

«RATIONAL ANIMAL» | Arabic *ḥayawān nāṭiq*, Latin *animal rationale*. In Arabic, the adjective (a present participle of the I form) has the same root of *manṭiq*, ‘logic’, thus maintaining the Greek connection between λόγος (and λογική) and man as ζών λογόν ἔχων (or λογικόν). Accordingly, it might also be translated as ‘discursive’.

«WHAT MADE MAN AN ANIMAL?» | Arabic *mā alladī ġa‘ala al-insān^a ḥayawān^{am}?*. The Latin translation has: «Quae res posuit animal rationale animal?», thus replacing the «man» [*insān*] of the original with «animal rationale». The explanation of why this and the preceding question («What made the rational animal a rational animal?», Latin «Quae res posuit animal rationale animal rationale?») do not differ seems to be influenced by the change in translation, as well: «Nam *breviatur* una duarum interrogationum...» («Indeed, one of the two questions is *abridged*...»), emphasis added; cf. Lohr 1965: 248.64-66).

«WHY IS THE POSSIBLE EXISTENT?» | Arabic *limā kāna al-mumkin^u mawġūd^{am}?*. The final question opens the field for the crucial metaphysical question of the existence of the possible, which will be dealt with *infra*, at *Metaphysics* I.8, §§171-175.

[§14] D47.6-19

Having concluded in §13 the analysis of the requirements of the essential concept, al-Ġazālī introduces in the present paragraph a further conceptual division, this time concerning the accidental. The accident is subdivided into separable and absolutely inseparable concomitant, further subdivisions of each are laid down, and examples of each are given.

INTO [SEPARABLE CONCOMITANT AND] ABSOLUTELY INSEPARABLE CONCOMITANT | Dunyā's text must be wrong, because – despite announcing a subdivision – it only cites one of the two alternatives, *i.e.* the inseparable concomitant. I integrate the text on the basis of the required sense and of the Latin translation («Accidentale enim dividitur in comitans separabile et in comitans omnino inseparabile»), presupposing the loss of *lāzīm yufāriqū* (*wa-*) before *lāzīm lā yufāriqū* (D47.9), possibly for a *saut du même au même*.

«EVEN» FOR FOUR | The Latin text has the number 'two' instead of 'four': «paritas duobus» (Lohr 248.73).

THAT WHOSE SEPARATION IS SLOW | Arabic *baṭīʿ al-mufāraqa*, Latin *tarde separabile*. The first subdivision internal to the separable concomitant refers to those accidents which are «slow» to detach from their subject, like in the case of the growth of a «youth» [*ṣabī*] (or 'boy', 'lad') into a «young man» [*ṣābb*]. The quasi-synonymy of the two Arabic terms is maintained in the Latin translation: «ut pueritia et iuventus homini». The doctrinal point is not the reciprocal closeness of the two different ages of life, or the transition between the two, but rather the (relatively) long duration of each one of them.

THAT WHOSE SEPARATION IS QUICK | Arabic *sarīʿ al-mufāraqa*, Latin *cito separabile*. The second subdivision internal to the separable concomitant refers to those accidents which are «quick» to detach from their subject. The examples given are of physiological nature, being instances of bodily reactions to sudden emotions.

THE PALLOR OF FEAR | Arabic *ṣufra al-wağs*. I correct in *wağs* the erroneous form *وَجَل* [*wğl*] printed by Dunyā. The Arabic *ṣufra*, rendered with «pallor», has the literal meaning of 'yellowness'. This first example is not translated into Latin.

THE BLUSH OF SHAME | Arabic *ḥumra al-ḥağal*, Latin *ut rubor ex verecundia*. The Arabic *ḥumra*, rendered with «pallor», has the literal meaning of 'redness'. The two examples of quickly separable accidents are in a perfect lexical and syntactical parallelism.

THAT WHICH SEPARATES [...] EXISTENCE | Arabic *mā yufāriqū fī l-wahmⁱ dān^a l-wuğūd^d*. The first subdivision of the inseparable concomitant captures those accidents which can be separated in estimation [*wahm*], *i.e.* in the mind, but not in existence. The example given is that of «blackness» [*sawād*] for the «Black person» [*zanğī*]. Cf. Porphyry, *Isagoge*, 12.26-13.8 and also *infra*, *Metaphysics* I, §108, where the example of the blackness is given again, with the specific ethnicity of the «Ethiopian» (as in Porphyry) as a substitute for the generic Black person appearing here.

THAT WHICH IS NOT CONCEIVABLE [...] EITHER | Arabic *mā lā yataṣawwaru an yufāriq^a ayd^{an} fī l-wahmⁱ*.

LIKE THE ONENESS FOR THE POINT | Arabic *ka-l-muḥādāʿ li-l-nuqṭatⁱ*. The Latin translation reads – reasonably enough – «indivisibilitas puncto» (LOHR 1965: 249.80), which might presuppose an interpretation *ad sensum* of the Arabic term as if deriving from the trilateral root *w-ḥ-d* of 'oneness'. However, there does not seem to be any voice of *w-ḥ-d* compatible with the *rasm* printed by Dunyā. The term *muḥādā*, by contrast, also appears in the passage as edited in BİĠŪ 2000: 19.u, as well as elsewhere in the *MF*: cf. *infra*, *Metaphysics* III.b.6, §213. There, however, the term assumes the sense of 'opposition', quite incongruous in the present context. A possible solution to the difficulty might be provided by a peculiar theological – and especially Mu'tazilite – usage of *muḥādā* in the sense of the space that might be occupied by a (single) atom (for references, cf. DHANANI 2003: 127-129, esp.

129 fn. 5). In this specific sense, *muḥādā* as the space occupied by a point/atom could indeed be considered as an inseparable concomitant of that space-occupying point/atom, and Dunyā's text could thus perhaps be salvaged.

[§15] D47.20-48.8

The present paragraph deals with a further species of inseparable concomitant that might separate itself in the estimation, instantiated by the geometrical example of the sum of the internal angles of a triangle, as opposed to the physical example of the blackness of the Black person given *supra* at §14. This case is contrasted with that of the evenness of the four – one of the examples of concomitants inseparable in both estimation and existence given *supra* –, which attains such a degree of inseparability to be possibly mistaken for an essential (despite being an accidental). The criterion of distinction between this kind of inseparable accidentals and the essential concepts is thus the composition of the three requirements listed *supra*, §§11-13. The paragraph is concluded by a distinction between proper and absolute accidentals.

SINCE THEN [...] ONE OF THEM | There is a strong insistence on the necessity of all the three requirements listed *supra*, §§11-13, for the determination of the actual essential concept. Evenness, in particular, is not essential because it does not satisfy the second condition [§12]: as a matter of fact, it is not necessary to think of it before thinking of the four, even though when there is the four, there certainly is evenness as well.

«PROPER» | Arabic *ḥāṣṣ*, Latin *proprium*. The example of proper accident is that already given *supra*, §12, *i.e.* «laughing» for man.

«ABSOLUTE ACCIDENTAL» AND «COMMON ACCIDENT» | Arabic *ʿaradīyy^{an} muṭlaq^{an} wa-ʿarad^{an} ʿāmm^{an}*, Latin *accidens absolutum*. The Latin translation has here *accidens* instead of *accidentale* (LOHR 1965: 249.93), which would theoretically presuppose *ʿarad*, instead of *ʿaradī*, in the Arabic antigraph. However, the distinction between the words is generally volatile (cf. also *infra*, §21, for a specular case of inversion), not allowing any sure inference on this sole basis. What is more, here the Latin rendering might derive from a sort of conflation of the two expressions found in the original Arabic (adjective *muṭlaq* and noun *ʿarad*). The section comprising this distinction is considered by LOHR 1965 as a third part of the treatise (or 'chapter'), a *Divisio accidentalis* that comes rightly before a further *Divisio essentialis*. Dunyā, on the contrary, connects this accidental distinction to the preceding one, before opening «Another division» in the following paragraph [§16]. The example of absolute accidental given by al-Ġazālī is «eating» for man.

[§16] D48.9-49.1

The essential subdivides into genus and species. Whatever is not the highest genus, or the lowest species, can either be a species (in consideration to what is above it) or a genus (in consideration of what is underneath it).

IN CONSIDERATION OF COMMONALITY AND SPECIFICITY | Arabic *bi-ʾiṭtibārⁱ l-ʿumūmⁱ wa-l-ḥuṣūṣⁱ*, Latin *secundum considerationem magis universalis et minus universalis*. Despite the deceptively common root in English, the word *ḥuṣūṣ* is not linked in Arabic with the technical terms for species (*naw^ʿ*, cf.

infra). Alternative translations like ‘particularity’ would however conflict with the rendering of the root *ǧz*, not resolving at full the underlying ambiguity.

«GENUS» | Arabic *ǧīns*, Latin *genus*. Cf. Greek γένος.

«SPECIES» | Arabic *nawʿ*, Latin *species*. Cf. Greek εἶδος.

THAT WHICH IS INTERMEDIATE | Arabic *mā huwa mutawassīt*, Latin *id quod est medium*.

«species of the species» | Arabic *nawʿ al-anwāʿ*, Latin *species specialissima*. It is the lowest species, expressed in Arabic with a typical Semitic superlative (also called «génitif d’intensité», cf. MOHRMANN 1961: 49 and DEL POPOLO 2001: 137 fn. 1; for the same structure in Hebrew see CARROZZINI 2013: 42, §23.γ) of the kind noun + plural genitive of the same noun. The construction, common in Christian Latin for its biblical resonances and often maintained as a calque in translations (*rex regum*, *vanitas vanitatum*), is here recognized and rendered in Latin with a superlative adjective of the same root of the noun («most special/specific species»).

«GENUS OF THE GENERA» | Arabic *ǧīns al-aǧnās*, Latin *genus generalissimum*. It is the highest genus. The original Arabic and the rendition into Latin perfectly mirror the case of the lowest species (cf. *supra*).

HIGHEST GENERA | Arabic *al-aǧnās al-ʿāliya*. The Latin translation omits the adjective (LOHR 249.101: «Genera autem...»). The «highest genera» are said to be ten, «as will be [explained]». The crossreference is to the discussion of categories in the *Metaphysics* of the *MF*, for which see *infra*, *Metaphysics* I.1, §§127-133, and esp. §133 for the same definition of the ten categories.

THE SUBSTANCE [...] ESSENTIAL | Only the substance [*ǧawhar*], however, is said to be the proper «genus of the genera», of which nothing is more common [*aʿamm*], with the sole exception of the existence. Existence, however, is an accidental (cf. *supra*, §11, and *infra*, §137 and §295), and thus cannot be a genus (cf. *supra* the limitation of the definition of «genus» to «the most common essential» [*al-dāti al-aʿamm*]).

[§17] D49.1-end of page

A ramification of genera from the substance, as highest genus, to man, as lowest species, is presented. Further distinctions of lowest species are possible, but they are only accidental (examples concerning man are given). A *principium individuationis* is thereby presented: individuals within a lowest species are distinguished through an accidental, while essential aspects unify different individuals.

[THE SUBSTANCE] [...] WHAT IS NOT [MAN] | The first section of the paragraph is an articulated diairesis of substance. For the sake of the example, only the first, ‘positive’ member of each subsequent division is taken into consideration, although it is of course conceivable that the division should also continue in the other branches, which are not followed here. The first step is the division into body [Arabic *ǧism*, Latin *corpus*] and non-body; the body further subdivides into growing [Arabic *nāmin*, Latin *vegetabile*] and non-growing; the growing into animal [Arabic *ḥayawān*, Latin *animalia*, in the plural] and plant [Arabic *nabāt*, Latin *plantas*, in the plural; *nabāt* can be either a collective noun for plants or a singular]; the animal into man [Arabic *insān*, Latin *hominem*] and non-man (*i.e.* into rational and non-rational). The Latin rendering of *vegetabile* for «growing» is a sort of synecdoche, as the growing faculty is one of the powers of the vegetative soul, common, as a matter of fact, to plants and animals (cf. *infra*, *Physics* IV, §§376-377). In the next step of the diairesis, while Dunyā’s Arabic text reads «into animal and plant», the Latin text has «in plantas et animalia» (Lohr 1965: 250.108), with an ordering mirrored by the reading of *A* (*ilā l-nabāti wa-l-ḥayawān*).

THEREFORE [...] RELATIVELY | The series of elements just sketched displays *in concreto* the distinctions

between genus and species theoretically expounded *supra*, §16, inasmuch as every element of the series is a genus for the following item, and a species of the preceding one. The first element in the list, *i.e.* substance, and the last one, *i.e.* man, are respectively only a genus (the highest one, or «genus of the genera») and only a species (the lowest one, or «species of the species»).

ACCIDENTAL CONCEPTS | Further subdivisions of man are only possible by means of accidents, like «youth» [šabī] and «middle-aged» [kahl] (cf. *supra*, §14, for analogous features used as examples of slow-separable concomitants), «tall» and «short», «wise» and «ignorant». The Latin translation of the first couple of terms is «puerum et iuvenem», which reproduces the couple of «pueritia» et «iuventus» found *supra* in §14; there, however, *iuventus* stood for the Arabic šābb, while we have here *kahl*, which conveys the idea of a more mature age.

FOR ITS ESSENCE AND FOR ITS NATURE | The order of the two terms in D-Altis the opposite («for its nature and for its essence»), thus better corresponding to the Latin translation «natura et essentia» (LOHR 1965: 250.117).

IN THE INK [...] RAVEN | The distinction of two individual qualities is instantiated by the case of two blacknesses, one in the «ink» [Arabic *midād*, Latin *encaustum*] and the other in the «raven» (also 'crow') [Arabic *gurāb*, Latin *corvus*].

ZAYD [...] FOUND IN HIM | The distinction of two individual men, like Zayd and 'Amr (again Latinised as *Petrus* and *Iohannes*, cf. §7), passes through a series of possible accidents: birth («being son of another individual», Latin *in hoc, quod est filius alterius singularis*), «country» [*balad*] (Latin *alterius terrae*), «colour» [*lawn*] (*alterius coloris*), «occupation» [*hirfa*], «character» [*hulq*, *huluq*]. In the place of the last two terms, Latin has a series of three further elements: «vel alterius quantitatis, vel alterius moris, vel alterius vitii» (LOHR 1965: 250.120). While *mos* is a good translation for *hulq*, and *vitium* might be a misunderstanding for *hirfa* (whose root also conveys the meaning of negative alteration; see for instance the possible translation of *tahrīf* as «distortion» in WEHR 199a, s.v.), *quantitas* has no corresponding in Dunyā's Arabic text, and might thus presuppose a reading like **kammiyya* in the antigraph.

AS WAS MENTIONED BEFORE | Cf. *supra*, *Logic* II, esp. §§13-14.

[§18] D50.1-17

A further distinction of the essential is presented, in the form of the different answers to two distinct questions, one asking about what the thing is, and the other about which thing it is. While the aforementioned [§§16-17] genus and species are answers to the first question, the new concept of «differentia» is introduced here to qualify the answer to the second question. Examples of each are given.

«WHAT IS IT?» | Arabic *mā huwa?*, Latin *Quid est?*

«WHICH THING IS IT?» | Arabic *ayy^u šay^{hi} huwa?*, Latin *Quale quid est?*

«DIFFERENTIA» | Arabic *faṣl*, Latin *differentia*.

HAVING POINTED TO A HORSE, A BULL AND A MAN, «WHAT IS IT?» | *Prima facie*, Dunyā's text would seem to reconcile two mutually contradictory elements, namely the conjunction *wa-* as link of the list of the animals, and the question in the singular (*mā huwa?*, «what is it?»). D-Alt reads on the contrary the disjunction *aw* («or») in the place of the conjunction, and conversely the question in the plural (*mā hiya*, «what are they?»), thus showing a specular difficulty with respect to Dunyā's printed text. More coherently, the Latin translation chooses the conjunction and the verb in the plural: «'Quid sunt?', ut de equo et bove et aliis» (LOHR 1965: 250.130-131). The more coherent pattern of elements linked by conjunctions (*Zayd wa-'Amr wa-Ḥālid*) and question in the plural (*ma-hum?*) is also in the second

example of the Arabic text, this time in accordance with the Latin translation («'Quid sunt?', ut de Petro et Iohanne et reliquis»). However, the reading of *Y* supports Dunyā's chosen text in the first example, which is in any case not untenable, and which I have thus translated.

THE QUESTION IS NOT STOPPED | Arabic *lam yanqati' al-su'āl*, Latin *adhuc restat interrogatio*. The meaning is that it is still possible to ask further, because the answer is not exhaustive. This further asking opens the field for the introduction of the concept of «differentia».

SPECIFICALLY DIFFERENTIATE | Arabic *yafsilu*, Latin *separetur*.

[§19] D50.18-51.11

The paragraph presents the notions of definition and description. While the first one captures the true essence, or «core of the quiddity» of one thing by mentioning its genus and its essential differentia, the second lists a series of accidental characteristics of the thing which might single it out altogether, but which are nonetheless non-essential. Sometimes, however, more than one essential differentia is needed to complete a proper definition.

COMPLEX | Arabic *mağmū'*, Latin *coniunctione*. It is the conjoining of two elements – namely the genus and the differentia – which produces the definition.

TRUE DEFINITION | Arabic *hadd haqīq*, Latin *definitio vera*.

WHAT REPRESENTS THE CORE OF THE QUIDDITY OF THE THING IN THE SOUL OF THE ONE WHO ASKS | Arabic *mā yuṣawwiru kunh^a māhiyyatⁱ l-šay^x fī nafsⁱ l-sā'il^l*, Latin *id quod facit imaginari quidditatem rei in animo interrogantis*. While translating this sort of definition, or better description (cf. *infra*) of «definition», Latin translators condensed the expression «core of the quiddity» in the sole «quiddity» (or else their antigraph did not read *kunh*). The rendering *facit imaginari* for *yuṣawwiru* captures quite well the causative meaning of the II form, which could also be translated here as «forms the image of».

«DESCRIPTION» | Arabic *rasm*. It is contrasted with the definition inasmuch as it provides the tools for «discerning» [*tamyīz*] one kind of beings from its congeneric beings (for example man from the other animals) by means of a list of accidental features. Definition, on the contrary, differentiates on the basis of the essential differentia [*faṣl*]; see *supra*.

SOMETIMES THE DISCERNING [...] THOSE DIFFERENTIAE | Sometimes one differentia is not enough for the discerning [*tamyīz*], and listing all the relevant differentiae is needed to single out the intended thing.

ESSENTIAL, DISTINCTIVE, UNVARYING, CONVERTIBLE THINGS | Arabic *umūr dātīyya mumayyiza muṭṭarida mun'akisa*, Latin *res essentielles, discretivas, ordinatas, convertibiles*. The descriptions of the animal as «body» [*ğism*], «endowed with soul» [*dū nafs^m*], and «sensitive» [*ħassās*], despite making up for a good basis for the «discerning» of the true nature of the animal, are still insufficient without the addition of «voluntary mobile» [*mutaħarrik bi-l-irāda*]. With that last addition, the list of the «essential differentiae» [*fuṣūl dātīyya*] is «complete» [*yatimmu*].

[§20] D51.11-21

Four reasons of error (or fallacies) in definition are introduced, and the first one – namely, defining one thing through the thing itself – is presented in greater detail.

AFTER HAVING SET FORTH THE SPEECH | Arabic *idā 'uriḍa l-kalām^u*, literally «when the speech [...] has

been set forth'. Instead of *'uriḍa*, *A* reads *'urrifa* (probably *facilior*), on which the Latin translation seems to be based: «Postquam autem facta est mentio definitionis» (LOHR 1965: 251.161).

LET US BRIEFLY INFORM | Arabic *fal-nunabbihu*, Latin *faciam te cognoscere*. The Latin verb is in the first person of the singular, as opposed to the plural of the Arabic original, and might presuppose the reading **fal-unabbihu*.

THE REASONS THAT TRIGGER ERROR CONCERNING IT | Arabic *maṭārāt al-ġalaṭ fi-hi*, Latin *quot modis fit error in illa*. I translate the *fi-hi* omitted by Dunyā, according to the reading of *A* and of the Latin translation (Lohr 251.162).

PROXIMATE GENUS | Arabic *al-ġins al-aqrab*.

ORDERING | Arabic *tartīb*.

[THE REASONS] [...] THROUGH IT | The four possible reasons for error are introduced here in an abridged form, before being expounded more abundantly one by one in the present – reason (a) – and in the next – reasons (b), (c) and (d) – paragraphs. Reasons (a) and (d) can be traced back to a fallacy of circularity, inasmuch as they aim to define the *definiendum* through itself [(a)], or through something that is known thanks to it [(d)]. Reasons (b) and (c) are instances of explanations of an *obscurum* respectively *per obscurum* and *per obscurius*, namely through a *definiens* which is either in itself obscure [(b)], or even more obscure than the *definiendum* [(c)]. The Latin addition of «et e converso» (LOHR 1965: 251.166) at the end of the formulation of fallacy [(d)] is absent from the Arabic text and unwarranted: as will become apparent in §21, as a matter of fact, it is wrong to define the «sun» through a reference to «daytime», but not viceversa, since «daytime» is only known through the notion of «sun», but not viceversa.

INTERVAL OF THE MOVEMENT | Arabic *mudda al-ḥaraka*, Latin *mora motus*. The example of fallacy [(a)] is a definition of «time» [*zamān*] through a *definiens* which is supposedly a synonym for it, *i.e.* «interval of the movement». A thorough discussion of the issue will take place *infra*, *Metaphysics* 4, §§256-259, concluding to a more logically acceptable (and strongly Aristotelian) definition of time.

[§21] D51.22-52

The three remaining reasons of error in definition are expounded. A synthesis of the five universals (predicables) distinguished in *Logic* II is then provided by way of conclusion.

THE EXAMPLE OF THE SECOND [...] OPPOSITE | Fallacy [(b)], which consists in explaining *obscurum per obscurum*, is instantiated by the attempt at defining «whiteness» [*bayād*] by «blackness» [*sawād*], *i.e.* a contrary [*didd*] by its contrary. Since *iuxta* Aristotle (*Metaphysics* K [XI], 1061^a19) «the study of contraries pertains to one and the same science», the ignorance of one contrary must automatically extend to the other; thus, the two contraries are equally «concealed» [*fi l-ḥafā**], and one cannot be the *definiens* of the other.

THE EXAMPLE OF THE THIRD [...] [THE FORMER]? | Fallacy [(c)], which consists in explaining *obscurum per obscurius*, is exemplified through the definition of «fire» [*nār*] as the «element resembling the soul» [*al-ʿunṣur al-ṣabīḥ bi-l-naḥs*].

SOME OF THEM SAY | Arabic *qawl baʿḍ-him*, literally ‘the speech of some of them’. The notion that the soul is a fire-like substance would seem *prima facie* to be attributable to the thought of Heraclitus, but the long-lasting debate among modern interpreters on the priority of fire or air in his psychology (notwithstanding the role perhaps played by the wet element water) suggests caution; for a recent overview (which concludes for interpreting the Heraclitean soul as an «exhalation» [ἀναθυμίασις] working throughout the other elements) see BETEGH 2007. However, it is worth remarking that the example given by al-Ġazālī here – and absent in the corresponding section of the *DN* – states

something different, *i.e.* that these unidentified thinkers would have maintained that the fire is a soul-like substance (and not viceversa). Such a doctrine is quite puzzling, but the difficulty could be explained away either by considering it an *exemplum fictum*, invented for the sake of showing the fallacy in the clearest way, or else by interpreting this as the same as stating that the soul is fire-like. This latter hypothesis, although plausible, would bring us back to the difficult task of pinpointing a source, which might be Heraclitus or – given how general al-Ġazālī’s statement is – also any other philosopher who maintained the similarity of the soul to some fine substance such as fire: for the diffusion of such understandings of the ψυχή in ancient Greek thought cf. LORENZ 2009. In the brief remarks on the Presocratics in Arabic thought prepared by BAFFIONI 2011 for the *Encyclopedia of Medieval Philosophy* I could not find however any specific information on the problem at hand, on which I am thus forced to suspend judgment for now.

THE EXAMPLE OF THE FOURTH [...] ABOVE EARTH» | Fallacy [(d)], which is an instance of circularity similar to fallacy [(a)] (cf. *supra*, §20), is exemplified by the definition of the «sun» [*šams*] by reference to the «daytime» [*nahār*]. However, it is the notion of daytime to depend on the notion of sun, and not viceversa (cf. also *supra*, §20).

REGARDING THE DEFINITION | Arabic *ft l-ḥadd*. In both fallacies [(c)] and [(d)] I translate this parenthesis as «regarding the definition», as opposed to the plainer «in the definition», because the *definiens* is in both cases introduced by *inna-hu* (dependent on the preceding *qawl*), with a masculine suffix pronoun. Since both *definienda* («fire» and «sun») are feminine in Arabic, the pronoun must refer to the masculine *ḥadd*. Consequently, I have put the *definiens* in inverted commas in both occurrences («The element resembling the soul», «The bright star rising during daytime»). Correcting the text in *inna-hā*, by contrast, «fire» and «sun» would have been explicitly the subjects of their respective definitions, as seems presupposed by the Latin translation. While this might seem a more natural way of translating the text, it does not provide sufficient reason for emending Dunyā’s reading in the absence of attested variants.

PROPER CHARACTERISTIC | Arabic *ḥāṣṣa*, Latin *proprium*. Cf. Greek ἰδιον. *Supra*, §15, where the concept was first introduced, the Arabic term was *ḥāṣṣ*, in the masculine.

ACCIDENT | Arabic *‘araḍ*, Latin *accidentale*. Cf. Greek συμβεβηκός. Strictly, the Latin reading should presuppose the Arabic *‘araḍī* instead of *‘araḍ*. As discussed *supra*, §21, where a specular case of inversion (Arabic *‘araḍī*, Latin *accidens*) occurs, these lexical distinctions are however minor, and thus quite unstable.

FIVE PREDICABLES | Arabic *al-mufradāt al-ḥams*, Latin *quinque, quae dicuntur incomplexa*. The Latin rendition of *mufradāt* with *incomplexa* can be explained on the basis of the basic, grammatical sense of the Arabic word, which stands for «simple, consisting of only one word», and in the plural for «words, names, terms, expressions (of a scientific field)» (WEHR 824^a, *s.v.* *mufrad*). The five predicables, defined by Porphyry’s *Isagoge* on the basis of the previous, fourfold distinction in Aristotle’s *Topics* (101^b17-25), are listed as follows: «[(i)] the genus, [(ii)] the species, [(iii)] the differentia, [(v)] the common accident and [(iv)] the proper characteristic». Among the essentials, [(i)] and [(ii)] are firstly introduced *supra*, §16, while they receive a further treatment in §18, where the notion of differentia is introduced [(iii)]. The accidentals [(iv)] and [(v)] are introduced at the end of §15. The Latin translation reads: «[(i)] genus, [(ii)] species, [(iii)] differentia, [(iv)] proprium et [(v)] accidens» (LOHR 1965: 252.189-190), with an inversion of the two accidental predicables with respect to the original Arabic, and the omission of the adjective «common». For the terminology of the five predicables in the *MF*, by the way standard in philosophical Arabic, cf. also the thorough lexical note by BEER 1888: 17.

Treatise III

[§22] D53-54.9

Moving toward more complex forms of logico-linguistical organization, the topic of the third treatise [*fann*, ‘chapter’] consists in the composition of the predicables and the divisions of the propositions. The first paragraph narrows down the focus of the treatise on the proposition with a definite truth-value, providing examples of this and other kinds of propositions excluded from the logical analysis.

SIMPLE CONCEPTS | Arabic *al-ma‘ānī al-mufrada*, Latin *intentiones incomplexae*. While I render *mufraadāt*, as a noun, with «predicables» (*supra*, §21), I translate the adjective (which can also be read as a past participle of the II form, *mufarrad*) as «simple»: cf. *supra*, §6.

NOTIFICATION | Arabic *ḥabar*, Latin *enuntiatio*. Cf. *supra*, *Preface*, §4, where *enuntiatio* was rather the translation of *qaḍīyya*.

«PROPOSITION» | Arabic *qaḍīyya*, Latin *indicativa*. The inaccurate translation with an adjective might be explained also by the fact that *propositio* had been used *supra*, §4, to render the Arabic *muqaddīma*, «premise», while *qaḍīyya* had been translated as *enuntiatio*, here attributed instead to *ḥabar*. This chain of substitutions leaves the occurrence of *qaḍīyya* in the present paragraph somewhat uncovered.

«DEFINITIVE SPEECH» | Arabic *qawl^{mn} ḡāzim^{mn}*, Latin *dictio definitiva*.

ADMITTING JUDGMENTS OF TRUTH AND FALSITY | Arabic *yataṭarraqu ilay-hi al-taṣḍīq wa-l-takḍīb*, literally ‘in which the judgment of assent and that of dissent have access’. The Latin translation has a free paraphrase: «in qua contingit veritas vel falsitas» (Lohr 1965: 252.7-8).

«THE WORLD HAS AN ORIGIN» | Arabic *al-‘ālam^u ḥādīṭ^{mn}*, Latin *mundus coepit*. The comparison with the apparent falsity of the following statement about man being a stone (Arabic *al-insān^u ḥaḡar^{mn}*, Latin *homo est lapis*) allows one to think that the anti-eternalist proposition is believed by al-Ġazālī to be true. This impression is corroborated by the corresponding passage in the *DN*: «Exemple: si quelqu’un dit: “Pour l’homme, il y a récompense et châtement”, tu peux dire: “Il en est ainsi”; et si l’on dit: “L’homme est volant”, tu peux répondre qu’il n’en est pas ainsi» (cf. *DN*, ACHENA-MASSÉ 1955 (I): 35-36), as man is not flying, while reward and punishment are certainly recognized by Avicenna as real. Cf. SIGNORI 2018: 371 fn. 34.

«EITHER THE WORLD HAS AN ORIGIN, OR IT IS ETERNAL» | While an instance of al-Ġazālī’s general tendency to introduce the question of the eternity of the world as a relevant logical example throughout the text of the *MF* (SIGNORI 2020^b: 169-170 ff.), this kind of disjunctive statements is certainly less informative on al-Ġazālī’s actual commitment about the anti-eternalist thesis than other examples. This notwithstanding, it must be noticed that this statement is «[t]he stock example» on ‘mutual exclusiveness’ in al-Ġazālī’s «textbooks of logic» (cf. GRIFFEL 2021: 508, who discusses the issue in connection with the notion of *sabr wa-taqṣīm*, for whose treatment in the *MF* cf. *infra*, *Logic* IV, §52). «Eternal» translates here the Arabic *qadīm*.

«ZAYD IS EITHER IN ‘IRĀQ OR IN ḤIĠĀZ» [...] IN SYRIA | Further example of disjunctive clause, this time not exhaustive as for the possible alternatives. GRIFFEL 2021: 508 seems to understand this kind of example – standard in Ġazālīan texts on logic – the wrong way, when he writes: «When we claim that Zayd is either in Iraq or in the Hijaz, we know for certain that he cannot be in a third place, such as Syria». Rather, the idea (at least in the *MF*) seems to be that there are matters, such as the geographical location of someone, in which the method of exhausting the possible alternatives –

although possible in line of principle – is unadvisable because practically unfeasible. The cultural acclimation of the Latin translators is at work also on these geographical matters: «Petrus aut est Romae aut Constantinopoli» (LOHR 1965: 252.14); «eo quod potest esse Hierosolymis» (*ivi*, 252.15); as is also apparent from the following example concerning Mecca.

«TEACH ME A QUESTION» | Arabic *‘allam-nī mas’alat^{am}*, Latin *doce me aliquam quaestionem*. Example of a command in the imperative. «Question» [*mas’ala*] is used here in the sense of ‘issue’, ‘argument’, ‘matter’ or ‘problem’.

«WOULD YOU AGREE IF WE WENT OUT TOWARD MECCA?» | Cf. LOHR 1965: 252.16-17: «Placet tibi, ut eamus Hierosolymam», where it is remarkable that the Holy City of Islam is substituted with its Christian (and Jewish) counterpart, Jerusalem (which however stood also for the original «Syria» in the preceding example, cf. *supra*).

IT IS NOT POSSIBLE | Reading *fa-lam yumkin* instead of *lam yumkin* as in *Dunyā*, for the necessity of restoring the *fa-* in correlation with the initial *wa-ammā* («As for...»).

THIS IS THE CONCEPT | Reading *fa-hādā ma’nā* as in *D-Alt* instead of *fa-hādīhi ma’nā* as in *Dunyā*.

[§23] D54.10-55.3

A first subdivision of propositions into three classes is presented: [(1.1)] categorical, [(1.2)] conjunctive hypothetical, and [(1.3)] disjunctive hypothetical. The first class – that of categorical propositions – is discussed in greater detail.

CATEGORICAL | Arabic *ḥamlīyya*, Latin *categorica*.

«THE WORLD HAS AN ORIGIN» | This is one of the many logical examples surreptitiously reaffirming the origin in time of the world, against the exhibited eternalism of the text of the *MF*: cf. Introduction, §1.8.2, for a detailed discussion.

CONJUNCTIVE HYPOTHETICAL | Arabic *šarṭīyya muttašila*, Latin *hypothetica coniuncta*. This is a hypothetical clause in which the conditional conjunctions *id*, *idā*, *idā kāna* or *law kāna* appear. The given example is «If the sun rises, then the daytime exists», which recalls the example of fallacy in definition given *supra*, §20. The use in this logical/grammatical context of the Arabic *muttašil* as opposed to *munfašil* (for a hypothetical construed with the disjunctive couple *immā...immā...*, cf. *infra*) dates back at least to al-Fārābī’s *K. al-Qiyās*: cf. VERSTEEGH 1991: 80.

DISJUNCTIVE HYPOTHETICAL | Arabic *šarṭīyya munfašila*, Latin *hypothetica disiuncta*. The given example is again «Either the world has an origin, or it is eternal», for which cf. *supra*, §22.

THAT OF WHICH IT IS PREDICATED | Arabic *maḥbar* / *muḥabbar ‘an-hu*, Latin *id de quo agitur*. It is the subject [*mawḍū‘*] of the categorical proposition.

THAT WHICH IS PREDICATED | Arabic *ḥabar*, Latin *id quod dicitur*. It is the predicate [*maḥmūl*] of the categorical proposition.

AS WE HAVE MENTIONED | Arabic *kamā dakarnā-hu*. This is probably a backward reference to §6, where the the distinction of simple [*mufarrad*] and composite [*murakkab*] expressions was introduced, but the Latin translators interpret it as a reference to the example just provided of categorical proposition: «sicut in ea quam praenominavimus: ‘Mundus coepit’» (LOHR 1965: 253.30).

[§24] D55.4-end of page

The second class of propositions distinguished in §23, namely the conjunctive hypothetical, is analysed in the present paragraph. Examples are provided, and differences with respect to the

categorical proposition are illustrated.

IT ALSO HAS TWO PARTS | In symmetry with the categorical proposition discussed in §23, the conjunctive hypothetical is also divided into two parts, the difference being however that each of them is a proposition (while in the categorical the two parts, subject and predicate, are expressions: cf. *supra*, §23).

«ANTECEDENT» | Arabic *muqaddim*, Latin *antecedens*. In the traditional grammatical understanding of the conditional sentences, this is the protasis of the if-clause.

IF [...] YOUR SAYING: «IF» | The first «if» is *law* ('if' of irreality) in the original Arabic, while the second – the one with which we are concerned as it is the «particle of the hypothesis» [*ḥarf al-šart*] – is *in* ('if' of reality).

«THEN THE STARS HIDE» | Restoring *fā-* before *al-kawākib ḥafīyyat^{um}*, as in D-Alt, against Duniyā's omission of it. The «consequent» of the conjunctive hypothetical, as a matter of fact, needs to be introduced by *fā-*, as it is apparent from both the first formulation of the example (cf. *supra*, §22), and the following discussion about the «particle of the conclusion» [*ǧazā'*], which is precisely «then» [*al-fā'*].

«CONSEQUENT» Arabic *tālī*, Latin *consequens*. In the grammar of the conditional sentences, the apodosis of the if-clause.

WHETHER IT IS | Restoring the reading *hal huwa* of A against *anna-hu huwa* printed by Duniyā. Cf. also the Latin text: «an ipse sit...» (LOHR 1965: 253.51).

DISTINCTION | Arabic *farq*, Latin *differentia*. Of the two differences between categorical and conjunctive hypothetical listed by al-Ġazālī, the first one is the one already expounded in the opening of the present paragraph, namely that the parts of the hypothetical are propositions, whereas the parts of the categorical are expressions. The second one is that while one of the two parts of the categorical, *i.e.* the subject, might be the predicate, the antecedent is never the consequent.

[§25] D56

The paragraph presents the third class of propositions distinguished in §23, namely the disjunctive hypothetical, through its differences with respect to the conjunctive hypothetical discussed in §24.

THE FIRST [ONE] [...] IS TRUE | The first difference is that, while both the conjunctive and the disjunctive hypothetical are made up of propositions (and not expressions), the relative order of utterance of those propositions is only relevant in the case of the conjunctive, where the meaning «changes» or 'varies' [*taǧayyaru*], while in the disjunctive hypothetical it does not «change» [*tabaddalu*]. The use of two different verbs in the original Arabic does not convey any discernible variation of meaning, hence the common translation with the English «change» (and cf. also Latin *mutabitur* in both occurrences). In particular, in the conjunctive hypothetical the truth-value of the conjunction may change depending on the order of the two propositions: if $p \rightarrow q$ holds true, it does not follow that $q \rightarrow p$ is also true. Cf. also *infra*, §46.

[IN THE CONJUNCTIVE HYPOTHETICAL] | Following the suggestion of the Latin version («Alio, quod in coniuncta...», cf. LOHR 1965: 254.64), I have also made this point explicit in the translation, while in the original Arabic it remains implicit. There seems to be no need, however, to emend the Arabic text in this direction.

THE SECOND [...] CANCELS THE OTHER | The second difference is that in the conjunctive the two parts (antecedent and consequent) have something – a «notion» [*ma'nà*] – in common, while in the disjunctive hypothetical the two propositions are mutually exclusive.

[§26] D57.1-21

On the basis of its predicate, every proposition can be either affirmative or negative. Negation of the categorical, of the conjunctive hypothetical and of the disjunctive hypothetical.

ANOTHER DIVISION | Dunyā's text makes this the beginning of a new subsection; this division, however, is structurally at the same level of the preceding one, beginning at §23 (as in Lohr's edition of the Latin text).

AFFIRMATIVE | Arabic *mūǧiba*, Latin *affirmativam*. The example al-Ġazālī gives is, once again, the affirmation of the temporal origination of the world.

NEGATIVE | Arabic *sāliba*, Latin *negativam*. The example given by Dunyā is: «The world does not have an origin» [*al-ʿālam^u laysa bi-ḥādīṭⁱⁿ*], corresponding to the Latin translation «Mundus non coepit» (Lohr 254.71). Interestingly, A rather reads *al-ʿālam^u laysa bi-qadīmⁱⁿ*, «the world is not eternal», which would be consistent with al-Ġazālī's widespread, but surreptitious, anti-eternalist claims. Moreover, it seems more likely that – in the presence of *al-ʿālam^u ḥādīṭⁱⁿ* as an example of affirmative proposition – a scribe corrected *laysa bi-qadīmⁱⁿ* in the more plain *laysa bi-ḥādīṭⁱⁿ* (the direct negation of the first example), as opposed to the opposite scribal passage from the *facilior* reading *bi-ḥādīṭⁱⁿ* into the *difficilior* one. Cf. SIGNORI 2020^b: 171 and 199 (*Appendix*, n. [13]). Authoritative ms. Y, however, supports Dunyā's reading, so that further philological analysis would certainly be needed in order to ascertain the text.

«NOT» | Arabic *laysa*, Latin *non*. Al-Ġazālī defines *laysa* as «the particle of the negation» [*ḥarf al-salb*], although grammatically it is actually a verb; Dunyā, in his footnote *ad locum*, qualifies its ascription among the particles as a «logical technical usage». Qualifying *laysa* as a particle might also be an (undue) extension based on the particles of the hypothesis («if» [*in*]) and of conclusion («then» [*fa-*]), which we encountered *supra* in §24, and which are *ḥurūf* also in proper grammatical sense.

DENYING THE CONJUNCTION [...] DENYING THE DISJUNCTION | Negation in the conjunctive [*muttaṣila*] and in the disjunctive [*munfaṣila*] hypothetical occur respectively through the negation of the «conjunction» [*ittiṣāl*] and of the «disjunction» [*infiṣāl*] of the two propositions forming the hypothetical (and not through the negation of any of them taken separately).

«IT IS NOT [THAT] IF THE SUN RISES, THEN IT IS NIGHT» | The example of (negation) of a conjunctive hypothetical proposed by the Latin reprises that of the hidden stars of §24: «Non cum sol est super terram, stellae occultantur» (LOHR 1965: 254.74), while the example of the Arabic, which denies the connection of sunrise and night, is rather linked with the following example of an affirmative conjunctive hypothetical formed of two negative propositions.

«IF THE SUN DOES NOT RISE, THEN IT IS NOT DAYTIME» | This conjunctive hypothetical is affirmative, despite its two parts being negative. The «affirmation» [*ṭjāb*] in this proposition is the «concomitance» [*luṣūm*] of the denial of sunrising with the denial of daytime [*nahār*].

PLACE WHERE THE STEP SLIPS | Arabic *mazilla al-qadam*. The same expression also occurs in the *Prologue* of the *MF* (cf. *supra*, §1: *mazilla aqdām al-ǧuhhāl*), where it was translated as *lapsus*, and *infra*, in *Logic* IV, at §54 (*mazilla qadam*). While in both those occurrences *mazilla* is translated into Latin with the word *lapsus* (respectively with a *lappso ignorantium* and *lappso pedum*, cf. *supra* and *infra*), here the Latin translation paraphrases (however quite effectively) the expression: «sed hic errant multi» (LOHR 1965: 254.82-83).

[§27] D57.22-58.18

After the reason of error concerning affirmation and negation in the case of the conjunctive hypothetical discussed in §26, here al-Ġazālī deals with possible errors of a similar kind arising in the categorical proposition. To do so, he avails himself of an interesting linguistic comparison between Persian and Arabic, for which cf. also the *Introduction* (§1.3). For a lucid discussion of the corresponding passage in Avicenna's *DN* cf. RESCHER 1968: 72-73. *Ivi*: 73, Rescher rightly observes that from this text it can be elicited that, for Avicenna, «an important difference must be drawn between the assignment of a negation-predicate [*scil.* since it implies the existence of the subject of predication] and the negation of a predicate assignment [*scil.* since it implies that the subject of predication is either non-existent, or else that the negation of the predicate is true of the existing subject]».

IN PERSIAN | Arabic *bi-l-ʿaġamiyya*.

«ZAYD IS NOT SEEING» | زيد نا بينا است [*Zayd nā bīnā ast*], in Persian in the text. Of this non-Arabic insertion in the text, and of the sentence that contains it, there is no trace in the Latin translation. The rationale of this Persian addition is likely a difficulty in translation experienced by al-Ġazālī, which discloses once more the tight relation of the *MF* with Avicenna's Persian *DN*. Al-Ġazālī's own native competence in Persian may of course have played a role in ensuring the cross-linguistic interference displayed in this paragraph. Cf. *DN*, MEŠKĀT: 37.4-38.8 (French transl. in ACHENA-MASSÉ 1955 (I): 37.26-38.13), and in particular, for the question on the negative or affirmative meaning of this sentence, MEŠKĀT: 37.4 (*Zayd na-bīnāst*) corresponding to ACHENA-MASSÉ 1955 (I): 37.26-27 («Zaid est non voyant»). The characteristic of the Persian clause, as is also apparent from the French translation, is that it denies the adjective *bīnā* («seeing», «voyant») rather than the verb *ast* («is», «est»).

BLIND | Arabic *aʿmā*. The Persian sentence is affirmative, despite the deceptive presence of a negation, because it amounts to affirming that Zayd is blind, *i.e.* to predicate an affirmative (although privative) attribute of him.

IN ARABIC | Arabic *bi-l-ʿarabiyya*. Having omitted the translation of the Persian sentence, the Latin version does not translate this linguistic indication either.

«ZAYD IS NON-SEEING» | Arabic *Zayd ġayr^m baṣīr^m*. It is legitimate to suppose that it is this Arabic rendition of the Persian example advanced *supra* that the Latin translators render with «*Petrus est insipiens*» (LOHR 1965: 254.84-85), where Zayd is (as always) substituted with Peter, and the predicate of sight replaced with that of wisdom (*insipiens* as 'non-wise', 'ignorant'). This latter replacement is warranted, on the one hand, by one of the possible meanings of *baṣīr* («possessing knowledge or understanding», cf. WEHR 75^b s.v.), and allows, on the other hand, the use of a Latin adjective with the negative prefix *in-*, which works much like the Persian *na-*[*bīnā*], and probably even better, to the effect of the present argument, than the Arabic *ġayr*. As a matter of fact, the caution with which al-Ġazālī puts forth his Arabic rendition of the Persian is witnessed by the introductory words «one may say» [*rubbamā yuqālu*]. The Latin translation is thus quite on point as for the general sense of the passage. However, we can be certain that *baṣīr* was meant by al-Ġazālī in the sense of «seeing», and not of «knowing», on the basis of both the Persian of the *DN*, and the paraphrasis «blind» [*aʿmā*] – an adjective with no extended meaning in the field of knowledge – which he gives shortly *infra* for *ġayr^m baṣīr^m*. Coherently with their rendition of the negative attribute as *insipiens*, the Latin translators have there *stultus* in the place of «blind» (LOHR 1965: 254.86).

«ZAYD IS NOT NON-SEEING» | Arabic *Zayd laysa ġayr^m baṣīr^m*, Latin *Petrus est insipiens, et Petrus non est insipiens*. The Latin rendering seems to presuppose in the Arabic antigraph the repetition of the affirmative version of the sentence (**Zayd ġayr^m baṣīr^m*) before its negation. The example of a negative sentence in the original Persian of Avicenna's *DN* is *Zayd nīst bīnā* (MEŠKĀT: 38.2), translated

in French as «Zaïd n'est pas voyant» (ACHENA-MASSÉ 1955 (I): 38.2). In English, it might be rendered as «Zays is not seeing», as opposed to «Zayd is non-seeing». The characteristic of the Persian clause is that it denies the verb *ast* – with the synthetical form *nīst*, typical of Persian – and not the adjective *bīnā* (as was done *supra*). Al-Ġazālī's strategy of translation in Arabic is that of using *ġayr* as the negation of an attribute, and *laysa* as the negation of an entire verbal predicate. The application of the negation *laysa* to an already negative predicate, *ġayr^u baṣīrⁱⁿ*, mirrors a further example provided in the conclusion of Avicenna's passage: *Zayd nīst na-bīnā* (MEŠKĀT: 38.6; cf. ACHENA-MASSÉ 1955 (I): 38.9: «Zaïd n'est pas non-voyant»).

[HERE,] [...] OF ZAYD | Arabic *id suliba 'ġayr^u baṣīrⁱⁿ* 'an Zayd. The sentence is not translated into Latin. «TRANSFORMED» | Arabic *ma'dūla*, Latin *privatio privativa*. While the Latin *privativa* might presuppose the Arabic **ma'dūma* (maybe due to an attraction of the following «non-existing», cf. *infra*), it might also be an interpretative translation of *ma'dūla*, showing the Latin translators' consciousness of the (Aristotelian and Peripatetic) debates on privation and its difference from negation. The Arabic reading *ma'dūla* is in any case guaranteed by the presence of the same verb *'adala* in what follows, and by the analogous reading of the *DN* (cf. MEŠKĀT: 38.1 and 38.8). The French translation renders with «indéfinie» both occurrences of the term (ACHENA-MASSÉ 1955 (I): 38.1 and 38.13), which seems rather inaccurate, despite the corresponding note 12 (*ivi*: 229) correctly explains the reason of Avicenna's terminological choice: «La racine arabe *'adl* signifie "redresser"; on nomme ce genre d'attribut *ma'dūlè* parce que c'est une négation transformée en affirmation». A similar explanation in ALONSO 1963: 32 fn. 19, who translates *ma'dūla* as «oración desviada»; a detailed discussion of this passage of the *MF* with its Latin translation is also in ALONSO 1954: 107.

WHAT IS TRULY AN AFFIRMATION | Arabic *īġāb^{um} fī l-taḥqīq*, Latin *cum revera sit affirmativa*.

WAS TRANSFORMED IN THE WORDING OF THE NEGATION | Arabic *'udila bi-hi ilā ṣīġatⁱ l-salbⁱ*, Latin *est translata ad formam negationis*.

SIGN | Arabic *āya*.

NON-EXISTING | Arabic *ma'dūm*, Latin *quod non est*. About what is not existent (*i.e.* a non-existing or empty subject-term), «the negation is true» [Arabic *al-salb yaṣīḥḥu*, Latin *vere negari potest*]. Cf. ARISTOTLE, *Cat.* 10, 13^b27-33.

«THE COMPANION OF GOD IS NOT SEEING» | Arabic *ṣarīk^u llāhⁱ laysa baṣīr^{am}*, Latin *socius Dei non est sapiens*. As an example of certainly non-existing entity, al-Ġazālī uses the notion of a second god, unacceptable in every monotheism, but particularly repugnant for Muslim believers in the indivisible oneness of God [*tawḥīd*]. Cf. *infra*, *Metaphysics* II.11, §189 (on the characteristics of the Necessary Existent) and *Metaphysics* III, §198 (on the meaning of God's attribute of unicity), for further denials of any associate of God (a passing remark on this also in *Logic* IV, §66) The corresponding example in Avicenna's *DN* was not theological, as it only involved a non-existing Zayd (cf. MEŠKĀT: 38.3-5, ACHENA-MASSÉ 1955 (I): 38.3-8). A negative proposition like this one can have a non-existing subject.

«THE COMPANION OF GOD IS NON-SEEING» | Arabic *ṣarīk^u llāhⁱ ġayr^u baṣīrⁱⁿ*, Latin *socius Dei est insipiens*. As opposed to the preceding example, this sentence is an affirmative proposition, since «non-seeing» can be replaced with «blind», as already shown *supra*. In this case, predication of a non-existing subject is not admitted. In Aristotle's discussion of propositions expressing privation/possession in the *Categories*, such propositions are both false if construed with an empty subject-term (see *Cat.* 10, 13^b19-27).

AS IT IS NOT [POSSIBLE] | Reading *ka-mā* instead of the misprint *kamāl* ('perfection').

SINCE THE IMPOSSIBLE IS NOT A SPECIFIC INDIVIDUAL | Arabic *id al-muḥāl laysa 'ayn^{am}*, not translated into Latin (cf. ALONSO 1963: 32: «porque lo imposible no es algo real»).

THIS IS MORE APPARENT IN THE LANGUAGE OF THE PERSIANS | The conclusion of the paragraph is once again concerned with linguistic aspects, as it reaffirms that the issue is more evident [*aẓhar*] in the «language of the Persians» (or 'of Persia') [*luġa al-'aġam*] (*A* has the indifferent variant *al-luġa al-'aġamiyya*, with the adjective as at the beginning of §27). The sentence is not translated into Latin,

which consistently omits all the non-Arabic insertions, and the connected linguistic pointers.

[§28] D58.19-59.21

After the division of the propositions concerning their predicate (§26, with an appendix in §27), this paragraph presents a subdivision of them in consideration of their subject. Every proposition can be singular, indefinite or definite. Definite propositions can be either universal or particular. An overall diagram of eight possible propositions is derived, and the four definite propositions are singled out as the ones employed in scientific knowledge.

SINGULAR | Arabic *šahṣiyya*, Latin *singularem*.

«INDEFINITE» | Arabic *muhmala*, Latin *indefinitam*. Cf. AHMED 2011: 17. The Arabic adjective is also used in grammar to designate a word without diacritical points: see WEHR 1213^b.

«DEFINITE» | Arabic *maḥṣūra*, Latin *definitam*, i.e. quantified propositions: cf. AHMED 2011: 17. Indefinite and definite propositions belong to the common class of «non-singular» [*gayr^m šahṣiyyat^m*] propositions. The four kinds of definite propositions are specified as universal and particular affirmative, and universal and particular negative.

«MAN IS IN LOSS» | Arabic *al-insān^m fi ḥusr^m*. As an example of indefinite proposition, al-Ġazālī employs a Qur’ānic quotation (cf. *Qur’ān* 103.2: «innā l-insān^a la-fi ḥusr^m»), which was probably misunderstood by the Latin translator, who renders: «Homo est Toleti» (LOHR 1965: 255.98). The Latin rendition might also be considered as a cultural acclimation of the kind described *supra* (Introduction, §2.2.1), which might be either merely geographical – if *ḥusr* was misunderstood as a name of place (which, in this case, would have been substituted by the more ‘local’ Toledo) –, or of religious value – if the quote was indeed recognized as a Qur’ānic citation, and then consciously altered. The same quotation appears also *infra*, *Logic* IV, §75 (and in that case it is not translated at all into Latin). For an overview of the Qur’ānic quotes in the *MF* cf. Introduction, §1.9.1.

THE PROPOSITIONS [...] ARE THEN EIGHT | The Latin translation appropriately adds here the clause: «cum his quattuor quae sequuntur» (LOHR 1965: 255.106-107). Four kinds of definite propositions had already been listed *supra*, to which the affirmative and negative singular, and the affirmative and negative indefinite propositions are now added, bringing the total to eight.

[§29] D59.22-60.18

After having explained the reasons why singular and indefinite propositions are not employed in the science, the paragraph presents a subdivision of conjunctive and disjunctive hypothetical propositions into universal and particular. Examples of the affirmatives are given, while examples of the corresponding negatives are left as an exercise to the reader.

SINGULAR INDIVIDUAL | Arabic *al-šahṣī al-mu’ayyin*.

ONE DOES NOT RESEARCH [...] ABOUT MAN | The Latin translation is correct albeit compressed: «De singulari enim, ut de Petro, non agitur in scientiis, sed de homine» (LOHR 1965: 255.109-110), the main point of the passage being of course the Aristotelian denial of a science of individuals.

COMMONALITY | Arabic *‘umūm*, Latin *universalitas*. The «commonality» of the indefinite propositions is «doubted» [*maškūk*] because it is subject to an «oscillation» [*taraddud*].

IN THE TEACHINGS | Arabic *ta'limāt*, Latin *a demonstrativis*. The maṣḍar of the II form *ta'lim*, however in its broken plural *ta'ālīm*, is used in AL-FARĀBĪ, *Iḥṣā' al-'ulūm*, ch. 3, ed. BŪ MALḤAM 1996: 49-65 to designate the mathematics (translated into Latin as *scientia doctrinarum* by Gerard of Cremona, cf. SCHUPP 2005: 64). In the *MF* (and the *DN*), however, the word for 'mathematics' is consistently *riyāḍiyyāt* (cf. *Prologue*, §1). The meaning which the term acquires in this occurrence is thus probably the standard one of «teachings», although with the nuance of scientific, or 'demonstrative' (in the way of mathematics) teaching.

«SOMETIMES, IF THE SUN RISES, THERE ARE CLOUDS» | As an example of particular conjunctive hypothetical, the Latin translation seems to presuppose a different Arabic text, as it reads: «Si aliquando fuerit sol super terram, erit dies'» (LOHR 1965: 255.118). The Latin example, despite providing a translation for *rubbamā* (*aliquando*; cf. on this rendition ALONSO 1955: 141), fails to express a particular (not universally valid) connection of the antecedent with the consequent, as the Arabic original on the contrary does. The solidity of the reading with «clouds» [*ḡaym*] is by the way confirmed also by the text of the *DN* («Parfois quand le soleil se lève, il y a nuage», ACHENA-MASSÉ 1955 (I): 44.4-5).

«THE MAN IS EITHER ON THE SHIP OR HE DROWNS». | I correct Duniyā's text *al-insān^u immā an yakūn^a fī l-baḥr^r wa-ammā [sic] an yafruq^a* («the man is either in the sea, or he is separate [from it]») in *al-insān^u immā an yakūn^a fī l-safīnatⁱ wa-ammā an yaḡraq^a*. The reading *fī l-safīnatⁱ* is restored on the basis of *A*, while *an yaḡraq^a* («he drowns») is my conjecture on the basis of the Latin translation («Homo aut est in navi aut est mersus», cf. LOHR 1965: 255.120-121) and of the *DN* («Parfois, il arrive que l'homme ou soit en bateau ou se noie" et ce parfois est le moment où l'homme est sur mer», ACHENA-MASSÉ 1955 (I): 44.27-29). The genesis of the error is easily explained on the basis of the extreme similarity of the *rasm* of *yafruq^a* and *yaḡraq^a*. The meaning is also much better, as the sentence should be an example of a particular disjunctive hypothetical: the alternative, then, must not be universally valid, but there must be circumstances in which it holds (namely, when man «is in the sea» [*fī l-baḥr^r*]), and circumstances in which it does not hold (namely, when he is «on the mainland» [*fī l-barr^r*]).

IT REMAINS ON YOU | Arabic *wa-'alay-ka an*. If this actually is a sort of 'homework' given by al-Ġazālī to his reader, the Latin translation slightly misunderstands the sentence, as it renders: «Oportet autem ut distinguas inter exemplum...» (LOHR 1965: 255.122), which is weaker and leaves the impression that the examples have already been provided (and that the exercise only consists in 'distinguishing' them, or telling them apart). A partial parallel for this curious case can be found in the *DN*, where Avicenna says: «D'après ce raisonnement, apprend à connaître l'état des propositions conditionnelles» (ACHENA-MASSÉ 1955 (I): 46.33-34) as a conclusion of his chapter on contradiction. Al-Ġazālī's case seems however more striking, as he gives more clearly a task to his reader than Avicenna does. If confirmed, this circumstance would also be an argument against the interpretation of the *MF* as a purely juvenile work of al-Ġazālī's (cf. JANSSENS 2003^b: 43), as giving exercises to the reader is clearly more compatible with a teacher's, than with a pupil's or a beginner's, stance.

[§30] D60.19-61

After divisions based on the predicate (affirmative and negative, §§26-27) and on the subject (universal and particular, §§28-29) of the proposition, the fourth division considers the relationship between the subject and the predicate, subdividing propositions into possible, necessary, and impossible.

POSSIBLE | Arabic *mumkina*, Latin *possible*.

IMPOSSIBLE | Arabic *mumtani'a* (also: 'prevented', 'prohibiting'), Latin *impossibile*. Duniyā's text, as it

is, is untenable, as it reads as examples of «impossible» propositions «Man is a stone» (a correct example) and «Man is not a stone» (an absurd one); cf. *infra* for a necessary emendation of the text, on the basis of which I have translated.

NECESSARY | Arabic *wāğiba*, Latin *necessarium*. Dunyā's text reads as examples of «necessary» propositions «Man is an animal» (correct) and «Man is not an animal» (absurd). It is clear, then, that the two second examples provided respectively for impossible and necessary propositions must be inverted, reading «Man is not an animal» as a meaningful example of a (negative) impossible proposition, and «Man is not a stone» as a meaningful instance of a (negative) necessary one. Cf. as a matter of fact the Latin translation, which correctly reads «'Homo est lapis,' et 'Homo non est animal'» as examples of *impossibile*, and «'Homo est animal,' 'Homo non est lapis.'» as examples of *necessarium* (LOHR 1965: 256.128-129).

AMBIGUOUS [BETWEEN] TWO MEANINGS | Arabic *muštarik li-ma'nayayni*. The two meanings of «possible» are respectively [(4.1.1)] what is not impossible («one-sided possibility», cf. STREET 2002: 135), and [(4.1.2)] that whose existence and whose non-existence are both possible («two-sided possibility», *ibidem*; see also AVICENNA, *Išārāt*, ed. DUNYĀ 1971: 272 ff. for the distinction). While [(4.1.1)] encompasses the necessary, thus bringing the tripartition to a simple alternative, according to [(4.1.2)] the necessary is distinct from the possible.

ACCORDING TO THE FIRST MEANING [...] NOT IMPOSSIBLE | Arabic *al-mumkin bi-l-ma'nā al-awwal lā yağibu an yakūn^a mumkin al-'adam, bal rubbamā mumtani' al-'adam, ka-l-wāğib, fa-inna-hu ġayr mumtani'*, Latin «Possibile enim secundum intentionem primam † non debet esse possibile non esse, sed *impossibile* † sicut necessarium, quod est non impossibile» (LOHR 1965: 256.144-146). Lohr's *cruces desperationis* depend on an intrinsic difficulty of the Latin text, due both to its being a slavish translation of its antigraph, and to the density of the Arabic original, which plays with use and mention of the same modal words. The main failures of the Latin version, which is however not unthinkable to salvage once considered its Arabic counterpart, are the omissions of *rubbamā* («sometimes», **aliquando*), and of the second genitive *al-'adam*, which leaves in suspension the adjective *impossibile* at the end of Lohr's *crux*. However, Lohr registers in *apparatus* the addition of *non esse* after *impossibile* in MS Bernkastel-Kues, St. Nikolaus Hospital, 205. With different punctuation, and accepting the emended text of the Kues copy, which agrees with the Arabic, Lohr's text can thus be read with good sense (and without *cruces*) as follows: «'Possibile' enim secundum intentionem primam non debet esse 'possibile non esse', sed 'impossibile non esse', sicut necessarium, quod est non impossibile».

POSSIBLY NON-EXISTING | Arabic *mumkin al-'adam*, Latin *possibile non esse*. The English rendition mirrors that of the analogous, and far more common, structure *wāğib al-wuğūd*, usually translated as «Necessary Existent». In its first meaning [(4.1.1)], «possible» also encompasses the meaning of «necessary», which might be glossed as «impossibly non-existing» (cf. *infra*), i.e. that whose non-existence is impossible. It is not mandatory [Arabic *lā yağibu*, Latin *non debet esse*, English «it is not necessary»], then, that «possible» in the first meaning only designates the «possibly non-existing», i.e. that whose non-existence is possible.

IMPOSSIBLY NON-EXISTING | Arabic *mumtani' al-'adam*, Latin *impossibile*.

ACCORDING TO THAT MEANING | Arabic *bi-dālika al-ma'nā*, Latin *secundum aliam intentionem*. The Latin *aliam* is a misunderstanding, because the meaning according to which «possible» means «not-impossible» is the first one listed *supra*, the same dealt with in the difficult passage just above, and not the 'other one'.

[§31] D62

The paragraph introduces the notion of contradiction (or contradictoriness) and presents three of seven conditions, which must obtain for the occurrence of proper contradiction.

THIS IS THE FIFTH [DIVISION] | D-Alt and the Latin translation both omit the specification of the numbering of the present division.

CONTRARY | Arabic *naqīd*, Latin *contradictoriam*. As opposed to the choice of the Latin translators, I leave the use of «contradictory» to the technical *mutanāqīd* appearing *infra*. Elsewhere in the translation, however, «contrary» is also used as an English rendering of *ḍidd*: cf. *e.g. infra, Metaphysics* I.3, §152. This notion of contrariety is explained as the opposition of affirmation and negation; in §152, *infra*, finer distinctions of the general notion of «opposition» will be propounded.

CONTRADICTION | Arabic *mutanāqīdatayni*, Latin *contradictoria*. The present participle of the VI form conveys the idea of reciprocity. Mutuality is however already implicit in the technical logical notion of contradiction (in Aristotelian logic), since this is the property ruling the diagonals of the traditional square of opposition. Affirmative universal and negative particular on the one hand, and negative universal and affirmative particular on the other hand, are contradictory because they cannot be both true nor both false. A specific condition for contradiction in the case of quantified propositions is however provided only in conclusion of the section (cf. *infra*, §32, condition [(vii)]), while the six conditions explored in the first place also apply to singular, unquantified propositions.

ONE OF THEM IS CONTRARY TO THE OTHER | «Contrary» translates here the Arabic *naqīḍa*, employed not technically; Latin has *contradictoria*, which seems in this case more on point.

CONTRADICTION | Arabic *tanāquḍ*, Latin *contradictio*. The fact that the property of being contradictory is expressed through the maṣdar of the VI form, corresponding to the participle *mutanāqīd*, seems to be a sign that the technical term is precisely the latter, while *naqīd* bears a more generic meaning.

CONDITIONS | Arabic *ṣurūṭ*, Latin *ista sex*, without a noun corresponding to «conditions» but with the addition of the numeral ‘six’. The listed *ṣurūṭ* in the original Arabic, however, are globally seven: cf. *infra*, §32.

THE FIRST ONE [...] NOT CONTRADICTION | The first condition excludes the cases of ambiguous expressions used with different meanings as the subject [*mawḍūʿ*] of the two sentences whose contradictoriness is up to verification. The example is the ambiguity of the word «ram» [*ḥamal*], which in Arabic might designate either the animal (the adult male sheep that can breed), or the sign of the zodiac (constellation of the Aries).

«THE RAM IS SACRIFICED AND ROASTED» | In the place of the two verbs *yaḍbaḥu* and *yašwī*, the Latin translation has here, and in the corresponding negative example, the sole verb *decollatur* (which should translate *yaḍbaḥu*).

AND BY THE OTHER THE KNOWN ANIMAL | A and the Latin translation both omit this sentence.

THE SECOND [CONDITION] [...] SUBJECT | The second condition prevents ambiguity in the predicate [*maḥmūl*].

FORCED | Arabic *mukrah*, Latin *coactus*.

FREE TO CHOOSE | Arabic *muḥtār*, Latin *volens*. JANSSENS 2019: 86 interprets the double meaning of *muḥtār* as ‘free to choose’ or ‘chosen’. Avicenna’s example in the *DN* was «sugar is *chirin* (meaning ‘sweet’ or ‘made of milk’)», as explained by Janssens *ibidem*; cf.

HE HAS THE POWER TO REFUSE | Arabic *ayy la-hu qudra ‘alā l-imtināʿ*, Latin *cum sit potens resistere*.

NAMELY IF HIS DESIRE [...] AS WELL | Reading *ayy law ḥullīya wa-ṣahwat^u-hu*, with Y and Vat. ar. 357, against *ayy mā ḥalī [?] wa-ṣahwat^u-hu* printed by Dunyā. The reading of *خلي* as passive of the II form is also suggested by the addition of a *tašdīd* in the corresponding passage in BĠŪ 2000: 27.11, while the reading *law* instead of *mā* is also supported by the Latin translation, which reads *si permutatur suo arbitrio* (where *permutatur* might in turn be a corruption of a better translation of *ḥullīya*, as for instance **privatur*. I thank Amos Bertolacci for this latter suggestion, and for his precious general help with this difficult clause). For an analogous structure with *law...wa-* cf. also *infra, Metaphysics*

IV.b.1.4, §261.

THE THIRD [CONDITION] [...] WHOLE EYE | The third condition claims to be excluding differences in universality and particularity in the two propositions involved, but the example is probably better understood in the terms of the distinction between predication *secundum quid* and predication *simpliciter*: cf. *infra*.

«SOMEONE'S EYE IS BLACK» | For «someone», the Arabic original is *fulān*; Latin uses here [*oculus*] *Petri*, with the same generic proper noun usually employed for the Arabic *Zayd*.

HIS EYE IS NOT BLACK | Dunyā's text has an obviously erroneous dittography, *laysat laysat*, which I have corrected before translating.

DENIAL OF THE BLACKNESS OF THE WHOLE EYE | As a matter of fact, the eye is not entirely black – the iris might be so, while the cornea and the sclera are certainly not –, so that the predication of the blackness on the basis of the pupil is *secundum quid*, and not *simpliciter*.

[§32] D63-64.3

The paragraph presents four further conditions of contradictoriness, three valid as for singular propositions, and one necessary as for quantified propositions.

THE FOURTH [CONDITION] [...] ACTUALITY | The fourth condition excludes contradiction when the two propositions differ as for potentiality and actuality. The given example is that of the intoxication of the wine in the jug, potential when the alcohol lies in its container, but actual when drunk. Avicenna's example for this in the *DN* was 'fire is [potentially] burning and [actually] not burning', as recalled in JANSSENS 2019: 86. Janssens surmises that «[i]n this case a *fiqh*-motive might have influenced al-Ghazālī's decision to modify the example».

EARTHEN JUG | Arabic *dann*, Latin *lagena*.

INTOXICATING | Arabic *muskir*, Latin *inebrians*.

ABILITY TO INTOXICATE | Arabic *iskār*, Latin *inebriationem*.

THE FIFTH [CONDITION] [...] INDIVIDUALS | The fifth condition excludes cases of different «relations» [sg. *idāfa*] occurring in the two considered propositions. «Ten» is the half only in relation to twenty; Zayd is «parent», father, only in relation to his son or daughter; and so on.

ALL THE CORRELATED | Arabic *ǧumla al-muḏāfāt*. The Latin translation replaces the Arabic «that they are equivalent in the relation in which all the correlated fall» with «ut non sint diversae relationes» (LOHR 1965: 257.172), which conveys roughly the same meaning, but seems to presuppose a different Arabic text.

UNLESS IN RELATION TO «TWENTY», [BUT NOT] TO ANOTHER [NUMBER] | The sentence, although clear in meaning, seems to have some textual problems. I have translated it presupposing that it means that the contradiction between the two propositions «Ten is the half»/«Ten is not the half» only arises when they are completed with the same number, twenty. In this direction, I have supplied a negation in square brackets to give account of the conclusive *wa-ǧayr^u-hu*. The Latin translation seems to show another way, albeit slightly more invasive, of restoring the text while getting the intended meaning: «Decem sunt dimidium,' comparatione scilicet viginti, non contradicis dicenti: 'Decem non sunt dimidium,' comparatione alterius numeri», LOHR 1965: 257.173-174.

BOTH ARE TRUE IN RELATION TO TWO [DIFFERENT] INDIVIDUALS | Namely, for instance, in relation respectively to Zayd's son, and to Zayd's father.

THE SIXTH [CONDITION] [...] AFFIRMATION | The sixth condition requires the equivalence of the two propositions as for time and place, but is soon extended to state the necessity of a global equivalence of the two considered propositions, with the sole exception of the variation in affirmation or

negation.

SIXTH [CONDITION] | D-Alt and the Latin translation both omit the numeral (cf. Latin: «et omnino oportet...», LOHR 1965: 257.176).

A SEVENTH CONDITION | The Latin has «*sexta conditio*», coherent with the omission of the preceding numeral, but Dunyā does not report in this case any variant reading of *A*. The seventh condition only applies to quantified propositions, and requires that the contradictory propositions are one universal and the other particular (thus building the diagonals of the traditional square of opposition, cf. *supra*).

[§33] D64.4-65

The sixth, and last, division expounded in Treatise III deals with conversion, *i.e.* the inversion of subject and predicate in a proposition. Considering the four quantified propositions distinguished in §28, the paragraph shows that universal negatives and particular affirmatives convert to themselves, while the universal affirmative converts into a particular affirmative. The particular negative is on the contrary not convertible.

IT IS THE SIXTH [DIVISION] | *A* and the Latin translation both omit this sentence.

CONVERSION | Arabic *ʿaks*, Latin *conversio*.

CONVERTIBLE PROPOSITION | Arabic *qaḍīyya maʿkūsa*, Latin [*dicetur*] *propositio converti*.

IT DOES NOT CONVERT | Arabic *lā tanʿakisu*, Latin [*dicetur*] *propositio non converti*.

ITS CONTRADICTIONARY | Arabic *naqīḍ*, Latin *contradictoria*. The particular affirmative («Some stones are men») is the contradictory of the universal negative in the square of opposition, but the terminology employed by al-Ġazālī is at least partially fluid, as *naqīḍ* seemed to be used *supra*, §31, in a weaker and less technical way than the VI form-participle of the same root.

OUR SAYING: «SOME STONES ARE MEN» | For symmetry with the other occurrences, I correct in *qawl^u-nā*, on the basis of *A*, the reading *qawl^u-hu* chosen by Dunyā.

Treatise IV

[§34] D66

The paragraph contains a short general introduction to the topic of the fourth treatise, namely syllogism, whose explanation is seen as the core of logic and its primary intent. The macrosubdivision of the argument into form and matter of the syllogism is introduced, and syllogism is framed within other possible kinds of proofs and argumentations.

THE FIRST IN THOUGHT IS THE LAST IN ACTION | Arabic *awwal al-fikr āhīr al-ʿamal*, Latin *initium autem cognitionis finis est operis*. On this saying attributed to Aristotle and on its history in the Arabic world see STERN 1962 (on Stern's fascinating figure of scholar, cf. STILLMAN N. 2018). The usage of the saying in this context aims to underline the centrality of the syllogism in the system of logic. The «beginning of thought», *i.e.* that which is primary in logical theory, is properly what is stated in the title of the fourth treatise, namely «the composition of the propositions to set in a syllogism» [*tarkīb al-qaḍyā li-taṣīr^a qiyās^{am}*]. The first three treatises have been necessary before getting to the syllogism, and its discussion will now involve general definitions, before getting to the real core of the matter, *i.e.* demonstrative syllogism (cf. *infra*). This is thus «last in action», despite its primary theoretical importance.

INTENT | Arabic *maqṣūd*, Latin *intentio*. Although *maqāsid* is not the plural of *maqṣūd* (cf. *supra*, §1) the Latin version does not distinguish between the two.

SYLLOGISM | Arabic *qiyās*. The Latin rendering is commonly *sylogismus*, but the first two occurrences of *qiyās* (in the general title of the treatise, and in the title of the first «pillar», cf. *infra*) make exception to this rule, as they are rendered with the more generic *argumentatio*, which later translates instead *huḡḡa*.

PILLAR | Arabic *rukn*. The word is not translated into Latin. When the Arabic original speaks of matter and form of the syllogism as dealt with «in two pillars» [*fī ruknayni*], Latin has only the generic «circa duo», while the «first pillar» is introduced with the simple «Primum quidem...» (cf. LOHR 1965: 258.4 and 258.7. The title *Capitulum de forma probationis* (*ivi*, 258.6) is supplied by the editor.

FORM | Arabic *ṣūra*, Latin *forma*.

MATTER | Arabic *mādda*, Latin *materia*. The general issue of the form and the matter of the syllogism in the *MF* is thoroughly discussed in LAGERLUND 2010.

WE HAVE ALREADY MENTIONED [...] THE PROOF | The passage summarizes the findings of §2 *supra*.

PROOF | Arabic *huḡḡa*, Latin *argumentatio*.

INDUCTION | Arabic *istiqrāʾ*, Latin *inductio*. Induction will be considered again *infra* at §47 and, specifically, at §49.

EXEMPLIFICATION | Arabic *tamṭīl*, Latin *exemplum*. Exemplification will be considered again *infra* at §47 and, specifically, at §§50-54. The term will also appear in an entirely different context, in psychology, as one of the characteristic functions of the cogitative faculty: cf. *infra*, *Physics* IV, §400. For a parallel listing of *qiyās*, *istiqrāʾ* and *tamṭīl* as kinds of argumentations cf. *supra* the introductive §3. For a different rendering of *tamṭīl* as «analogy» cf. AHMED 2011: 84 (§96).

CONSIDERATION OF THE UNKNOWN THROUGH THE PRESENTLY WITNESSED | Arabic *iʿtibār al-ḡāʾib bi-l-ṣāhid*. I translate according to Dunyā's text, as opposed to the inverted reading of *A: iʿtibār al-ṣāhid bi-l-ḡāʾib* («the consideration of the presently witnessed through the unknown»). That reading seems presupposed by the Latin translation: «Consideratio vero 'Praesentis ex absenti'...» (LOHR 1965: 258.11). Lohr however seems to recognize that the meaning must be opposite with respect to his

printed text, as he references the «argument from the present to the absent» (*ivi*, fn. 11) referring to GARDET-ANAWATI 1948: 365-367 and VAJDA 1960: 125.

EXAMPLE | Arabic *maṭāl^m*, Latin *exemplum*. The Latin failure to distinguish *maṭāl* from *tamtīl* provokes an unhappy conflation of part and whole: cf. *infra*.

IT FALLS WITHIN IT | *i.e.* within the «exemplification» [*tamtīl*], as the Latin translation makes explicit: «vocatur exemplum et continetur sub exemplo» (LOHR 1965: 258.11-12), where both methods of argument are deceptively called *exemplum*, but the relation of inclusion of one into the other is nonetheless very clear.

DEMONSTRATIVE | Arabic *burhānī*, Latin *demonstrativum*.

[§35] D67.1-18

The paragraph presents a definition of the syllogism and provides examples of syllogisms with different kinds of premises: two categorical propositions; one conjunctive hypothetical and one categorical proposition; one disjunctive hypothetical and one categorical proposition. All these examples concur to affirm that the world has a (temporal) origin, coherently with al-Ġazālī's general (albeit concealed) eternalist agenda (cf. Introduction, §1.8.2). However, the argument for the origin of the world is given as an example of syllogism already in Avicenna's *DN*, where it must have had the weaker sense of an argument for the eternal creation of the world, *i.e.* for a dependence of the world on God which does not dispense from the former's coeternity with the latter. Judging from this sole occurrence, then, we would not have enough elements to draw a conclusion on al-Ġazālī's stance, as here he might be merely translating Avicenna. The frequency and quality of al-Ġazālī's previous and further examples concerning the origin of the world, however, leaves no doubt as for his anti-eternalist position, especially when considered in the light of the *TF*. On all this cf. the Introduction, §1.8.2.

«SYLLOGISM» IS AN EXPRESSION [...] FOLLOWS | Latin *Syllogismus est oratio in qua, positis quibusdam orationibus et concessis, aliam per eas quae concessae sunt necesse est evenire*. Cf. the Aristotelian definition of syllogism in *An. pr.* A (1) 1, 24^b18-26.

SPEECHES | Arabic *aqāwīl*, Latin *orationibus*.

COMPOSITION | Arabic *ta'rif^m*.

FROM THE CONCESSION OF WHICH | Arabic *min taslīmⁱ-hā*.

NECESSARILY | Arabic *iḍtirār^m*.

«THE WORLD IS FORMED, BUT EVERY FORMED HAS AN ORIGIN» [...] THE WORLD HAS AN ORIGIN | The example of a syllogism deals once again with the thorny question of the origin in time of the world. «Formed» translates the Arabic *muṣawwar* [Latin *formatum*]. In the various occurrences of the expression 'having an origin', Dunyā's Arabic text oscillates between the form *hādīt* (present participle of the I form, in general far more common) and the alternative reading *muḥdat* (past participle of the IV form, less common in the *MF*). In particular, Dunyā prints *muḥdat* only in the third of the six occurrences of the predicate in this paragraph (*i.e.* in the consequent of the conjunctive hypothetical premise of the syllogism: «then it has an origin» [*muḥdat*]), while *A* reads *muḥdat* also in the first (the second premise of the categorical syllogism given above: «but every formed has an origin») and in the fourth occurrence (the conclusion of the syllogism with a conjunctive hypothetical premise: «it would follow that the world has an origin»). In the absence of any real variation in meaning, and without any help coming from the Latin translation (which always translates with *coepit*), I am inclined to consider the variants as indifferent; a possible way to standardize them in an edition would be choosing consistently the more widespread form *hādīt*. In any case, there should be lexical

uniformity between the occurrences of the predicate in the same syllogism, which Dunyā's text fails to provide.

CONNECTIVE | Arabic *iqtirānī*. For the translation as «connective» cf. STREET 2015 and AHMED 2011: 43 (§60); Achena-Massé have «à connexion», 'by combination', for the corresponding Persian in the *DN*. It corresponds to the categorical syllogism [*qiyās ḥamlī*], since *infra*, §45, while recapitulating the subject-matter whose discussion had begun here, the text says that what preceded was a *tafṣīl al-aqīsa al-ḥamliyya*, which posits the equivalence of *iqtirānī* and *ḥamlī*.

REPETITIVE | Arabic *istitnāʿī*. For the translation as «repetitive» cf. STREET 2015 and AHMED 2011: 43 (§60); Achena-Massé have «à exclusion», 'by exclusion', for the corresponding Persian in the *DN*. For an overview of the term *istitnāʿ* in Arabic logic see also GYEKYE 1972.

[§36] D67.19-68

Speaking about the connective syllogism, and continuing to use his favourite example concerning the world's origin, al-Ġazālī provides in the present paragraph a list of the technical terms occurring in basic syllogistic: major, minor and middle terms, major and minor premises, conclusion.

A PREDICATE AND A SUBJECT | Cf. *supra*, §23. Dunyā's text and the Latin translation share the same ordering; *A* reads instead *mawḍūʿ wa-maḥmūl*.

COUPLING | Arabic *izdiwāḡ*, Latin *convenientia*.

OCCURRENCE OF THE CONCLUSION | Arabic *intāḡ*, Latin *conclusio*.

«WHAT IS FORMED HAS AN ORIGIN» | Here again the predicate 'having an origin' is expressed with the past participle of the IV form *muḥdat*; cf. *supra*, §35.

TERMS | Arabic *ḥudūd*, Latin *termini*. The term *ḥadd* translates the Aristotelian Greek ὄρος in both its senses: that of 'definition' (for which also ὀρισμός is used in Aristotle; cf. *supra*, §§2-3 and *passim*), and that of 'term' of a syllogism (here and *infra*). Cf. LAMEER 1994: 72 for the rendition of the Arabic and the corresponding Greek.

THE PIVOT OF THE SYLLOGISM | Arabic *madār al-qiyās*, Latin *tota constructio syllogismi*. All the syllogism is said to 'revolve' (hence the root of *madār*) around the terms. The Latin rendering is free but quite accurate.

«MIDDLE TERM» | Arabic *al-ḥadd al-awsaṭ*, Latin *medius terminus*. Cf. LAMEER 1994: 72.

CONCLUSION | Arabic *natīḡa*, Latin *conclusio*. The Latin translation fails to distinguish between the 'resulting' or 'occurrence of the conclusion' (Arabic *intāḡ*, for which see *supra*) and the conclusion itself (*natīḡa*), because it renders both with *conclusio*.

«MINOR TERM» | Arabic *al-ḥadd al-aṣḡar*, Latin *minor terminus*. Cf. LAMEER 1994: 72. I prefer the reading *al-ḥadd al-aṣḡar*, witnessed by *A*, over the indeterminate *ḥadd^{mn} aṣḡar^a* printed by Dunyā (cf. indeed the names of the various premises distinguished *infra*, always determinate). The minor term is the subject of the conclusion, and it is identified here with «the intended [thing] of which it is predicated» [Arabic *al-maqṣūd bi-an yuḥbir^a*, Latin *id de quo agitur*].

«MAJOR TERM» | Arabic *al-ḥadd al-akbar*, Latin *maior terminus*. Cf. LAMEER 1994: 72. I prefer the reading *al-ḥadd al-akbar*, witnessed by *A*, over the indeterminate *ḥadd^{mn} akbar^a* printed by Dunyā. The major term is the predicate of the conclusion, and it is identified here with the «judgment» [*ḥukm*].

«HAVING AN ORIGIN» | Here: *muḥdat*.

«PREMISE» | Arabic *muqaddima*, Latin *propositio*. LAMEER 1994: 70 fn. 6 (referencing also HEIN 1985: 357, 360) suggests instead to transcribe *muqaddama*, at least in the context of al-Fārābī's logic, with the specific sense of «that which is put forward» also conveyed by the Greek πρότασις. In more recent

scholarship the reading *muqaddima* seems however predominant: cf. for instance, for an Avicennan context, the translation of the *Logic* of the *Kitāb al-Nağāt* in AHMED 2011: 32 and *passim*. The «premise» is here defined as «the proposition [*qaḍīyya*], when it is made part of a syllogism».

«MINOR PREMISE» | Arabic *al-muqaddima al-ṣuğrà*, Latin *propositio minor*.

«MAJOR PREMISE» | Arabic *al-muqaddima al-kubrā*, Latin *propositio maior*. Cf. LAMEER 1994: 78-79.

«CONCLUSION» | Arabic *natīġa*, Latin *conclusio*. The *natīġa* is defined as «that which follows» [*lāzīm*] from the syllogism «after its having followed» [*ba'da l-luzūm*].

«PROBLEM» | Arabic *maṭlūb*, Latin *quaestio*. For the rendition of *maṭlūb* as 'problem', based on Aristotle's Greek *πρόβλημα*, cf. LAMEER 1994: 71 and AHMED 2011: 44 (§61); see also ZIMMERMANN 1981: lii fn. 3 (referenced in LAMEER 1994: 72 fn. 9) for the connection, here particularly on point, between *maṭlūb* and *ζητούμενον*. The «problem» here is the undeduced conclusion of a syllogism, or, as the *MF* puts it, the *lāzīm* of a syllogism «before its having followed» [*qabl l-luzūm*].

[§37] D69

The paragraph introduces the three figures of syllogism that will be treated in what follows. As noticed by JANSSENS 2010^b, al-Gazālī's logic – much like Avicenna's one – ignores the fourth figure of the syllogism.

THE COMPOSITION [...] COMBINATION | The «composition» [*ta'līf*] of the premises, already mentioned *supra* in the definition of syllogism [(§35)], is identified here with their «combination» (or «connection») [*iqtirān*]. On the Arabic technical term *iqtirān* and its derivation from the Greek *συνπλοκή* see LAMEER 1994: 80-84. In the *Logic* of Avicenna's *K. al-Nağāt* the term *qarīna* (of the same root) is employed instead, with the same meaning: cf. AHMED 2011: 44 (§61).

«FIGURE» | Arabic *ṣakl*, Latin *figura*. On *ṣakl* as corresponding to the Greek *σχῆμα* see LAMEER 1994: 73. The «figure» of the syllogism is defined here as the «appearance [*hay'a*] of the combination» (Latin *qualitas* [...] *dispositionis*) of the premises. The three figures of the syllogism are distinguished on the basis of the position of the middle term: in the «first figure» it is predicate in one premise and subject in the other; in the «second figure» it is subject in both premises; in the «third figure» it is predicate in both premises.

JUDGMENT | Arabic *ḥukm*, Latin *iudicium*.

WITH RESPECT TO THESE FIGURES | As opposed to the Arabic original, the Latin translation repeats here the numeral 'three' referred to the figures: «tribus» (LOHR 1965: 260.60).

CONCLUSIVE SYLLOGISM | Arabic *qiyās muntīġ*. Latin paraphrases the sentence: «in nulla earum concluditur aliquid», cf. LOHR 1965: 260.61-62.

PROPERTIES | Arabic *ḥaṣā'is*, Latin *proprietas* (in the singular).

[§38] D70-71.5

The paragraph deals with the syllogism of first figure. Its distinctive properties are (a) that its moods do not need to be reduced to another figure in order to be proven (which explains its priority and its name of «first»), and (b) that it concludes to all four kinds of quantified propositions (while the second figure does not admit affirmative conclusions, and the third figure does not admit universal ones). Two conditions for the validity of the conclusion in the first figure are then given: the minor premise must be affirmative, and the major must be universal. An explanation of the validity of the first figure in terms of inclusion of the subject within the predicate is then advanced.

AND I MEAN WITH THIS [IN] THE FIRST FIGURE | This sentence has the features of a gloss fallen into text, and is indeed missing in the Latin translation. Ms. *Y* (103^r2-3) reads *šarṭ intāğ al-šakl al-awwal* («the condition of the occurrence of the conclusion [in] the first figure») instead of Dunyā’s *šarṭ intāğ hādā al-šakl*, later omitting of course the likely gloss.

GIST | Arabic *ḥāšil*. The Latin text has by contrast *certitudo* here and in the following logical occurrences; different is the rendition in the title of *MF*, *Metaphysics* V, for which cf. *infra*, §295.

MOODS | Arabic *ḍurūb*, Latin *modi*. For *ḍarb* as Arabic rendition of πτωσις see LAMEER 1994: 73. Dunyā’s text reads *aḍrab*. In this sense, however, the plural of *ḍarb* should be *ḍurūb* (cf. WEHR 630b; see also for the regular plural in philosophical context AHMED 2011: 45 and here, *infra*, §41; LAMEER 1994: 73 does not specify the wanted plural), and on this basis I correct Dunyā’s text. (The alternative form *aḍrāb* would also be admitted as a plural of *ḍarb*, but with long *alif*, and in any case with a different meaning).

[§39] D71.6-72.13

The four valid moods of the first figure (with the exception of the subalternate moods Barbari and Celaront) are detailed: [(1.1)] Barbara, [(1.2)] Celarent, [(1.3)] Darii, [(1.4)] Ferio. The examples given in the text are summarised in the following table.

TABLE 24. *Examples of the valid moods of the first figure of the syllogism*

	[(1.1)] BARBARA	[(1.2)] CELARENT	[(1.3)] DARI	[(1.4)] FERIO
M	Every composed has an origin	No composed is eternal	Every composed has an origin	No composed is eternal
m	Every body is composed	Every body is composed	Some existents are composed	Some existents are composed
∴	Every body has an origin	No body is eternal	Some existents have an origin	Some existents are not eternal

DETAILING | Arabic *tafšīl*, Latin *distinctio*.

TWO [...] UNIVERSAL [PREMISES] | Reading *kulliyyatayni* instead of Dunyā’s misprint كئین.

COMPOSED | Arabic *mu’allaḥ*, Latin *compositum*.

HAS AN ORIGIN | Arabic *muḥdaṭ*, Latin *coepit*.

REPLACING [...] WITH «NOT ETERNAL» | Arabic *laysa bi-qadīm*, Latin *non aeterno*. It is noteworthy that, in need for a negative premise, al-Ġazālī does not deny the predicate ‘having an origin’, but its opposite, leaving the meaning – that is, the fact that the world has a beginning in time – inalterate. This is a relevant feature, inasmuch as it shows that in the *MF* the logical examples are not only formal, but must be considered at least in part also in their concrete truth-value. Moreover, given the overwhelming importance of the specific example concerning the world’s origin in time, and the similarity of this syllogism (concerning ‘body’) with the preceding instances about the world, the substitution of a possible **laysa bi-ḥādīt/muḥdaṭ* with *laysa bi-qadīm* can be seen as a parallel case

to the possible analogous replacement, which we have hypothesised in §26 *supra*.

FIRST PREMISE | With «first premise» the minor premise is meant, as in the order with which the premises are generally provided in the text. In the preceding table I have on the contrary rearranged the syllogisms according to the mnemonic Latin ordering.

IS MADE NEGATIVE [...] IS REPLACED | Or with the second person singular: «you make the major [premise] negative, you replace the wording of the affirmation with the negation, and you say [then] [...]». For *ṣīġa* as wording cf. also *supra*, §27.

ETERNAL | Arabic *azalī*.

RUNS PROPERLY | Arabic *intaẓama*, Latin *constat*. Whereas in its first occurrence the verb is construed with *min*, in the second Duniyā expunges *min*, against the reading of *A*.

A PARTICULAR AFFIRMATIVE MINOR [PREMISE] | Reading *ṣuġrā mūġiba ġuz'iyya*, with *A*, instead of *mūġiba ṣuġrā ġuz'iyya* printed by Duniyā; cf. indeed the formulation of the «universal negative major [premise]» as *kubrā sāliba kullīyya* immediately *infra*. After the regular translation *et maiore negativa universali*, at the end of the passage, the Latin text adds *et conclusione negativa particulari*. Although correct (this is the example of syllogism in Ferio, where the conclusion is precisely a particular negative), this addition is perhaps unwarranted, as the verb *intaẓama* is used in the text to introduce the *premises* that guarantee the validity of the mood, with no need to make its conclusion explicit as well.

[§40] D72.14-73

The paragraph introduces the further twelve possible combinations leading to ineffectual, *i.e.* non-conclusive or invalid, syllogisms of the first figure.

COMBINATIONS | Arabic *iqtirānāt*, Latin *connexiones*.

IN EACH FIGURE SIXTEEN COMBINATIONS |

ARE ORDERED | Arabic *yantaẓimu*, Latin *possunt fieri*. Unlike the preceding occurrences of the verb *intaẓama* (§39 *supra*), here the meaning seems the general one of 'running', 'being ordered' (of the syllogisms) rather than the more specific sense of 'running properly', 'being valid' (since the further «combination» mentioned here are not conclusive). This seems to be mirrored by the different translations chosen by the Latin translators, who have *constat* in the previous cases (see §39), but the generic *possunt fieri* here.

THERE REMAIN TWO AFFIRMATIVES | Restoring *wa-yabqī* before *mūġibatāni*, as in D-Alt.

[§41] D74

A table of the sixteen moods of the first figure is presented. It is noteworthy that the material is arranged in the form of a table already in our most ancient Arabic codex, the Istanbul manuscript *Y* (f. 104^r). The table however is absent from other Arabic (cf. for instance Vat. ar. 357) and Judaeo-Arabic copies (O). Lohr's Latin edition prints it in the form of a discursive list, as well. Tables and graphical depictions of knowledge in medieval manuscripts are still understudied. The Latin list, moreover, has only eight of the total sixteen cases, as it only considers the possible moods stemming from an affirmative minor, universal ([1]-[4]) or particular ([5]-[8]). Cases [9]-[12] in the Arabic table – *i.e.* moods stemming from a universal negative minor – and [13]-[16] – *i.e.* moods stemming from a particular negative minor – are not considered in the Latin text. This might be a simplification occurred in the Latin tradition due to the fact that all the latter eight moods are ineffectual, but it

contrasts nonetheless with the *sexdecim connexiones* announced in Latin as well at the beginning of §40, *supra*. The eight ineffectual moods stemming from a negative minor premise are however briefly discussed *infra*, §42, which may have helped the Latin translators (and readers) to do without an exhaustive conspectus of the moods here. This table of moods was already translated into English in CHERTOFF 1952: 123 (second part of the dissertation).

MOODS | Here regularly *ḍurūb*, not *aḍrab* as before. Cf. *supra*, §38.

CONCLUSIVE | Reading *muntiqū-hā* instead of the misprint *منتها* which is found in Dunyā's text.

INEFFECTUAL | Arabic *'aqīm*, Latin *sterilis*. Although the title is not translated into Latin, the rendition as *sterilis* can be inferred by the description of the single moods in the list corresponding to the Arabic table.

[§42] D75.1-8 + 76.4-21

The paragraph discusses again, this time in a discursive rather than tabular form, the conclusive and invalid moods of the first figure.

THEREFORE, THE UNIVERSAL AFFIRMATIVE MINOR [...] EITHER. | As already noticed by LOHR 1965: 262 fn. 148, these two sentences are omitted in the Latin translation. Together with the omission of part of the material of the table of the moods of the first figure (see *supra*, §41), this seems to point at some sort of conspicuous textual accident occurred here between the Arabic original and the Latin version. After these two sentences, Dunyā's text goes on to report a lengthy variant reading of *A* (corresponding to D75.9-76.3), which Dunyā describes as substitutive of the material arranged in the table of §41. The text provided by *A* is however strictly worse than that of the table, and accordingly I did not translate it.

WE HAVE ALREADY ASSEMBLED [...] PARTICULAR AFFIRMATIVE MINOR | Dunyā reads *fa-qad rakkabnā 'alā kull' wāḥidatⁱⁿ min ṣuġrā mūġibatⁱⁿ kulliyyatⁱⁿ wa-ṣuġrā mūġibatⁱⁿ ġuz'iyatⁱⁿ*, as opposed to the more concise, but still clear and correct, text of *A*: *fa-qad rakkabnā 'alā kull' ṣuġrā mūġibatⁱⁿ*, which could be translated to: «we have already assembled on each affirmative minor» (*i.e.* on both the particular and the universal). The text of *A* was at the basis of the Latin translation: «iam adiunximus unicuique minori affirmativae» (LOHR 1965: 262.149).

FLAW | Arabic *ḥalal*, Latin *e converso [minoris affirmativae]*, which seems to presuppose a different Arabic text (or a misunderstanding on the part of the Latin translator; thus LOHR 1965: 263 fn. 155).

DETACHED | Arabic *mubāyan*, Latin *remotum*.

JUSTIFICATION | Arabic *ta'lil*, Latin *causa* (clearly on the basis of the meaning of *'illa*).

[§43] D76.22-79.11

The four valid moods of the second figure (with the exception of the subalternate moods Cesaro and Camestrop) are detailed: [(2.1)] Cesare, [(2.2)] Camestres, [(2.3)] Festino, [(2.4)] Baroco. The examples given in the text are summarised in the following table.

TABLE 25. *Examples of the valid moods of the second figure of the syllogism*

	[(2.1)] CESARE	[(2.2)] CAMESTRES	[(2.3)] FESTINO	[(2.4)] BAROCO
M	No soul is divisible	Every body is composed	No soul is divisible	Every body is composed
m	Every body is divisible	No eternal thing is composed	Some existents are divisible	Some existents are not composed
∴	No body is a soul	No eternal thing is a body	Some existents are not a soul	Some existents are not a body

ITS GIST REVERTS | Arabic *yarǧī'u ḥāšil^u-hu*, Latin *cuius haec est proprietas* (which would rather lead to think to the Arabic root *ḥ-ṣ-ṣ*; a confusion with the undotted *rasm* of *ḥāšil* in the antigraph of the Latin translation is not unlikely). Before the translation of the *incipit* of the Arabic paragraph, the Latin translation adds this sentence: «Figura secunda est, cum medius terminus praedicatur in utraque propositione» (LOHR 1965: 263.165). This kind of short explanatory statement is present in the parallel case of the introduction to the third figure of the syllogism (*infra*, §45), which corroborates the hypothesis of the loss of that portion of text here.

AS IT HAS BEEN EXPLAINED BEFORE ABOUT THE FIRST FIGURE | Cf. *supra*, *Logic* IV, §38.

AS WE HAVE MENTIONED ABOUT THE FIRST FIGURE | Cf. *supra*, *Logic* IV, §40.

QUALITY | Arabic *kayfīyya*, Latin *qualitate*. Despite the introduction of the notions of affirmation and negation as early as in §26 (*Logic* III, see *supra*), this is the first time in the text that this feature of the propositions is called «quality» (as opposed to the ‘quantity’ of particularity and universality). The origin of this use, sparse in the *MF*, can be traced back to the notion of ποτόν (and conversely of ποσόν for quantity) in Alexander of Aphrodisias’ commentary on the *Prior Analytics*.; cf. LAMEER 1994: 79.

THE CONCLUSIVE MOODS OF [THIS FIGURE] | Accepting Duniyā’s *ḍurūb^u-hu* (referred to the second figure) as opposed to *ḍurūb^u-humā* of *A*, where the dual can be explained as a case of attraction, given the wide series of dual verbs and nouns that precede.

FOUR MOODS | The seemingly irregular *aḍrab* resurfaces here (plural of paucity?).

DIVISIBLE | Arabic *munqasim*, Latin *divisibile*.

«DIVISIBLE» BECOMES A SUBJECT FOR THE MAJOR | Duniyā prints here the masculine *akbar* instead of the usual *kubrā* (feminine for the implicit ‘premise’, *muqaddima*).

[§44] D79.12-80.12

Two ways of showing the validity of the fourth mood of the syllogism of the second figure (*Baroco*) are introduced and explained, *i.e.* the ekthesis and the *deductio per impossibile*. For an explanation of these two proofs of the validity of the fourth mood cf. LAGERLUND 2010: 198-199. Lagerlund advances some perplexities on al-Ġazālī’s proofs, but it seems that these can probably be addressed and solved on the basis of the Arabic text, as opposed to the Latin text he used for the article.

IT CAN ONLY BE ASCERTAINED AS CORRECT | Arabic *wa-innamā yuṣaḥḥihū*, Latin *non potest sciri nisi*.

«EKTHESIS» | Arabic *iftirāḍ*, Latin *positio*. For the connection of *iftirāḍ* with Aristotle’s ἐκθήσις (*An. pr.*

28³23-26) see LAMEER 1994: 75 (cf. also LAGERLUND 2010: 199); for the translation of the Arabic term with the technical ekthesis in logical context see also AHMED 2011: 39 (§55). Possible English translations of the Greek term (usually however employed as such) include ‘exposition’, ‘setting-out’, and ‘(universal) instantiation’.

«ABSURDITY» | Arabic *ḥalf*, Latin *indirecta ratiocinatio*. For the necessity of reading *ḥalf* and not *ḥulf* see LAMEER 1994: 74 and fn. 12, who renders the Arabic expression *qiyās al-ḥalf* as *deductio ad/per impossibile*. For a non-Latin rendition of the same phrase cf. AHMED 2011: 79 (§91), who translates it as «syllogism [that concludes by way of] absurdity» (hence my translation). The method of the *qiyās al-ḥalf* will be discussed *infra* in §48.

«SOME» | Arabic *al-ba’d*, Latin *aliqua res*.

ALLEGATION | Arabic *da’wā*, Latin *sententia*.

THEREFORE, IT IS NOT TRUE | The subject «it» here refers to the «contradictory of the conclusion». Having demonstrated that as false, the conclusion itself is proven to be true, and the syllogism is thus verified and formally valid (which was the aim of the *deductio per impossibile*).

[§45] D80.13-83

The six valid moods of the third figure are detailed: [(3.1)] Darapti, [(3.2)] Felapton, [(3.3)] Datisi, [(3.4)] Disamis, [(3.5)] Bocardo, [(3.6)] Ferison. The examples given in the text are summarised in the following table.

TABLE 26. *Examples of the valid moods of the third figure of the syllogism*

	[(3.1)] DARAPTI	[(3.2)] FELAPTON	[(3.3)] DATISI	[(3.4)] DISAMIS	[(3.5)] BOCARDO	[(3.6)] FERISON
M	Every man is rational	No man is a horse	Every man is an animal	Some man writes	Some man does not write	No animal is snow
m	Every man is an animal	Every man is an animal	Some man is white	Every man is an animal	Every man is rational	Some animal is white
∴	Some animal is rational	Some animals are not a horse	Some white [thing] is an animal	Some animals write	Some rational [beings] do not write	Some white [thing] is not snow

THE PROPOSITION BE A PARTICULAR OR UNIVERSAL AFFIRMATIVE | Duniyā prints *mūǧibat^{um}*, as predicate, instead of *al-mūǧiba* referred to the subject as in D-Alt. The latter seems to have been the reading of the Arabic copy used for the Latin translation; cf. LOHR 1965 265.226: «sive propositio affirmativa sit universalis vel particularis».

THEREFORE, SOME ANIMAL IS RATIONAL | Restoring the conclusion of the third mood of this figure (*Datisi*) as in D-Alt, against Duniyā’s omission of it. Cf. also the Latin translation: «ergo quoddam animal est rationale», LOHR 1965: 265.234-235.

«A CERTAIN WRITER IS A MAN» | Arabic *kātib^{um} mā insān^{um}*. This is just another way of rendering a particular with *ba’d*.

THROUGH THE WAY OF EKTHESIS | Arabic *bi-ṭarīq' l-iftirāḍ'*, Latin *per positionem*. The following example of ekthesis is omitted in the Latin translation.

ILLITERATE | Arabic *ummī*.

CATEGORICAL SYLLOGISMS | Arabic *al-aqīsa al-ḥamliyya*, Latin *syllogismorum categoricorum*.

[§46] D84-86.8

Two kinds of repetitive syllogisms, *i.e.* conjunctive hypothetical and disjunctive hypothetical, are listed. The conjunctive hypothetical syllogism is expounded in greater detail: given a conjunctive hypothetical proposition of the kind explained above (§§23-24) used as a premise, four types of conjunctive hypothetical syllogisms stem according to the affirmation or the negation of its antecedent or of its consequent. The two valid kinds are respectively equivalent to the *modus ponens* ('affirming the antecedent': If *p*, then *q*; but *p*; therefore, not *q*) and the *modus tollens* ('denying the consequent': If *p*, then *q*; but not *q*; therefore, not *p*). If the consequent *q* is included in the antecedent *p*, however, all kinds are valid (*i.e.* also 'denying the antecedent' and 'affirming the consequent' become conclusive).

REPETITIVE SYLLOGISMS | Arabic *qiyāsāt istiṭnā'īya*, Latin *de syllogismis hypotheticis*.

CONJUNCTIVE HYPOTHETICAL | Arabic *ṣarṭī muttaṣil*, Latin *hypotheticus coniunctus*.

DISJUNCTIVE HYPOTHETICAL | Arabic *ṣarṭī munfaṣil*, Latin *hypotheticus disiunctus*. Cf. *supra*, §23 ff., the parallel discussion of conjunctive and disjunctive propositions, which gives the basis for the explanation of the repetitive syllogism.

«IF THE WORLD HAS AN ORIGIN, THEN IT HAS AN ORIGINATOR» | Here «has an origin» translates *ḥādīt*; «originator» translates *muḥdīt*. Cf. *supra* and *infra* the further examples of the same tendency (and see the Introduction, §1.8.2).

WHEN YOU HAVE REPEATED | Arabic *idā istiṭnayta*, Latin *si posueris*. WEHR 129^a, s.v. *ṭanā*, only gives the meaning of 'to except, exclude' for the X stem; however, it is clear from the context that this cannot be here the sense of the verb.

[IT IS SUCH THAT] IF | Reading *in* instead of *an* as in *Dunyā*.

«IF THIS PRAYER [...] NOR THAT IT IS VAIN» | This further example, typically Islamic, is omitted by the Latin translation, in accordance with the usual strategy of cultural acclimation at work in the Latin version. The use of this example together with the common one about the (non-)eternity of the world adds to the impression of a specific willingness, on al-Ġazālī's part, to add broadly religious motives to the philosophical examples given in the text. On this aspect, cf. Introduction, esp. §1.9 and §1.10. For the Latin omission as a sign of cultural acclimation see the Introduction, §2.2.1.

PRAYER | Arabic *ṣalāt*.

LEGALLY VALID | Arabic *ṣaḥiḥa*, usually rendered as 'correct' or 'sound'. Here, however, the religious and juridical dimension of the example invites to a more specific translation.

THE PLACE OF PRAYER | Arabic *al-muṣallā*.

REPETITIVE [SYLLOGISMS] | Arabic *istiṭnā'āt*; perhaps also, more literally, 'repetitions'.

THE ANTECEDENT ITSELF | Arabic *'ayn al-muqaddim*, Latin *antecedens*.

THE CONTRADICTORY OF THE CONSEQUENT | Arabic *naqīḍ al-tālī*, Latin *negativam consequentis*. In the summary of the two valid kinds of repetitive syllogisms (*i.e.* the *modus ponens* and the *modus tollens*), where *'ayn al-muqaddim* and *naqīḍ al-tālī* also occur, they are translated respectively into Latin as *positio antecedentis* and *destructio consequentis* (cf. LOHR 1965: 266.281-282).

DENIAL | Arabic *naḥy*, Latin *remotio*.

ESTABLISHING | Arabic *itbāt*, Latin *positio*.

[§47] D86.9-87

The second case of repetitive syllogism distinguished above (§46), *i.e.* the disjunctive hypothetical syllogism, is discussed in greater detail: given a disjunctive hypothetical proposition of the kind explained above (§23 and §25) used as a premise, four types of disjunctive hypothetical syllogisms stem, on the basis of the affirmation or the denial of one disjunct or the other. The cases of disjunctive hypothetical syllogisms with a premise constituted by an exhaustive disjunctive statement with more than two alternatives (where conclusions, although partial, are still possible), and by a non-exhaustive disjunctive proposition (cf. *supra*, §22; in this case, only positing one of the two alternatives yields to a defined conclusion) are also treated.

«THE WORLD EITHER HAS AN ORIGIN, OR IT IS ETERNAL» | The opposition of the two familiar concepts of eternity and origin in time of the world is expressed in this case with the typical formulae of *qadīm* and *ḥādīt*, respectively.

THIS IS ITS CONDITION | Restoring the missing (second) long *alif* in *hādā*, misspelled in *Dunyā*.

«ZAYD IS EITHER IN ḤĪĠĀZ OR IN ʿIRĀQ» | Cf. *supra*, §22, for the same example (although with the inverted order of the places). While that formulation of the example was translated into Latin with names of places more familiar to a European reader, this occurrence is omitted by the Latin translation. JANSSENS 2019: 89 challenges the correctness of this example, deeming it to be «clearly wrong» and surmising that this could be the reason for the omission in the Latin translation. However, I do not think that the example is wrong (it is actually a good instance of non-exhaustive alternative, as also explained in §22), and the omission might be rather explained by the difficulty of the geographical terms involved, which might have given problems to the Latin translators also elsewhere.

«THIS NUMBER IS EITHER FIVE, OR TEN, OR THIS, OR THAT» | The Latin translation reads «quattuor» instead of «five», and adds «vel viginti», with no Arabic counterpart, after «ten» (cf. LOHR 1965: 267.312).

THE SYLLOGISM [THAT CONCLUDES BY WAY] OF ABSURDITY | Arabic *qiyās al-ḥalf*, Latin *ratiocinatio indirecta*. Cf. *supra*, §44, and *infra*, §48.

INDUCTION | Arabic *istiqrāʿ*, Latin *inductio*. Cf. *supra* the parallels listings of §3 and §34, and *infra*, §49, for a discussion of the concept.

EXEMPLIFICATION | Arabic *tamṭīl*, Latin *exemplum*. Cf. *supra* the parallel lists of §3 and §34, and *infra*, §§50-54, for a thorough discussion of the concept.

COMPOSED SYLLOGISMS | Arabic *al-qiyāsāt al-murakkaba*, Latin *ratiocinatio composita* (in the singular). This Latin translation seems modelled on the parallel rendition of *qiyās al-ḥalf* as *ratiocinatio indirecta*, for which cf. *supra*. For a doctrinal discussion of the notion of composed syllogism(s), close to what is sometimes called polysyllogism, cf. *infra*, §§55-57.

[§48] D88

The paragraph is devoted to the description of «the syllogism [that concludes by way] of absurdity» or *deductio ad/per impossibile*. On this method cf. GRIFFEL 2021: 109, who describes it in relation to a dispute between Ibn Ġaylān al-Balḥī and Rašīd al-Dīn al-Waṭwat; cf. also *ivi*: 109 fn. 7, where Griffel also quotes to this effect al-Tahānawī's *Kaššāf iṣṭalahāt* [sic pro *iṣṭilahāt*] *al-funūn*, 1: 440-441. A description of the method is also in SHEIKH 1970: 102. For a parallel in al-Ġazālī, see also *Šifāʿ al-ġalīl*, 450-451, transl. in HALLAQ 1990: 355, in which al-Ġazālī, as Griffel puts it, characterizes the *qiyās al-ḥalf* as «a subcategory of *al-sabr wa-l-taqṣīm* (probing and dividing), a method of arguing that becomes important in al-Rāzī». For the method of *al-sabr wa-l-taqṣīm* in the *MF* cf. *infra*, §52.

OPINION | Arabic *madhab*, Latin *propositum*. The Arabic term is usually employed in the sense of ‘school of thought’ (cf. *infra*, §91, §326) or as ‘doctrine’ (*supra*, §1), but the intended meaning here seems to be rather the generic one of ‘opinion’ (held in the first place by an individual, rather than by a group).

OPPONENT | Arabic *ḥaṣm*, Latin *adversarius*. The introduction of the «opponent» in the description of the method of the *deductio per impossibile* traces the lines of a dialectical context, in which this kind of argumentation is more likely to be employed.

[§49] D89-90.4

The paragraph is devoted to the method of induction. For the traditional example of the crocodile, which would invalidate the general rule that every animal moves the lower jaw in chewing, and the connected criticism of induction, cf. also al-Ġazālī, *TF*, Discussion 18, MARMURA 2000: 191.16-23:

One of the things whose falsity is agreed on and which has been stated in logic is to make a universal judgment based on a particular cause or on numerous particulars, so that [the logicians] have illustrated it by the hypothetical example of a man who states: “Every animal moves its lower jaw in chewing, because we have examined inductively all the animals, observing them to be such,” [the logicians adding that he makes this error] “because of his being oblivious of the crocodile; for it moves its upper jaw.”

INDUCTION | Arabic *istiqrāʾ*, Latin *inductio*.

ITS LOWER JAW | Arabic *fakk^a-hu al-asfal*, Latin *mentum inferius*.

DURING THE MASTICATION | Arabic *ʿinda l-maḍġ*, Latin *dum masticat*.

THE HORSE [...] AND THE REST OF THE ANIMALS | Dunyā reports – unusually in a footnote rather than in the main text between dashes, as customary for his edition – a variant reading of *A*: *wa-saʿir*, which I restore on the basis of the Latin translation: «et in ceteris animalibus» (LOHR 1965: 268.336-337).

CAT | Arabic *hirra*, technically a ‘she-cat’.

ALL THE PARTICULARS | The Latin translation has here ‘animals’ instead of ‘particulars’, although the meaning of the sentence is virtually unchanged in the context: «si hoc posset vere induci de omnibus animalibus» (LOHR 1965: 268.336-337).

NAMELY: «EVERY ANIMAL [...] [WHILE CHEWING]» | The example of the possible syllogism of the first figure that could be construed if all the particular animals were considered is reported by Dunyā only as a variant reading of *A*. I have translated it nonetheless, as it helps the meaning and has the support of the Latin translation: «Hoc modo: ‘Omne animal est equus et homo et unumquodque aliorum, sed omnis equus et homo et unumquodque aliorum movet inferius mentum, dum masticat; sequitur ergo quod omne animal movet inferius mentum, dum masticat’» (LOHR 1965: 268.339-342). The text of *A* reported by Dunyā shows however, indeed, some difficulties: the specification «while chewing» / «during the mastication» is always missing (cf. instead the Latin *dum masticat*, which could however be an addition *ad sensum* of the translator); and the returns seem to divide the text in the wrong way, at least if one is to assume – as I did – that the various *wa-kadā* have the purpose of completing, in a synthetical way, the list of animals, which is assumed at this level of the argument to be exhaustive. Dunyā’s disposition of the text seems thus, at best, to be misleading, and a further analysis of the manuscripts would be needed in order to ascertain the correct reading in this point.

LIKE THE CROCODILE | Arabic *timsāh*, Latin *temza* (cf. LOHR 1965: 268.344-345: «Sicut de quodam animali quod dicitur *temza*, verum est quod non movet mentum inferius dum comedit, sed superius»). For *timsāh* as a rendition of Greek *κροκόδειλος* ('crocodile') see the Arabic translation of Aristotle's *Historia animalium*, I 487^a22, 492^b24; II 503^a1, 503^a8; VII 589^a27, 599^a32 (in the plural, *tamāsīh*); as a rendition of *κροδύλος* ('newt', due to the similarity of the two Greek words; FILIUS 2019: 38) see *Hist. an.* I 490^a3, VII 589^b27 (cf. for all the passages FILIUS 2019: 414, Arabic-Latin glossary, entry for *timsāh*). The relevant passage for the notion of the exceptional mastication of the crocodile (which was however already remarked on by HERODOTUS, *Histories* II 68) is Aristotle, *Hist. an.* I 11, 492^b23-24 (see FILIUS 2019: 125 for the Arabic translation of Aristotle: *wa-ğami^u l-ḥayawānⁱ yuḥarriku al-fakk^u al-asfal mā ḥalā l-timsāh*; the original Greek specifically mentioned the «river crocodile», *κροκόδειλος ὁ ποτάμιος*); but cf. also *De partibus animalium* II 17, 660^b23-24. The passage of the *Historia animalium* is reprised in Avicenna's *Kitāb al-Ḥayawān*: «It is the inferior [one] of the two jaws that is moved by every animal, except the crocodile» [*wa-fakkāni yutaharraku min kullⁱⁿ ḥayawānⁱⁿ asfal^u-humā, illā l-timsāh*] (cf. ed. MUNTAŞIR-ZĀYID-ISMĀ'IL-MADKOUR 1970: 22.18), as referenced by JANSSENS 2019: 91 fn. 44. Janssens' note is however addressed only to the further occurrence of *timsāh* in the text of the *MF* (cf. *infra*, §51), while he ignores the present one. As mentioned *supra*, §11, the crocodile [*timsāh*] also appears in two other places in the *MF* (§11, §188) as example of a substance, but in those cases the Latin translator replaces the transliteration *temza* with the innovative translation 'phoenix'. As for the Latin practice of transliterating *timsāh* in zoological contexts, cf. also ALBERT THE GREAT, *De animalibus* I 2 9, who interestingly takes the Arabic word to be just a species of crocodile, because the unusual movement of the superior jaw declared by Aristotle contrasts with his own alleged observations: «In homine enim movetur mandibula inferior et similiter in omni animali praeter tencheam [*tenchath* Scotus] solam, || quae est quaedam species cocodrilli, | quae movet mandibulam superiorem: || non tamen omnis species cocodrilli facit hoc: quia ego vidi duos cocodrillos, qui mandibulam inferiorem moverunt» (cf. STADLER 1916: 82.12-16, §227). See also ALBERT THE GREAT, *De animalibus* II 2 1, STADLER 1916: 266.3-5, §97: «[...] species cocodrilli quae vocatur | thenchea, et || cocodrilli species quae | hardon || vocatur. Cocodrilli enim genus quidem Arabice vocatur thesach: | et || ea quae dicta sunt, species sunt ipsius». For further corruptions of *timsāh* in Latin characters cf. also the *varia lectio* gathered in LOHR 1965: 268 *app.* 344, and 269 *app.* 382. Interestingly, the Arabic *timsāh* was also preserved in transliteration through the Hebrew translation and into the 15th century Slavic (Ruthenian) translation of the *MF* (where it became тймсахъ): the circumstance is noticed by TAUBE 2016: 57 (reprised in ROMANCHUK-GOFF 2020: 221. For the Slavic text of the *MF* cf. the Introduction, §2.4.2.3.

IT IS NOT UNLIKELY [...] JUST ONE | Arabic *wa-lā yab'udu an yaṭrud^u ḥukm^{um} fi al^{fi} fi wāḥidⁱⁿ* (*Dunyā illā fi wāḥidⁱⁿ*), Latin «Nec mirum, si quod verum est de mille, fallat in aliquo» (LOHR 1965: 268.345-346). While the Latin translator seems to read *in* instead of *an* before the verb, the main issue appears to me the presence of *illā* in Dunya's text. The negative sense of *ṭarada*, as a matter of fact, seems to impose the elimination of the further negation *illā* in order to make sense of the passage.

JURIDICAL [MATTERS] | Arabic *fiqhīyāt*, Latin *in auctoritatibus legis*. With reference to this occurrence of *fiqhīyāt* in the text of the *MF*, JANSSENS 2019: 90 fn. 40 quotes LAMEER 1994: 234-239 (but cf. also the summary there provided at 256-258, esp. 257) for al-Fārābī's notion of *qiyās fiqhī* (translated by Lameer, *ivi*: 254 as «legal inference») and its origin in the Arabic translation of the Greek *ῥητορικὸί* in *An. pr.* II 23, 68^b9-12, rendered in Arabic with the compound expression *al-ḥuṭbiyya wa-l-fiqhiyya wa-l-mašwariyya*. According to Lameer, *fiqhīyya* would specifically designate the forensic or judicial part of rhetoric distinguished by Aristotle (as opposed to the deliberative and epideictic functions, which would be instantiated by the further two relative adjectives). Janssens then goes on to quote Avicenna's *Qiyās* (555.11-556.3) for its parallel conception of *qiyās fiqhī* as judicial argument «by way of paradigm» (cf. JANSSENS 2019: 90 fn. 40). No proper reference to the mechanism of induction, which is the main focus of al-Ġazālī's reasoning here, is however to be found in those passages.

MATTERS OF CERTAINTY | Arabic *yaqīniyyāt*, Latin *in necessariis*. No similar opposition to that expressed

by *fiqhīyyāt* / *yaqīniyyāt* is to be found in the corresponding passage of the *DN*, where the induction is said to be employed by «dialecticians» [Persian *ǧadaliyān*] and «theologians» [*mutakallimān*] (cf. MEŠKĀT 93.5 = ACHENA-MASSÉ 1955 (I): 61.27-28, and see JANSSENS 2019: 90).

THE MORE ACCURATE IN EXAMINATION | Arabic *ašadd istiḡṣāʾ*, Latin *quo magis* [...] *diligentius composita*. Also: 'the one who is stronger in careful examination', if one is to give a fuller sense to *istiḡṣāʾ* in itself (cf. *infra*, §52).

CLOSER TO EXHAUSTION | Arabic *aqrab ilā l-istifāʾ*, Latin *plenior*.

SURER TO TRIUMPH | Arabic *ākadd fī taǧlībⁱⁿ*, Latin *faciet maiorem fidem*. Arabic *ākadd* is the comparative of *wakīd*, 'corroborated, substantiated' (WEHR 1283^a). At best, Latin condenses the passage too much, missing the idea of 'victory' of the opinion for which the induction was put to use in the first place. At worst, the Latin translator might have misunderstood the Arabic construction, translating *al-ẓann* (see *infra*) with *fides* and taking it as the object, rather than correctly as the subject, of the sentence.

OPINION | Arabic *al-ẓann* (cf. immediately *supra* for a partial Latin misunderstanding).

[§50] D90.5-91.13

The paragraph deals with the method of the exemplification, which is said to be proper of the jurists and the theologians, and which is identified with the «analogy» adopted by those thinkers. A connection with the contexts and the function of rhetoric is highlighted, and in conclusion the weakness of this kind of argumentation is linked to the finding, on the part of «the most sensible among the dialecticians» of further ways to guarantee its validity.

THE EXEMPLIFICATION | Arabic *tamṭīl*. The title of the subsection is omitted in *A*, as in the Latin version (the title *De exemplo* reported by Lohr in square brackets is provided by the editor). For *tamṭīl* in Avicenna as the method of «presenting an example», cf. also GUTAS 2014: 311.

THE JURISPRUDENTS AND THE THEOLOGIANS | Arabic *al-fuqahāʾ wa-l-mutakallimūna*. The Latin translation has only *doctores legis*, which seems a better translation of the sole *fuqahāʾ* than of *mutakallimūna* (or of the compound of the two). This interesting preliminary remark is missing in the *DN*, but JANSSENS 2019: 90 aptly draws attention to an almost perfect parallel passage in Avicenna's *Kitāb al-Maǧmūʾ* (or *al-Ḥikma al-ʿArūḍiyya*): «Exemplification is that which the jurists of our time call 'analogy'» [*al-tamṭīl huwa allādī yusammay-hu fuqahāʾ zamānⁱ-nā qiyās^{am}*] (cf. ŠALIḤ 2007: 90.9-10), where however the «theologians» [*mutakallimūna*] are not mentioned. *Ivi*, fn. 41, Janssens finds it «surprising» that the Latin reading *doctores legis* is closer to the passage in the *Ḥikma ʿArūḍiyya* than to the *MF*. However, *lex* is often linked to the concept of *mutakallim* in Latin translations (in almost fixed expressions such as *loquens/loquentes in legem*), so that the rendition of the Latin translators might have been intended to cover both Arabic terms. If that were not the case, moreover, a plain omission of *mutakallimūna* (possibly due to a lack in the Arabic antigraph of the *MF*) would be by far the less onerous explanation for the small discrepancy between the Latin and the Arabic text. The main historical (and theoretical) issue of the passage is in any case the well-known, but not less significant superimposition of the more traditional (Islamic) use of *qiyās* – as 'analogy' or 'reasoning by analogy' –, and the (Aristotelian) use of the same term to designate the syllogism. As opposed to the *DN*, and more similarly to other Avicennan works such as the *Ḥikma al-ʿArūḍiyya*, al-Gazālī is willing here to draw specific attention to this linguistic issue, showing once more his care for the nuances of meaning that unite (or conversely divide) the philosophical jargon and the cultivated, Islamic use of the Arabic language.

«ANALOGY» | Arabic *qiyās*, Latin *argumentationem*. On the validity of the legal analogy called *qiyās* in

al-Ġazālī's thought, also in connection to the philosophical meaning of 'syllogism', cf. most recently OPWIS 2019.

DOES NOT BRING ADVANTAGE TO THE CERTAINTY | Arabic *lā yufidu al-yaqīn^a*, Latin *non valet ad acquirendum veritatem*. 'Truth' (*veritas*) is not a perfectly accurate translation for *yaqīn*.

FOR THE SOOTHING OF THE HEART | Arabic *li-taṭyībⁱ l-qalbⁱ*. The translation of this phrase is missing in Latin.

FOR PERSUADING THE SOUL IN THE DISPUTES | Arabic *wa-iqnā' al-nafs fī l-muḥāwarāt*. Cfr. LOHR 1965: 268.358: «Hoc autem non valet ad acquirendum veritatem, sed ad persuadendum animo in altercationibus hominum». An equivalent for the genitive *hominum* (for instance **al-nās*) is missing in the Arabic.

RHETORIC | Arabic *ḥiṭāba*, Latin *rhetorica*. JANSSENS 2019: 91 fn. 42 remarks that the main idea of the usefulness in rhetoric of the reasoning by analogy is also present in the section on *Rhetoric* of the *K. al-Šifā'* (*Ḥiṭāba*, ed. SĀLIM 1954: 36.5-6); however, the passage is globally al-Ġazālī's reworking, largely independent from Avicenna as a source. On Avicennan rhetoric see now CELLI 2022.

WE MEAN WITH «RHETORIC» [...] AND SO FORTH | The list of matters usefully dealt with in rhetoric, or by rhetoric, includes the aforementioned «disputes» [*muḥāwarāt*], here specified to occur «in the lawsuits» [*fī l-ḥuṣūmāt*]; the term can also have the more generic sense of 'quarrel' (WEHR 282a, s.v. *ḥuṣūma*), but would then be a meaningless addition to the preceding *muḥāwarāt*], in the «grievances» [*šikāyāt*], and in the «pleas» or 'apologies' [*i'tidārāt*] concerning «blame» [*damm*] and «praise» [*madḥ*], «glorification» [*tafḥīm*] or «humiliation» [*taḥqīr*]. The final four elements of the list are quite literally translated into Latin, but the beginning of the enumeration seems to suffer from some sort of misunderstanding (or omission), since it does not have an equivalent for «we mean with "rhetoric"» [Arabic *wa-na'nī (ya'nī A) bi-l-ḥiṭāba*], and seems also to omit at least one of the first four terms listed in the Arabic: «Quae saepe inducuntur in rhetoricam de impetitionibus hominum, et de accusationibus et de pulsionibus, de laude et vituperatione, de exaggeratione et attenuatione, et ceteris huiusmodi» (LOHR 1965: 268.358-361).

THE MOST SENSIBLE AMONG THE DIALECTICIANS | Arabic *aḥass^u l-ġadaliyyīna* (instead of the nominative *ġadaliyyīna* printed by Dunyā), Latin *dialectici*.

BECAUSE OF THE WEAKNESS OF THIS KIND [OF ARGUMENTATION] | Arabic *bi-ḍa'f ḥādā l-fannⁱ*, Latin *debilitatem huius argumentationis*.

[OTHER] WAYS | Arabic *ṭuruq*. A reads however *ṭarīq* in the singular, which also seems at the basis of the Latin translation: «adinvenere aliam viam» (LOHR 1965: 269.369). Dunyā may have chosen the plural because the ways advanced in what follows are indeed two, but this preliminary *ṭarīq* might as well be presented in the singular (as a generic 'strategy', or 'method'), and then be subdivided into the «two ways» [*ṭarīqataynī*] appearing just *infra* at the end of the paragraph (and later discussed in detail in §§51-54).

[§51] D91.14-92.3

The first «way» suggested by the dialecticians in order to ensure the validity of their ways of argumentation is the «evaluation from all sides», discussed in the present paragraph. The running example in this and the following paragraphs concerns once again the temporal origin (or alternatively the eternity) of the world, although in this context the «sky» is properly taken into consideration. For the Aristotelian-Avicennan cosmology accepted throughout the *MF*, however, the two notions of sky and world can probably be used interchangeably.

EVALUATION FROM ALL SIDES | Arabic *al-ṭard wa-l-'aks*, literally 'the repulsion and the conversion', but

cf. WEHR 651^a. If «evaluation from all sides» is indeed the meaning to give the idiom, the Latin translation suffers from a misunderstanding, as it renders: «Quarum una dicitur simile et contrarium» (LOHR 1965: 269.373). JANSSENS 2019: 91, for his part, translates the expression as «coextensiveness and coexclusiveness».

ALL THAT IS FORMED HAS AN ORIGIN | Here: *muḥdat*.

THE EXHAUSTION OF ALL THE INDIVIDUALS IS NOT POSSIBLE | For the concept of «exhaustion» [*istīfā'*] cf. also *supra*, §49, devoted to the method of the induction. While there it was not properly translated into Latin, here it is rendered with the verb *comprehendere* (not wrong, but probably too generic).

HAS SCRUTINIZED | Arabic *taṣaffaḥa*, Latin *consideravit*.

THE SKY | Arabic *al-samā'*, Latin *caelum*. The «sky» is used here as a (possible) exception to the deceptively self-evident identification of what is formed and what has an origin. Under an eternalist assumption, indeed, the sky (taken as the utmost celestial sphere that embraces the whole world) might be formed, and yet not having an origin. In this case, not considering the sky would be exactly like not considering the crocodile while discussing the animal jaws: it would be a singular exception, sufficient however to make the entire inductive reasoning collapse. However, al-Ġazālī also presents the alternative case, and namely the possibility that the sky actually has an origin, precisely because it is formed. This latter situation would also entail the inutility of the inductive reasoning that stands at the basis of the argument: if we already knew that the sky is originated, and also why that is the case, there would have been no need of trying to establish the same by way of a syllogism.

AS WE HAVE MENTIONED ABOUT THE CROCODILE | Cf. *supra*, §49. The Latin rendition works here as well by way of transliteration: «sicut praedictum est in animali quod dicitur *temza*» (LOHR 1965: 269.381-382).

IT WAS ALREADY CLEAR | I do not think the *la-hu* added by Dunyā with respect to the formulation of A is actually needed, as it seems to be based on the presupposition that all the preceding verbs, as well, had an implicit subject in the third person singular. They could however be impersonal, as I have translated them, which helps to do without the addition.

UNINTERRUPTED SEQUENCE | Arabic *iṭṭirād*. This designates the 'flowing' of the syllogism, *i.e.* the inevitable deduction of the conclusion given certain premises.

[§52] D92.4-93.16

To deal with the second «way» distinguished by the dialecticians (cf. *supra* §50), *i.e.* the so-called method of «probing and dividing», the present paragraphs present in the first place an argument concerning the origin in time of a house, which proceeds by listing the features of the house to the effect that it is thanks to its being formed that it is also originated. The first two reasons why the argument is corrupted are introduced and discussed.

THE PROBING AND THE SUBDIVISION | Arabic *al-sabr wa-l-taqṣīm*, Latin *coniectatio et enumeratio*. JANSSENS 2019: 91 translates the expression as «classification and successive elimination», choosing the rendition by HALLAQ 1997: 92 that he had already adopted in his previous article on Avicennan/Ġazālīan syllogistic and Islamic law (JANSSENS 2010^b: 221). Other renditions adopted in previous scholarship include «division and investigation» (for *taqṣīm wa-sabr* in HALLAQ 1990: 355), «investigation and disjunction argument» (SHIHADAH 2016: 104-105), and «analytical division» (YOUNG 2019: 219 and 261). A further translation as «probing and dividing», on which my own translation is modelled, is chosen by MARMURA 1975: 105 and GRIFFEL 2021: 159 n. 7 and 505 ff. (cf. also *ivi*, 542 n. 94). As shown in detail by GRIFFEL 2021: 505-516, the method of *sabr wa-taqṣīm* – before becoming a crucial asset of Faḥr al-Dīn al-Rāzī's novel epistemology (cf. also the observations on the

topic in SHIHADÉH 2005: 166-169) – was widely studied by al-Ġazālī himself as a method for finding the legal ‘cause’ [*illa*] of a ruling: cf. *al-Mustasfā min ‘ilm al-uṣūl* (ed. HĀFĪZ 1992-1993 (III): 616-618); *al-Manḥūl min ta’līqāt al-uṣūl* (ed. HAYTŪ 1998: 450-452), *Šifā’ al-ġalīl* (ed. AL-KUBAYSĪ 1971: 451-455, relevant passage translated in HALLAQ 1990: 355-358); see GRIFFEL 2021: 542 n. 99 for these references. What is more, al-Ġazālī was probably the first scholar who introduced this method in texts on *kalām* (see *al-Iqtisād fī al-‘itiqād*, ed. CUBUKÇU-ATAY 1962: 15-16) and on logical philosophy (under the name of *ta’ānūd*, ‘mutual exclusiveness’, in both the *Mi’yār al-‘ilm*, ed. AL-KURDĪ 1927: 100-101, and the *Mihakk al-naẓar*, ed. AL-NA‘SĀNĪ-AL-QABBĀNĪ [1925]: 42-44). The treatment of the *MF* is recognized by GRIFFEL 2021: 508 as a fairly relevant and original departure from Avicenna’s hypotext, inasmuch as «Avicenna never writes a word about “probing and dividing”». However, the longest discussion on this technique in al-Ġazālī appears to be the one of his still poorly studied *Foundation of Syllogistics* [*Asās al-qiyās*], ed. AL-SADIḤĀN 1993: 20-24.

CHARACTERISTICS | Arabic *awṣāf*, Latin *formas*.

THAT THIS [HAPPENS] | «This» refers here to the predicate of having an origin.

THE ENCOMPASSMENT AND THE CAREFUL EXAMINATION | Arabic *al-ḥaṣr wa-l-istiḡṣā*, Latin *comprehendere* (which was also used *supra*, §51, as a translation for «exhaustion» [*istiḡṣā*]). The Latin translation seems thus at best *ad sensum*.

WE WOULD NOTICE SHOULD THERE BE AN ELEPHANT IN FRONT OF US | The argument of ‘the elephant in the room’ is presented by al-Ġazālī as advanced by «most dialecticians» [*akṭar al-ġadaliyyīna*] in defense of their inductive methods, and against the primary importance – underlined by the philosophers proper – of the full «encompassment» of all particulars (*i.e.* the exhaustiveness of the method). The dialecticians would argue, according to al-Ġazālī’s presentation of their stance, that it is not that common to entirely miss a relevant case for one’s analysis: rather, missing one of those cases would be like missing the presence of an «elephant» [*fil*] before one’s eyes. This is of course quite caricatural, as shown by the very example of the crocodile advanced *supra* (§49 and 51), which could very well escape the attention of even a good zoologist. The example of the elephant, which also caught Frank Griffel’s attention (cf. his remarks on this in GRIFFEL 2021: 508), is not translated into Latin.

INCAPABILITY | Arabic *‘aǧz*. The Arabic word in this pattern only means ‘incapability’ and ‘weakness’, not ‘old age’ [*uǧūz*]; the Latin translator, who renders here: «in illa hora vel in tota vita sua» (LOHR 270.410) might have misunderstood on this basis.

[§53] D93.17-94.24

A third reason why the argument of the house is invalid, concerning the possible combination of the considered causes in order to give the researched effect, is presented and discussed.

IT IS TENABLE, AS A MATTER OF FACT [...] IN TWOS OR IN THREES | While the global meaning of the passage and its function within the more general argument are perfectly clear – the aim being that of providing examples of possible combinations of causes, which might work only together for the production of a given effect – the textual situation of this long list of features is extremely intricate, to say the least. The complete list given by Dunyā, if one is to consider also the variant readings of *A*, presents fifteen items, each one composed by two or three features of ‘being a house’ put together: (1) existent and body, (2) existent and self-subsisting, (3) existent and formed, (4) formed and house, (5) house and existing body, (6) house and formed, (7) house and self-subsisting, (8) house and existent, (9) body and formed, (10) body and existent, (11) self-subsisting and existent, (12) body and self-subsisting, (13) body and formed, (14) existent, body and self-subsisting, (15) existent, self-subsisting and formed. The list as it is is clearly untenable, at least because some items are (illogically)

repeated, often with a mere inversion in the order of presentation of the elements of the combination: (1)=(10), with an inversion; (2)=(11), with an inversion; (4)=(6), with an inversion; (9)=(13), identical in the two occurrences. Dunyā presents eight of the total fifteen items he lists, namely numbers (4) to (11), as only present in the variant reading of *A*. Eliminating them would indeed leave all repetitions out of the text, but would also eliminate *tout court* the item ‘house and formed’, since both formulations of it – numbers (4) and (6) – happen to occur in the portion of text given by *A*. To make things even more complicated, the list provided by the Latin translation is utterly different from the Arabic one. According to Lohr’s edition, the Latin version lists thirteen items, as follows: (i) *vel propter hoc quod est*, (ii) *vel quia est corpus*, (iii) *vel existens per se*, (iv) *vel formatum*, (v) *vel domus*, (vi) *vel quia est corpus et domus*, (vii) *vel domus et formata*, (viii) *vel domus et existens per se*, (ix) *vel domus et ens*, (x) *vel corpus et formatum*, (xi) *vel corpus et existens per se*, (xii) *vel corpus et ens*, (xiii) *vel existens per se et ens*. Items (i) to (v) in the Latin list have no correspondence in the Arabic text, as they seem to consider the singletons composed of just one property of the house, an operation which the Arabic does not undertake (as this is the standard way of considering the properties one by one as possible causes, while the criticism advanced here against the method of the dialecticians is precisely that the properties might also result to be causes if taken together, in any possible combination). Conversely, items (14) and (15) in the Arabic list – *i.e.* the examples of triplets of features – are omitted in the Latin translation, having no correspondence in the Latin list. Among the remaining features, the following diagram of correspondences can be drawn: (vi)=(5) (but with an inversion in order, and no mention of the adjective ‘existing’ in Latin), (vii)=(6) [or, with an inversion in order, (3)], (viii)=(7), (ix)=(8), (x)=(9)=(13), (xi)=(12), (xii)=(10) [or, with an inversion in order, (1)], (xiii)=(11) [or, with an inversion in order, (2)]. The Arabic antigraph of the Latin translation seems thus to have had a text roughly corresponding to that of *A*. If I interpret correctly Dunyā’s not always perspicuous philological notes, moreover, it is also possible that *A* reads: *li-kawni-hi mawǧūd^{an} wa-ǧism^{an} wa-qā’ima bi-nafsⁱ-hi wa-muṣawwar^{an}* before the insertion of the list of items (4)-(11) listed *supra*. This would correspond quite accurately to items (i)-(v) in the Latin version, making the text of *A* very close to that of the Latin translation. Arabic ms. *Y* has, by contrast, a much shorter version of the list of items, which reads as follows: *id yaḥtamilu an yakūn^a li-kawni-hi [a] mawǧūd^{an} ǧism^{an} aw [b] bayt^{an} ǧism^{an} aw [c] bayt^{an} muṣawwar^{an} ǧism^{an} aw ǧayr dālika min al-tarkīb itnayni itnayni wa-ṭalaṭ ṭalaṭ* [sic]. Not much can probably be derived from *Y*’s reading, which does not correspond either to Dunyā’s Arabic or to Lohr’s Latin text. Of its three listed items, [a] corresponds to (1) in Dunyā’s text, and [b] is somewhat similar to (5), while [c], despite being a triplet, neither corresponds to (14) nor to (15). All things considered, an only partial list of features in al-Ġazālī’s original might be more likely than an exhaustive one, given that the meaning of the passage is in any case very clear, and the hypertrophic additions of combinations might be very well explainable as the work of too zealous copyists trying to cover all possible cases in their text. This passage will have to be considered carefully in the making of a critical edition of the Arabic text of the *MF*, as a particularly intricate *locus criticus*. Pending a more thorough analysis of the manuscripts, I have for the time being translated the entire list of fifteen items which can be read in Dunyā’s edition, secluding with the signs <...> those couples that Dunyā indicates as variants of *A*.

IT HAS AN ORIGIN | Here: *ḥādīṭ*.

LIKE THE BLACKNESS IN THE INK | Cf. *infra*, *MF*, *Metaphysics* II.2, §177, and *Metaphysics* IV.a.3, §248, for the same example of the ink – as compound *par excellence* – in different contexts.

GALLNUTS | Arabic *ʿafṣ*, Latin *gallis*. Also known as oak galls or oak apples, these are outgrowths of plant tissues, commonly found on oak trees, rich in tannins and used since the Middle Ages to produce ink (in combination with the vitriol, for which cf. *infra*).

VITRIOL | Arabic *zāǧ*, Latin *atramentum*. While *atramentum* is a generic Latin word for a black substance (usually liquid), and can itself mean ‘ink’ (cf. classical Latin *atramentum librarium* or *scriptorium*), *zāǧ* is rather, properly speaking, the ‘(green) vitriol’, an iron sulfate used throughout the Middle Ages and the modern era (up to the early 20th century) to produce – together with the

gallnuts or oak galls, for which cf. *supra* – the iron gall ink. A wealth of information (and bibliography) on the composition, the history, and the characteristics of iron gall ink can be found in The Iron Gall Ink Website, hosted by the Cultural Heritage Agency of the Netherlands (Rijksdienst voor het Cultureel Erfgoed) at irongallink.org. For inks in the Islamic tradition cf. also the rich RAGGETTI 2019. THE SOAK IN WATER | Reading *al-‘aḡn bi-l-māʾ*^ʿ, as in Dunyā, against the reading *al-ḡamʿ bi-l-māʾ*^ʿ (‘the mixture with water’) of *A*, which is probably to be discarded as *lectio faciliior*. The reading with *ḡamʿ* seems to be at the basis of the Latin translation, which reads: «et commixtione aquae» (LOHR 1965: 270.423). A word linked with *ḡamʿ*, that is, the *maṣdar* of the VIII stem of the same root *īḡtimāʿ*, appears in connection with the ink *infra*, at §177 – but the meaning there is the composition, or mixture, of all the ingredients to form the ink, while here the «soak in water» appears to be intended as one of the factors that, taken together, produce one of the properties of the ink, namely its blackness.

[§54] D94.25-95

A fourth and last reason why the argument about the house is invalid, concerning the possible composition internal to every considered concept, is presented and discussed. After having concluded the analysis of the four reasons of corruption of the argument, al-Ġazālī concludes the section on the exemplification by stating that only a syllogism (*i.e.* a deductive form of argumentation) of the kind: «Every formed has an origin, but the sky is formed; therefore, it has an origin» could lead to the conclusion about the origin in time of the sky/world. The premise «Every formed has an origin», however, cannot in any case be obtained through forms of inductive reasoning like the dialectical ones expounded in the preceding paragraphs (§§49-54), but would need in turn another syllogism (with proper premises) to be demonstrated.

DOES NOT LEAVE OUT | Arabic *lā yaʿdū*. The Latin *non transeat [ad quartam]* seems to misconstrue the situation sketched in the first sentence of the paragraph. Indeed, the meaning of the passage is that having excluded three of the four possible causes of a certain state of affairs does not entail *per se* that the fourth remaining cause is in itself, immediately and without qualification, the cause of that peculiar state of affairs, and that even under the assumption that the possible causes are indeed four and only four (*i.e.* that the «examination» [*istiḡṣāʿ*, cf. §52] «is» indeed «safe and sound», or ‘complete’ [*salīma*]). The «judgment» [*ḥukm*] here introduced represents the precise cause, or reason, of the circumstance about which we are inquiring (for a sense of *ḥukm* far wider than the generic philosophical meaning of ‘judgment’, cf. GAUTHIER 1904). Having excluded three of the four possible causes does not entail that the *ḥukm* lies immediately in the fourth one as it is (cf. *infra* for possible reasons why it is so), but only that the fourth cause cannot be left out, excluded, or bypassed from the analysis.

IT IS RATHER TENABLE [...] WITHOUT THE OTHER | This is the main reason why it is not possible to immediately identify a concept, taken globally, as the cause of a certain state of affairs. It is possible, as a matter of fact, that the fourth concept has some internal subdivisions, and that the specific cause for the researched state of affairs is just one of these ‘hidden’ parts of the concept. Of course, having excluded the alternatives by assumption, the cause must lie within the last remaining concept, but we have to entertain the possibility that this is not a unitary notion, but rather a constellation of concepts, among which it is again possible to draw distinctions.

THIS IS THE PLACE WHERE THE STEP SLIPS | Arabic *mazilla qadam*, Latin *lapsus pedum*. Cf. *supra*, §1 and §26, for the presence of analogous expressions – which seem to mark particularly convoluted lines of reasoning, or in any case subtle points which must be taken in due and careful consideration –

within the text of the *MF*. While the *mazilla* of §26 had been translated into Latin with a periphrasis («hic errant multi», cf. *supra*), the rendition with *lapsus* approaches the present passage to the one contained in the Prologue (the authorship of whose Latin translation is still uncertain, cf. *supra*). The parallel translation of such a rare term in the two contexts could provide at least a clue as for the possible common authorship of the two translations, although further research would of course be needed to ascertain the point (cf. HASSE-BÜTTNER 2018: 356 and the Introduction, §2.2).

THE UNVEILING OF THESE DIALECTICAL SIGNS | Arabic *kašf hādīhi al-adilla al-ḡadaliyya*, Latin *falsificatio argumentationum dialecticarum*.

DEMONSTRATION | Arabic *burhān*, Latin *probatio*.

PROBLEM | Arabic *maṭlūb*, Latin *quaestio*. For the technical notion of *maṭlūb* in the syllogistic cf. *supra*, §36.

[§55] D96.1-11

While introducing the section on the «composed syllogisms» (or ‘polysyllogism’) – *i.e.* on the concatenation of various syllogisms, the conclusion of each of which is one of the premises of the following one – al-Ġazālī remarks that the ordering itself of the exposition of the syllogistic is often altered in the ‘teachings’ or ‘didactic books’ devoted to the topic. This seems a cursory side-addition, since the main alteration of ordering which is at stake in the following paragraphs (§§56-57) is rather that of the polysyllogism itself, while the didactic presentation of the various syllogistical topics will not be treated again (in conformity with the *DN*).

COMPOSED SYLLOGISMS | Arabic *al-qiyāsāt al-murakkaba*, Latin *de argumentatione composita* (at the end of the preceding paragraph, cf. LOHR 1965: 271.444-445; the title *De ratiocinatione composita* is the editor’s choice, and changes the translation of *qiyās*).

IN THE DIDACTIC BOOKS | Arabic *ta’līmāt*, Latin *in tractatibus et doctrinis*. For *ta’līmāt*, there translated as «teachings», cf. also *supra*, §29. Given the value of *’ilm al-ta’ālīm* in Arabic classifications of the sciences (for which cf. the Introduction, §1.4.2) as a label for mathematics, and the following reference to Euclid, the phrase might also be sensibly translated as «in the mathematical books». Cf. also *infra*, *Metaphysics*, First Premise, §95. The concrete reference to ‘books’ seems justified here by the fact that the actual order of the exposition of the syllogistic, presumably not only oral but also written, is clearly at stake: cf. indeed *infra* the clearer specification «in the books» [*fi-l-kutub*].

IT IS NOT USUAL TO ORDER [...] THEM | This statement is at least in part a Ġazālīan addition, as the corresponding text in the *DN* only says: «Toutes les conclusions ne viennent pas d’un seul syllogisme, de sorte que deux prémisses suffisent; il arrive plutôt qu’un problème soit résolu par de nombreux syllogismes. Ainsi, de deux prémisses, on tire une conclusion; celle-ci devient ensuite prémisses pour un autre syllogisme, et ainsi de suite, jusqu’à la dernière conclusion du problème donné. On n’établit pas toujours tous les syllogismes sur le même ordre. Mais il arrive souvent qu’on supprime quelque prémisses, ou pour abrégé, ou dans une intention quelconque. Et il arrive souvent qu’on intervertit les prémisses. Mais, en réalité, on arrive finalement aux syllogismes dont nous avons déjà parlé» (ACHENA-MASSÉ 1955 (I): 57.28-58.8). While the alteration of the «order» [*tartīb*] of the argumentation – by omission or inversion of the premises – is remarked on in both texts, al-Ġazālī appears to add *sua sponte* the idea of an innovative ordering of the exposition itself of the syllogisms, *i.e.* of the didactic ordering which is normally to be found «in the books» (see *supra*). It might be relevant, however, that just *infra* in the *DN* (ACHENA-MASSÉ 1955 (I): 60.8-9) Avicenna as well claims to himself – and in this case more rightly so – an important piece of originality in logic, namely the invention of the conjunctive syllogisms.

OR [ELSE] FOR AN [ACTUAL] INTENT TO CONCEAL [IT] | Arabic *aw qaṣd^{mn} ilā l-talbīs*, Latin *vel scienter occultantur*.

[§56] D96.12-98.3

To give an example of the different orderings with which an argumentation or demonstration can be organized, Euclid's geometric construction of an equilateral triangle is presented. The text of the *MF* has in this context the first of a series of figures and illustrations, which help the comprehension of the text, and for which cf. *Appendix 2*. At least in part, this apparatus of illustrations seems to be authorial.

FIRST FIGURE BY EUCLID | Arabic *al-šakl al-awwal min Uqlīdis* [cf. Greek Εὐκλείδης], Latin *prima figura Euclidis*. The construction of an equilateral triangle on a given finite straight line is the first proposition of the *Elements*, and, indeed, the first «figure» to appear in the text; cf. EUCLID, *Elements*, Proposition I.1 (Greek text in HEIBERG 1883 I 11 ff.; English translation and annotation in HEATH 1908 (1): 241-243). For the Arabic reception and tradition of Euclid see HEATH 1908 (1): *Introduction*, ch. 7, 75-90; BRENTJES 1994; DE YOUNG 1984. On the more specific aspects of diagrams and illustrations in the Arabic tradition of Euclid, with useful general information also on the transmission of the text, see DE YOUNG 2005. Euclid is the only thinker, apart from Aristotle, to be quoted by name in the *MF* (and in the *DN* as well). Two further explicit nominal quotations of the mathematician are to be found *infra*, *Logic IV*, §84. For a complete list of explicit nominal quotes in the *MF* cf. *Introduction*, §1.6.1.

EQUILATERAL | Arabic *mutasāwī l-aḍlā'*, Latin *aequilaterum*.

WE POSIT ON IT THE SPIKE OF THE COMPASS | Arabic *wa-waḍa' nā 'alay-hi ṭarfⁿ l-firḡār^r* [Dunyā *firkār*], Latin *figes unum pedem circini*.

THEY UNDOUBTEDLY INTERSECT IN C | Arabic *wa-yataqāṭa'āni lā maḥālat^a fi Ğ*, Latin *intersecant se in puncto g*. I read Ğ instead of Dunyā's misprint H, on the basis of both the common order of the abḡad alphabet, and of the Latin reading «g», certainly due to a *ġim* in the original Arabic. In the translation, I have used the Latin letters commonly employed in geometry nowadays, in the corresponding alphabetical order normally used. For the issue of letters used in geometrical diagrams across different languages, cf. KUNITZSCH 1991-1992. A presents the longer variant reading: *wa-mutaqāṭi'āni lā maḥālat^a 'alā mawḍi'^{ān} fa-yuḡ'alu 'alāmat^u mawḍi'^ā l-taqāṭu^ā nuḡtat^a H*, which translates to «and they undoubtedly intersect in a [certain] place. The symbol of the place of intersection is made point H [or better: Ğ]».

FROM POINT C TO POINT B | In this case alone Dunyā's reads Ğ instead of H. All occurrences should in any case be made uniform to the standard Ğ, for the reasons explained *supra*.

IDENTICAL | Arabic *mutamāṭilatāni*, Latin *aequales*.

[§57] D98.4-99

The geometric construction of the equilateral triangle proposed by Euclid is 'translated' into syllogistical language. It is shown, namely, to be equivalent to a polysyllogism composed of four syllogisms, which are presented in detail. The paragraph concludes the first «pillar» (cf. *supra*, §34) of the fourth treatise, devoted to the «form» of the syllogism.

THE FIRST ONE IS THAT THE TWO LINES AB AND AC | I delete the phrase *mutasāwiyāni li-anna-humā*, which would incongruously anticipate in the premise the conclusion of the syllogism. Cf. also the Latin translation: «Duae rectae lineae *ab* et *ag* procedunt a centro eiusdem circuli ad eiusdem circumferentiam» (LOHR 1965: 272.477-478).

WHICH IS [BUILT] ON THE LINE AB | Dunyā reports the reading *al-mubayyin* (or *al-mubayyan*) of *A*, which seems out of place in the text. If that variant were in turn an error for *mabnī* (with inversion of *yā* and *nūn*), it could very well be accepted in the text, as *mabnī* 'alā precisely mean 'set up on', 'based on' (WEHR 95^b). The Latin translation seems to have had an Arabic antigraph with that reading, unless the past participle *constituta* was supplied *ad sensum* by the translators: «Ergo figura *abg* constituta super lineam *ab* est triangulus et aequilaterus» (LOHR 1965: 272.489-490).

AN EQUILATERAL TRIANGLE | Emending in *muṭallat* Dunyā's misprint *muṭallat*.

[§58] D100.1-19

The paragraph introduces the second «pillar» distinguished *supra* (§34), that which deals with the «matter» of the syllogism, *i.e.* with the various kinds of propositions that can form its premises. While presenting the section on matter, al-Ġazālī introduces however a simile that has to do with form, and thus with the preceding «pillar», as well. The syllogism is equalled to the dinar – the Islamic medieval gold coin (*infra* for more information) – whose forgery can be disclosed either by an alteration in form (bend or distortion from the standard roundness of the coin), or by an alteration in matter (change of material from the standard gold). Similarly, the syllogism can be invalid not only due to a formal invalidity (deviation from the figures analysed *supra*, esp. §§38-45), but also for a material corruption (use of premises which are not true and certain). For a basic analysis of the simile of gold cf. ÇAPAK 2010: 133-135; see also AL-SAYYED AHMAD 1981: 65-68 for various references to analogous imagery employed by al-Ġazālī in different works of his. A reappraisal of the entire set of examples concerning the dinar in §§58-59 is provided *supra* in the *Introduction*, §1.8.1.1.

TRUE AND CERTAIN | Arabic *ṣādiqa yaqīna*, Latin *credibiles et verae*. The Latin translation of *ṣādiqa* as *credibiles* mirrors that of *taṣḍīq* as *credulitas* in the Preface to *Logic* (and following occurrences): cf. *supra*, §2.

FALSE | Arabic *kāḍība*, Latin *falsae*.

OPINABLE | Arabic *ẓannīyya*, Latin *opinabiles*.

GOLD | Arabic *ḍahab*, Latin *aurum*. Cf. *infra*, §59, for a thorough classification of gold in coins as correlative to truth in propositions.

DINAR | Arabic *dīnār*, Latin *nummus*. The name of the Arabic gold standard coin *dīnār* comes from the Latin *denarius* through the Byzantine Greek *δηνάριον*, but the Latin translators of the *MF* choose instead the generic Latin *nummus* ('coin') to render the word. For a history of the *dīnār* from the Roman origins and up to the earliest gold coinage in Islam see DE ROMANIS-SORDA 2006 and MILES 1967; for an overview of Islamic numismatics see MITCHNER 1977; for the monetary standard of the *dīnār* (4,25 g of gold), see ABDULLAH 2020.

DEVIATION | Arabic *i'wiḡāḡ*, Latin *inflexione*.

COPPER OR IRON | Arabic *nuḥās^{an} aw ḥadīd^{an}*, Latin *ex ferro vel aere* (with an inversion of the two metals).

[§59] D100.20-101

Continuing the simile of the syllogism with the dinar introduced in the preceding paragraph (§58), al-Ġazālī focuses here on the material part of both, comparing five possible degrees of the purity of gold with five degrees of certainty and soundness of the premises. On this basis, five possible kinds of syllogisms, in decreasing order of argumentative strength, are presented: demonstrative, dialectic, rhetoric, sophistic, poetic. These could be traced back to the Aristotelian works that constitute their remote origin, respectively: *Prior* and *Posterior Analytics*, *Topics*, *Rhetoric*, *Sophistical Refutations*, and *Poetics*. The presence of rhetoric and poetic syllogisms in this list ultimately depends on the well-known articulation of the Arabic *Organon*, wider than the Greek one due to the inclusion of *Rhetoric* and *Poetics* along the strictly logical works penned by Aristotle, as already in the late antique tradition of Alexandrian commentators (WALZER 1962): see also HUGONNARD-ROCHE 1989, LAMEER 1996 (with clarifications and adjustments in particular on al-Fārābī), and the important collection of essays gathered in PERLER-RUDOLPH 2005. For a similar classification of five kinds of syllogisms see also al-Fārābī's *Iḥṣā' al-'ulūm* (ed. BŪ MALḤAM 1996: 38 ff.), for which cf. MANDOSIO 2013: 299 and fnn. 77-78; 303 (for the reprise of the classification in Gundissalinus); 310 (for a summarising table which, although referred to al-Fārābī, can be usefully compared with the one provided here). The simile of the various degrees of gold kinds, and the classification of the premises according to it, are added by al-Ġazālī: the five kinds of syllogisms are indeed presented by Avicenna (French transl. in ACHENAMASSÉ (I) 1955: 67.29-30), but no mention of gold is made. The classification proposed by al-Ġazālī is summarised in the following table.

TABLE 27. *Kinds of gold as correlative of different kinds of premises for the syllogism*

	KIND OF GOLD	KIND OF PREMISE	KIND OF SYLLOGISM
1	Pure gold	Certain and true, without any doubt and speciousness	Demonstrative [<i>burhānī</i>]
2	Gold stained by some adulteration, only apparent to the perspicacious expert	Almost certain, but liable to error (only apparent to a meticulous speculator)	Dialectic [<i>ġadalī</i>]
3	Gold with an adulteration apparent to any expert, and to non-experts as well if made aware of it	Opinable and persuasive, but liable to the acknowledgment of its contrary	Rhetoric [<i>ḥiṭābī</i>]
4	Copper counterfeit of gold, but convincingly plated	Neither opinable nor certain	Sophistic [<i>muġālīṭī; sūfistā'ī</i>]
5	Copper counterfeit of gold, apparently counterfeit	Apparently false, although the soul inclines to it for some sort of imagination	Poetic [<i>šī'rī</i>]

DEGREES | Arabic *marātib* (sg. *martaba*), Latin *ordines*.PURE GOLD | Arabic *ibrīz*, Latin *obryzum*. The common origin of the Arabic and the Latin term is the

Greek ὀβρυζον, 'pure', 'unadulterated gold'. Cf. *supra*, [1] in Table 27.

NOT ADULTERATED [AND] VERIFIED | Arabic *ḥālīṣ^{an} muḥaqqaq^{an}*, Latin *examinatum purissimum* (with likely inversion of the two word with respect to Dunyā's text).

LEVEL | Arabic *daraġa*, Latin *gradus*.

ADULTERATION | Arabic *ġašš*, Latin [*aliquid*] *admixtum*.

TO THE PERSPICACIOUS EXPERT | Arabic *li-l-nāqid^ī l-bašīr^ī*, Latin *peritissimus* (to be seen in opposition with the following *quilibet peritus*, see *infra*). Cf. *supra*, [2] in Table 27.

TO ANY EXPERT | Arabic *li-kull^{īn} nāqid^{īn}*, Latin *quilibet peritus*.

MIGHT BE PERCEIVED [...] CALLED TO IT | Arabic *wa-yumkinu an yaš'ura bi-hi ġayr^u l-nāqid^ī ayd^{an}*, *wa-yunabbahu 'alay-hi*. The Latin version is very compressed, and omits the last sentence: «quandoque etiam imperitus» (LOHR 1965: 273, 510-511). The liability of the adulteration to being discovered by any expert, as opposed to the best experts, and even by people who are not expert if properly informed, qualifies the passage to the third, inferior degree of gold: cf. *supra*, [3] in Table 27.

COPPER COUNTERFEIT | Arabic *zayf^{an} min nuḥās^{īn}*, Latin *de aere*.

IT PLATES ITSELF IN A PLATING | Arabic *mawwaha tamwih^{an}*, Latin *sed sit adeo subtilis simulationis*. The reading *subtilis* of the Latin version is witnessed in Arabic by *A*: *tamwih^{an} laṭīf^{an}*. Cf. *supra*, [4] in Table 27.

IT IS APPARENT TO ANYONE THAT IT IS PLATED | Arabic *yaẓharu li-kull^{īn} aḥad^{īn} anna-hu mumawwah^{an}*, Latin *falsitas eius appareat omni homini*. Cf. *supra*, [5] in Table 27.

WITHOUT ANY DOUBT AND SPECIOUSNESS | The true and certain premises of the first kind (*supra* [1] in the table), corresponding to pure gold, are further qualified as devoid of any «doubt» [Arabic *šakk*, Latin *dubietate*] and any «speciousness» or specious argument [Arabic *šubha*, Latin *deceptione*] (for a further occurrence of the same term, in that case misunderstood by the Latin translators, cf. *infra*, §205).

«DEMONSTRATIVE» | Arabic *burhāniyy^{an}*, Latin *demonstrativa*. See *supra*, [1].

NEAR THE CERTAINTY | Arabic *muqārība li-l-yaqīn^ī*, Latin *proxima veritati*. In the second kind of premises, compared to slightly adulterated gold ([2] in the table), the closeness to certainty and truth is measured on the subjective basis of a difficulty to discern the error – only if the speculator [*nāẓir*] is meticulous [*ta'annaqa*] it is possible for him or her to find the error (or the adulteration, in the case of gold). The reference to the «possibility of error» [*imkān al-ḥaṭa'*] in the premises goes rather in the direction of an objective invalidity of them, which must form the basis for the (however difficult) recognition of it on the part of the logician.

«DIALECTIC» | Arabic *ġadaliyy^{an}*, Latin *dialectica*. See *supra*, [2].

OPINABLE ACCORDING TO A PERSUASIVE OPINION | Arabic *ẓanniyya ẓann^{an} ġālib^{an}*, Latin *opinabilis opinione convincenti*. LOHR 1965: 273 *ad* 521 quotes Alonso's translation, as he does in the cases of divergence of the Latin text from the Spanish version. It seems to me, though, that the divergence is due in this case to a misunderstanding on Alonso's, and not on Gundissalinus', part. In this third kind of premises (*supra* [3]), the soul – primarily of the experts, but also of non-experts if properly briefed; cf. *supra* the description of the third kind of adulterated gold – «perceives» [Arabic *taš'uru*, Latin *percipit*] the possible truth of their «contrary» or – if the term is used more technically – of their 'contradictory' [*naqīd*; cf. *supra*, §§31-33].

«RHETORIC» | Arabic *ḥiṭābīyy^{an}*, Latin *rhetorica*. See *supra*, [3].

ACCORDING TO THE FORMS OF [THINGS] CERTAIN AS FOR THE GARBING | Arabic *bi-šumar^ī l-yaqīniyyāt^ī bi-l-talbīs^ī*. The Latin translation is somewhat free: «ad modum verarum cum simulatione et dolo» (LOHR 1965: 273, 524-525). Despite itself metaphorical, the «garbing» [*talbīs*] is used here as the more abstract counterpart of the physical «plating» [*tamwih*] of the counterfeit dinar, which makes it similar to gold, despite being actually copper. Likewise, the premises of the fourth kind (see *supra*, [4] in the table) are in truth «neither opinable nor certain».

«MISLEADING» AND «SOPHISTIC» | Arabic *muġālītīyy^{an} wa-sūfiṣṭā'īyy^{an}*, Latin *deceptivus et sophisticus*. See *supra*, [4].

IT IS FALSE [...] SORT OF IMAGINATION | The fifth and last kind of possible premises, equalled to the apparent forgery of a copper dinar, is said to be apparently «false» [*kādīb*]. Still, our soul «inclines» [*tumayyilu*] to them for her «imagination» [*tahayyul*]. For a cosmological use of this same notion in the context of the metaphysical explanation of the movement of the skies cf. *infra*, *Metaphysics* IV.b.3.1 (= b.2.4), §286; for proper psychological occurrences, see *infra*, *Physics* V.3, §§428-429 and V.5, §436.

«POETIC» | Arabic *šīrī*. See *supra*, [5]. Cf. the Latin rendition: «Et argumentatio facta ex ea graece vocatur *sumica*» (LOHR 1965: 274.527). The awkward translation *sumica* for «poetic» has puzzled many scholars. Lohr, *ad locum*, declares that he has «not been able to find what Greek word is meant», and proceeds to quote Albert the Great's commentary on the *Posterior Analytics* (*An. Post.* I 1 2) where the editor has however supplied, for our *sumica*, the even stranger form *σὺρροικα* (*sic*), which seems actually a *vox nihili* in Greek: «Argumentatio composita ex talibus Graece quidem vocatur *σὺρροικα*: apud nos autem tentativa» (BORGNET 1890 (II): 5^a); «Transformativae autem propositiones sunt propriae argumentationi quam *σὺρροικα* superius Graeco nomine vocavimus vel tentativam» (BORGNET 1890 (II): 7^a). Albert's passage is particularly interesting as for the *Wirkungsgeschichte* of the *MF*, as it is globally an extremely conspicuous and almost *verbatim* quotation of the Latin translation of al-Ġazālī's *Logic* (BORGNET 1890 (II): 4^a41-7^a48 = LOHR 1965: 273.495-278.673 = here §§58-68). In SIGNORI 2019 I did not have the chance to discuss the implicit quotation in the longer form here acknowledged, since in the case of Albert's texts still unavailable in the Cologne edition, like the *Posterior Analytics*, I only took into consideration the explicit nominal quotations of Algazel, leaving aside the indeterminate and the implicit quotes. LOHR 1965: 274 *ad* 527 also reports the usage of *sumica*, with the same meaning, in the translation of al-Fārābī's *Iḥṣā' al-'ulūm* made by Gerard of Cremona: cf. *De scientiis*, II, SCHUPP 2005: 58.12-13 (147^{ra}): «Et iste liber nominatur grece *sumica*, et est liber *versuum*», where the Greek origin of the word is again explicitly mentioned. In the apparatus, Schupp reports «*sumica*] *idest poetica add. B*», and further declares his own failure to detect the possible origin of the word: «Wie es im lat. Text zu dem Ausdruck *Sumica*, der im allen drei Handschriften steht, gekommen ist, ist nicht erklärlich. Im arab. Text, S. 89, steht *būūṭīqa* (im Arabischen gibt es kein p), das vom Autor der Marginalanmerkungen richtig als *Poetica* transkribiert wurde was auch von B als Erläuterung übernommen wird. Der arab. Titel, der auch so im arab. Text, ebd., aufgeführt wird, lautet: *Kitab* [sic] *aš-Šīr*, d.h. »Buch der Dichtung«.» (SCHUPP 2005: 195 fn. 80). On *sumica* in relation to both al-Ġazālī's and Albert the Great's passages quoted above see WELS 2011: esp. 473-474 and 478-479; cf. also, on Albert's passage in particular, BRUMBERG-CHAUMONT 2013: 383-384 and fn. 88, to be seen in connection with MARMO 2013: 454 and fn. 26. cursory references to *sumica* in al-Fārābī, none unfortunately decisive to settle the issue of the origin of the word, are also to be found in POLLONI 2016: 166-168 (three undiscussed occurrences) and MANDOSIO 2013: 298 and fnn. 72-73 (Mandosio quotes an oral communication by Silvia Di Donato to the effect that «[l]a transformation de *būūṭīqa* en *sūmica* résulte en réalité d'une erreur de lecture, peut-être due à une corruption, du texte arabe»; but this cannot be immediately true for the *sumica* occurring in the Latin translation of the *MF*, because the Arabic original in this case has the proper Arabic voice *šīrī*, and not the calque from the Greek). On the place of poetic syllogisms (and the *Poetics*) within logic in the Middle Ages cf. WALZER 1934; DAHAN 1980 (more focused on the Latin world); BLACK 1990 (on the Arabic *milieu*); SCHOELER 1983; LUDESCHER 1996; AOUAD-SCHOELER 2002 (devoted in particular to the poetic syllogism in al-Fārābī); SCHOELER 2005; WELS 2011: esp. 476-478.

[§60] D102.1-10

The paragraph is entirely devoted to the first introduction of thirteen kinds of premises, which will be later expounded and explained one by one in the following §§61-68. This inventory,

corresponding to the one provided in the *DN*, is to be seen in connection with the many other lists of the «principles of the syllogisms» [*mabādi' al-qiyāsāt*] (cf. *al-Šifā'*, *al-Burhān*, ed. 'AFĪFĪ 1956: 63) given by Avicenna throughout his many encyclopaedic works. The various kinds of propositions – and the data on which they are based – are synthetically but thoroughly discussed in the fundamental GUTAS 2012^a: 394-398. The list given in the *MF* is reprised almost entirely by Albert the Great in his *Analytica posteriora*: cf. in particular, for the preliminary listing of the thirteen propositions, *An. post.*, BORNET 1890 (II): 5^a33^b-10. For differences cf. MARMO 2013.

EXPOUND | Arabic *šarḥ*. Cf. also *infra* §105 for another case of contextual use of *šarḥ*. The first sentence of the paragraph is not translated into Latin.

THE PRIMARY | Arabic *al-awwalyyāt*, Latin *primas*. Cf. *infra*, §61. They correspond to number (8) in the classification provided by GUTAS 2012^a: 397 (propositions based on «primary data»), filling the role of the propositions whose necessity is internal to the soul and directly imposed by the faculty of intellect.

THE SENSIBLE | Arabic *al-maḥsūsāt*, Latin *sensibiles*. Cf. *infra*, §62. They correspond to number (2) in the classification provided by GUTAS 2012^a: 396 (propositions based on «sense-data»), belonging to the propositions whose necessity is external to the soul. Alongside this kind of premises, Gutas also lists (on the basis of the longest list of premises provided by Avicenna in the *Išārāt*) those propositions based on «data of reflection» [*i'tibāriyya*], which have no correspondence in the *DN* (and consequently in the *MF*).

THE EXPERIMENTAL | Arabic *al-tağrībīyyāt*, Latin *experimentales*. Cf. *infra*, §62. They correspond to the propositions based on (4) «tested and proven data» [*muğarrabāt*] discussed by GUTAS 2012^a: 396 (and cf. also *ivi*: 430, for a more detailed analysis of the meaning of *muğarrab*), and they belong to those propositions whose necessity is external to the soul.

THE TRANSMITTED | Arabic *al-mutawātīrāt*, Latin *famosas*. Cf. *infra*, §63. In the formulation adopted by GUTAS 2012^a: 396 these are the propositions based on (6) «data provided by sequential and multiple reports». As the experimental and the sensible propositions, this kind of premises belongs to the propositions whose necessity is external to the soul.

THE PROPOSITIONS OF WHOSE MIDDLE TERMS AND WHOSE SYLLOGISMS THE MIND IS NOT DEVOID | Arabic *al-qadāyā allātī lā yaḥlū al-dīhn^u 'an ḥudūd^h-hā al-wuṣṭā wa-qiyāsāt^h-hā*, Latin *propositiones quarum medium terminum et probationem intelligere in promptu est*. Cf. *infra*, §64. They correspond to the propositions based on «data with built-in syllogisms», number (9) in GUTAS 2012^a: 397, filling the role of the propositions whose necessity is internal to the soul and indirectly imposed by the faculty of intellect.

THE ESTIMATIVE | Arabic *wahmiyya*, Latin *aestimativas*. Cf. *infra*, §65. They correspond to the propositions based on «estimative data», number (7) in GUTAS 2012: 397, filling the role of the propositions whose necessity is internal to the soul and imposed by a faculty different than the intellect (namely, 'estimation' [*wahm*]).

THE FAMOUS | Arabic *mašhūrāt*, Latin *maximas*. Cf. *infra*, §66. In the classification provided by GUTAS 2012^a: 396-398, various kinds of *mašhūrāt* – which Gutas generally translates with the adjective «endoxic» – make their appearance. The analysis of the examples given by Gutas and here by al-Ġazālī clarifies that the «famous» propositions occurring here correspond to both numbers (12) and (13) in GUTAS 2012: 397, *i.e.* to premises based on (12) «absolutely endoxic data» [*mašhūrāt muṭlaqa*] and on (13) «limited endoxic data» [*mašhūrāt maḥdūda*]. Both kinds of propositions, here in the *DN/MF* partially overlapping, pertain to the class of premises «whose truth is acknowledged by way of concession [*taslīm*]» (GUTAS 2012: 397), together with the «accepted», the «conceded» and the «similar» propositions (see here *infra*).

THE ACCEPTED | Arabic *maqbulāt*, Latin *receptibiles*. Cf. *infra*, §67. They correspond to the propositions

based on «data approved on authority», number (14) in GUTAS 2012^a: 397.

THE CONCEDED | Arabic *musallamāt*, Latin *concessas*. Cf. *infra*, §67. They correspond to number (11) in the classification provided by GUTAS 2012^a: 397, which gives for them also the synonym «admitted» [*taqrīriyyāt*], not employed in the *MF*.

THE SIMILAR | Arabic *mušbihāt*, Latin *simulatorias*. Cf. *infra*, §67. GUTAS 2012^a: 397 vocalizes the participle as the passive of the II stem, *mušabbahāt*, and translates it as «equivocal data». The propositions based on this kind of data – number (10) in Gutas' classification – are those based on an «erroneous» [*ġalat*] concession, as opposed to the «famous», the «accepted» and the «conceded», whose concession is instead «correct» [*ṣawāb*].

THE SEEMINGLY FAMOUS | Arabic *al-mašhūrāt fī l-ẓāhir*, Latin *eas quae videntur maximae*. Dunyā seems to endorse a reading of the text with the sole term *al-mašhūrāt*, while he presents as variant of *A* the reading *al-mašūrāt fī l-ẓāhir*. The omission of *fī l-ẓāhir* in the main text is however a clear mistake, since without it the list would be repeating here, in eleventh position, the «famous» propositions already mentioned *supra*, in seventh position. The reading of *A*, which could be translated as «those with no apparent flaws», has some verisimilitude, as the description of this kind of propositions (*infra*, §68) presents them as *prima facie* perfectly acceptable statements, revealed only in a second moment as partially erroneous. However, Dunyā's reading is supported in both occurrences by ms. *Y* (which reads here *al-mušbihāt* – the item in tenth position in the list, see *supra* –, but has the correction *al-mašhūrāt* in the same hand in the right margin) and by the Latin translation (bearing in mind that *maximae* is the rendition chosen by Gundissalinus for *mašhūrāt*, while *famosae* translates *mutawātirāt*: see *supra*). The reading is also indirectly confirmed by the corresponding item in Gutas' list, *i.e.* the propositions based on «initially endoxic but unexamined data» [*mašhūrāt fī bādi' al-ra'y al-ġayr al-muta'qqab*] (cf. GUTAS 2012^a: 398).

THE OPINABLE | Arabic *maẓnūnāt*, Latin *putabiles*. Cf. *infra*, §68. They correspond to number (16) in GUTAS 2012^a: 398, *i.e.* the propositions based on «suppositional data» in Gutas' formulation. Together with the previously listed «seemingly famous», they constitute the class of propositions «whose truth is acknowledged by way of some overpowering supposition» [*alā waġh' ẓann^m ġālib^m*], as GUTAS 2012^a: 398 puts it.

THE IMAGINATIVE | Arabic *muḥayyalāt*, Latin *imitatorias*. Cf. *infra*, §68. They correspond to number (1) in GUTAS 2012^a: 396, as they constitute the sole instance of the class of propositions «whose truth is not acknowledged» (*ibidem*).

[§61] D102.11-end of page

[(1)] Primary propositions are described as propositions to which the intellect, taken in itself and without any correlation to sensible knowledge, cannot but give assent. Two of the three examples given are axioms originally found in Euclid's *Elements*, and the remaining one is «Two is greater than one». To ensure the independence from any conditioning of the assent of the intellect to these truths, a mental experiment is designed, to the effect that a man who is suddenly created intelligent, without any teaching but the basic understanding of notions like whole, greater and part, would give his assent to these propositions.

NATURAL DISPOSITION OF THE INTELLECT, ABSOLUTELY TAKEN | Arabic *ġarīza al-'aql bi-muġarrad^h-hā*, Latin *intellectui naturaliter*. The Latin rendition, albeit not wrong, seems a bit compressed. For the notion of «natural disposition» cf. also *supra*, §2.

«THE WHOLE IS GREATER THAN THE PART» | Cf. EUCLID, *Elementa*, *Common notion* 5 [8], HEATH 1908 (1): 155 and 232.

«THE THINGS EQUIVALENT TO A [SAME] THING ARE EQUIVALENT [TO EACH OTHER]» | Cf. EUCLID, *Elementa*, *Common notion* 1, HEATH 1908 (1): 155 and 222.

«WHOLE» | Arabic *al-kull*, Latin *totius*.

«PART» | Arabic *al-ğuz*, Latin *partis*.

«GREATER» | Arabic *akbar*, Latin *maioris*.

[§62] D103.1-10

[(2)] Sensible propositions, directly coming from the senses, and [(3)] experimental propositions, which derive from a combination of sensory perception and intellectual reflection on the experience, are presented. Two examples of sensible premises and three of experimental ones are provided.

«THE SUN IS LUMINOUS» | Arabic *al-šams mustanīrat^{um}*, Latin ‘*Sol est lucidus*’. According to WEHR 1183^a-1184^a, the X form of the root *nwr* only has the passive meaning of being illuminated (or enlightened), but the meaning must of course be active here.

«THE BRIGHTNESS OF THE MOON INCREASES AND DECREASES» | Arabic *ḍaw’ al-qamar yazīdu wa-yanqušu*, Latin ‘*Claritas lunae crescit et decrescit*’. Each example of sensible propositions contains a reference to one of the two most apparent heavenly bodies, the sun and the moon, with perfect symmetry.

«THE FIRE BURNS» | Arabic *al-nār taḥriqu*, Latin ‘*Ignis adurit*’. One could wonder whether the notion of the burning action of the fire really requires something more than the sensory perception of the sunshine, or of the lunar phases, but the idea is probably that one actually needs to be burnt by fire (theoretically, more than once), in order for the sensible content of the proposition to weld with the intellectual awareness of the fact that fire is, indeed, dangerous, and will indeed burn again one’s hand if handled improperly.

«SCAMMONY PURGES THE YELLOW BILE» | Arabic *al-saqamūniyā tushilu al-ṣafrā*, Latin ‘*Scamonia ventrem solvit*’. This example is undoubtedly empirical, inasmuch as it certainly requires prolonged and peculiar experiences – specifically, those proper to the physician – in order to be acquired. Scammony, whose Arabic name *saqamūniyā* comes perhaps from the Greek *σακκμωνία* (cf. LANE 1384^a, *sub voce*), is a perennial bindweed (*Convolvulus scammonia*) native of the Middle East, whose resin can be used in medicine as a powerful purgative. This specific medical function is singled out by the Latin translation, but seems to be also implicit in the main meaning of the verb *ahsala* (IV form), both in its active and passive voices. The Latin rendition, however, omits the reference to the yellow bile, whose presence in the Arabic appears to shift the implied pharmacological action of scammony in the direction of the theory of the four humours. The example of scammony is present, cursorily, in the *DN* (ACHENA-MASSÉ 1955 (I): 69.12-13), but it receives a more extensive treatment in Avicenna’s *K. al-Burhān*, the section corresponding to Aristotle’s *Posterior Analytics* of the *K. al-Šifā*, within the discussion on the notion (and the method) of «experience» [*tağriba*]: cf. *Burhān* I.9; an English translation of the relevant selection is available in MCGINNIS-REISMAN 2007:147-152 (esp. §§9-12 and §18 for the scammony). For a fine analysis of this passage of the *Burhān*, akin to the present one, and a wider discussion on the Arabic notion of *tağriba*, cf. MCGINNIS 2004 and JANSSENS 2004. For the notion of *tağriba* in Avicenna’s empiricism, also in connection with the concept of *mušāhada*, cf. GUTAS 2012^a: 428-430. The example that is here at stake is also present in the discussion on the «objects of experience» [*al-muğarrabāt*] in the *Logic* of the *K. al-Nağāt*: cf. AHMED 2011: 88 (§104 and related footnotes). The *saqamūniyā* appears again in a medical example, but with a different focus, *infra*, *Metaphysics* I.5, §161.

«THE WINE INTOXICATES» | Arabic *al-ḥamr yuskiru*, Latin ‘*Vinum inebriat*’. Examples concerning wine (called *ḥamr* or ‘*uqar*’) and its alcoholic properties are frequent in the text of the *MF*: cf. *supra*, *Logic*

III, §32, where the same concept was expressed with the active participle *muskir*, and again *infra*, *Logic* V, §77, and *Metaphysics* I.7, §166. That of wine is also the most expanded of the three examples of experimental propositions, as it is here that al-Gazālī refers to the necessity of the repetition of the experience, «time after time [and] frequently» [*marrat^{am} ba‘d^a uḥraⁿ ‘alā l-takrārⁱ*] in order to guarantee the possess of the notion. This example, however, is not made by Avicenna in the corresponding passage of the *DN*, and BERNAND 1990: 235-236 (commenting on the passage corresponding to my §166) has rather underlined its diffusion in, and likely provenance from, *fiqh* sources.

BECOMES ENGRAVED IN THE MIND | Arabic *yantaqīṣu fi l-dīhnⁱ*, Latin *generatur [...]* *in intellectu*. The Latin translation has too generic a verb, and too specific a noun (which would presuppose the more technical **aql* instead of *dīhn*). As for *yantaqīṣu*, WEHR 1162^b does not attest the VIII stem with this meaning, and one could wonder whether it might be better to omit the infix *-t-* and read instead *yanquṣu*, in the I stem, or *yunaqqīṣu*, in the II stem.

[§63] D103.11-22

[(4)] Transmitted propositions, *i.e.* those generally acknowledged and believed in the community, are presented. The term *mutawātira* conveys the idea of an uninterrupted sequence, an unbroken historical tradition that ensures the value and the truth of those propositions. However, differences in value are inevitable among them, which must therefore be evaluated one by one before being accepted in full. The clear background of this discussion is the transmission or ‘transportation’ of traditions in Islam, in particular in the field of *ḥadīṭ*, as it is made apparent by the chosen example – concerning the prophet and his miracles – and by the use of the key-term *naql*, ‘transportation’ (often contrasted in Islamic culture with ‘*aql*, ‘intellect’, which in the field of *naql* can be used only to verify the correctness and authenticity of the chain of transmission; cf. *The Oxford Dictionary of Islam*, *s.v.* «*naql*»).

NOTIFICATION OF A COMMUNITY | Arabic *bi-iḥbārⁱ ḡamā‘atⁱⁿ*, Latin *vulgo referente*. The indeterminate *ḡamā‘a* (a community, and not *the* community) might be a germ of cultural relativism, admitting to the possibility that the «transmitted» propositions vary when the community holding them varies.

THE EXISTENCE OF EGYPT AND MECCA | The example concerning Mecca is omitted in Latin, with a typical strategy of cultural acclimation. Cf. LOHR 1965: 275.560: «‘Aegyptus est’».

TO DRAW ANALOGOUS CONCLUSIONS | Arabic *an yuqāsa*, Latin *aequaliter credi*.

TRANSPORTATION | Arabic *naql*. The Latin translation does not have a direct counterpart for this typical Islamic notion («*quoniam famosum est*», LOHR 1965: 275.564), but translates nonetheless the chiefly prophetic example in which *naql* appears.

THEREFORE, IT IS INEVITABLE [...] TRANSMITTED [OR NOT] | The final sentence has some difficulties. At the beginning of the clause, Dunyā reads *fa-la budd^a wa-an yuhmila*, while A has the variant *wa-la budd^a min an yuhmila*, with a more natural construction of *la budd^a*, followed by the *min* of the inevitable consequence. The *wa-an* printed by Dunyā might be given the value of ‘also’, thus translating: «it is also inevitable to neglect [...]», although this is only partially convincing. Moreover, I have interpreted the subject of *yuhmila* («he neglects»), and the suffix pronoun of *‘inda-hu* («[transmitted] to him») as both referring to the person objecting against the truth of the transmitted proposition concerning the miracles of the prophet. This helps translating the sentence more naturally, but creates a tension with the *ma‘a-ka* («with you») of the last part of the passage, where I would have expected instead a *ma‘a-hu*. The text could be salvaged by interpreting the final «you» as impersonal, but more consistency in the use of pronouns in the text would indeed be pleasing.

[§64] D103.23-104.21

[(5)] The propositions whose middle terms and whose syllogisms are naturally and immediately in the mind are presented in this paragraph. Examples taken from basic arithmetics are provided, and a careful distinction from the primary propositions (cf. *supra*, §61) is advanced.

PROPOSITIONS WHOSE SYLLOGISMS ARE BY NATURE TOGETHER WITH THEM | Arabic *al-qadāyā allātī qiyāsāt^u-hā fī l-ṭab^a ma'a-hā*, Latin *propositiones [...] quae secum habent probationem suam naturaliter*. The formulation of this typology of propositions in the present paragraph differ slightly from the name they were given in the general list provided *supra*, §60. In particular, this description does not mention the 'mind' [*dihn*] of the person holding them, nor immediately the «middle terms» (but cf. *infra*, where the «soul» [*nafs*], as equivalent to mind, and the middle terms resurface).

ONE BELIEVES [...] MIDDLE [TERM] | The crucial role of the middle term in the origin of this kind of propositions is highlighted in the explanatory sentence that immediately follows the initial description. These propositions are, indeed, abridged forms of syllogisms, in which the mind is not aware of the middle term because of the ease with which it implicitly provides it. The middle term, however, can be supplied, reconstructing a proper syllogism (as will be made apparent in the examples given *infra*). This crucially distinguishes this fifth kind of propositions from the first kind, the primary ones (*supra*, §61), as the latter are «known without a middle» [*urifa bi-ḡayr^r wasat^m*], while the former do need a middle term.

RESEARCHED QUESTION | Arabic *al-mas'ala al-maṭlūba*, Latin *in propositione quaesita*. For the various technical senses of *maṭlūb* cf. *supra*, §36.

IF ONE TOLD HIM | Arabic *la-hu*, but the introduction *ex abrupto* of an unnamed third-person referent sounds a bit odd in the context. Cf. as a matter of fact the Latin translation, which presupposes instead a **la-ka* in the antigraph: «Si enim quis interrogaverit te et dixerit...» (LOHR 1965: 275.581-582).

SEVENTEEN | Reading *sab'a 'ašara*, as in D-Alt, instead of the incongruous *arba'a 'ašara* («fourteen») printed by Duniyā. For the example to work, it is of course necessary that the first number is the half of the second (which is in this case «thirty-four» [*arba'a wa-ṭalātīna*]). Cf. also the Latin translation: «Decem et septem quota pars sunt de triginta quattuor?» (LOHR 1965: 275.582).

THE INTENT [HERE] IS THE EXAMPLE | Al-Ġazālī gives here examples of slightly more difficult mathematical operations, in order to clarify the general «intent» [*maqṣūd*] of the argumentation: although more or less intelligent people can find it easier or harder to do without a middle term in similar operations, the key-point is that it is always possible to recognize a middle term, as disguised as it might seem due to the quickness of the mind in finding the answer. Anyone can thus find an «example» [*maṭāl*] suitable for him or herself: the didactic care of the author is here apparent. Cf. Latin: «Non enim intendo aliud nisi exemplum ponere» (LOHR 1965: 275.589-590).

COMPREHENSION | Arabic *šū'ūr*, Latin *percipere*. *Supra*, for instance §59, I have also translated the Arabic verb of the same root with «perceive».

[§65] D104.22-105

[(6)] The estimative propositions are presented as false propositions, which have however a great persuasive strength because they are held by the estimation (a central faculty in Avicennan psychology, on which cf. BLACK 1993 and *infra*, *Physics* IV, esp. §396 but more conspicuously *passim*). Their falsity derives from the estimation's impossibility to take into actual consideration anything transcending its own, ultimately sensible domain. On such issues, indeed, the estimative faculty lies

in a state of utter wrongness, and cannot but judge falsely. The reaching out of the estimation to non-sensible fields is thus entirely unwarranted.

ESTIMATION | Arabic *wahm*, Latin *aestimatio*. Estimation is a fundamental concept of Avicenna's psychology; cf. *infra*, *Physics* IV, §394 and esp. §396, for a discussion of the notion in its primary psychological context. It is worth remarking here that not all of the several occurrences of the notion of 'estimation' in the *MF* are to be taken as technical ones. In keeping with the description given in psychology, however, the present passage underlines in particular the estimation's incapability to deal with entirely non-sensible, *i.e.* intellectual, material.

STATE | Here and in what follows in the paragraph, «state» translates the Arabic *ḥukm*, usually rendered with «judgment» (and cf. Latin *iudicat*, *iudicium*). The more general sense of «state» – warranted by the beautifully researched GAUTHIER 1904 – is needed here because it is not properly a conscious 'judgment' of the estimation to be at stake, but rather the 'state' or 'stance' of this faculty with respect to those kind of propositions which transcend its proper domain.

THE WORLD [...] – I MEAN AFTER THE WORLD – | I restore this sentence, deleted by Dunyā, as present in D-Altand in the Latin translation. The final clarification within dashes is however missing in Latin, and might be a gloss later integrated in the text. Cf. LOHR 1965: 276.600-601: «Totalitas mundi terminatur inani vel pleno».

THE CAUSE OF THE STATE [...] THE ESTIMATION | Here, the «cause of the state of the estimation» [*sabab^u ḥukmⁱ l-wahmⁱ*] with respect to the aforementioned, non-sensible situations cannot be the cause of a «judgment» proper, because the «cause» is immediately identified with the fact that those matters «do not fall under the estimation» [*lā tadḥulu fi l-wahmⁱ*]. Maintaining the translation 'judgment', one would risk to give the awkward impression that the estimation *judges* these matters precisely because they do not fall under its domain, which seems very counterintuitive. The focus of the passage is rather that the estimation is, with respect to these non-sensible matters, in a state of error or «falsity» (cf. shortly *infra*), precisely because it cannot judge properly about them.

THE STATE OF ITS FALSITY [...] UNDER THE ESTIMATION | This sentence appears particularly convoluted, because it uses the same root of 'falsity' [*ḥūl*] to express two different kinds of falsity: subjective falsity (in the case of the estimation), and objective falsity or impossibility (in the case of the things 'judged' impossible by the estimation). With «its falsity» [*bi-buṭlānⁱ-hi*], what is intended is the «state» (*ḥukm*, once again) of wrongness of the estimation with respect to the non-sensible matters listed above. With the expression «false» [*bāṭil^m*] appearing afterwards, al-Ġazālī rather means something like 'impossible'; and of course, not all that which does not fall under the estimation is «false» in this second sense, because otherwise the estimation itself would be impossible (or always wrong, also in the sensible matters of its proper domain), because it does not fall under itself.

ITS ERROR IS ONLY KNOWN [...] ACCEPTANCE OF ITS CONCLUSION | The estimation accepts a syllogism moving from primary premises (cf. *supra*, §61), and accepts that its conclusion must be true, but then it 'pushes away' or «gets away from» [*kā'a*] (cf. Latin: «quod abhorret eam recipere», LOHR 1965: 276.614) the «acceptance» [*qabūl*] of the conclusion itself, once it has been reached (presumably because it contrasts with the estimation's own sensory assumptions). This leads to the state of error and falsity of the estimative propositions, which are however strongly held by the soul due to the strength of the estimation in its own domain.

[§66] D106-107.12

[(7)] The famous premises pertain for the most part to the juridical and religious domain, and the examples provided by al-Ġazālī – prescriptions, rules, and theological common sayings – mirror this

nature. They are accepted by the community for social and cultural reasons, although the individual tempers sometime play a role in ensuring their wide acceptance in society. They seem universally true, and they often are, but not absolutely: indeed, their characteristic is that their denial, and hence their contradictories, are counterintuitive (or repulsive), but not *ipso facto* false. Famous propositions differ greatly according to the different costumes, places, and uses, and also vary in different disciplines and techniques.

THE COMMON PEOPLE AND THE SO-CALLED MEN OF SCIENCE | Arabic *wa-naẓara l-‘awāmm wa-l-ẓāhir(ūna) bayna ahl’ l-‘ilm’*, Latin *Et putat vulgus et simplices doctores*. Dunyā’s punctuation reveals that his interpretation of the syntax of the text is entirely different and could be translated as follows: « concerning which one does not rely unless upon the mere fame and the speculation of the masses [with *naẓar* as noun, rather than verb]. The so-called men of science...». It seems to me however that, under the interpretation also endorsed by the Latin translation, the text becomes much clearer and plainer. Dunyā prints *al-ẓāhir bayna ahl’ l-‘ilm’*, but he indicates *al-ẓāhiryūna* (sic!) as the reading of A. Upon the obvious correction of the misprint (> **al-ẓāhirūna*), this plural might appear as the best reading, although also the singular could perhaps be defended.

UPON THE MERE FAME | Arabic *‘alā muġarrad’ l-šuhra’*, Latin *in quantum sunt manifestae*. Due to the previous rendition of *mašhūrāt* as *maximae*, the Latin translation misses the possibility to render with the same root the word «fame» [*šuhra*], used in the Arabic original as a direct explanation of the name given to this kind of premises.

«LYING IS SHAMEFUL» | Arabic *al-kiḏb’ qabīh’*, Latin *mendacium est turpe*.

«IT IS NECESSARY THAT THE PROPHET IS NOT AFFLICTED» | The Latin translation omits the reference to the prophet: «Innocens non debet puniri» (LOHR 1965: 276.619-620). JANSSENS 2019: 92 and fn. 48 suggests that the Arabic reading at the basis of that translation should be **barī*. The rendition with *innocens*, however, might also be the fruit of one of the typical strategies of acclimation of the Latin translators when facing purely Islamic material.

«ONE DOES NOT GO INTO THE BATH [...] [WITH IT]» | The Latin version is condensed, and omits both the reference to the «apron» [*mi’zar*] and to the typical oriental institution of the «bath» [*ḥammām*], with a global generalizing effect. See LOHR 1965: 276.621: «Omnis homo debet velare pudenda».

«INJUSTICE IS SHAMEFUL» | Arabic *al-ẓulm’ qabīh’*, Latin *iniustitia turpis*. In the psychological section of the *MF* (*infra*, *Physics* IV, §403), the same proposition is given as an example of knowledge of the practical faculty of the soul (as opposed to the theoretical faculty). In all the propositions given as examples of «famous» premises, the juridical and religious dimension is very well perceivable; in a way, the «famous» are precisely the kind of propositions to which *fiqh* and religious prescriptions naturally pertain.

ARE OFTEN REPEATED | Arabic *tatakarraru*, Latin *saepe audivit*.

THE PEOPLE OF THE COUNTRY | Arabic *ahl al-balād*, Latin *plures gentes*. The reference to the «country» is omitted in the Latin translation.

FOR THE AFFAIRS OF THEIR LIFE [IN COMMON] | Arabic *li-mašālīḥ ma‘āš’-him*, Latin *causa communis utilitatis*. This common, social business – at the basis of the acceptance of the famous propositions – is complemented by the influence of the «[individual] costumes» [Arabic *ahlāq*, Latin *mores propriū*], which contribute to make this sort of notions widely accepted within society.

DELICATENESS | Arabic *riqqa*, Latin *pusillanimitate*.

COWARDICE | Arabic *ġubn*, Latin *formidine*.

BASHFULNESS | Arabic *ḥayā*, Latin *verecundia*.

THROUGH EXERCISE | Arabic *bi-stiṣlāḥ’in*, Latin *per exercitium*.

DID NOT CLING [...] BY A HABIT | The idea is to exclude cases of knowledge of the famous propositions ‘by assumption’, for instance because the man of the mental experiment is supposed to already

adhere to these propositions for his own «nature» (or ‘temper’, or ‘creation’) [*ḥalq* or *ḥulq*], or because an intervening habit has made them known to him. The conclusion, which marks the difference of the famous premises from the primary ones, is that it would be possible for the man of the experiment – although perfectly intelligent – to not give his assent to the truth of these propositions. In order to underline the difference between primary and famous premises, the mental experiment proposed perfectly retraces the one provided *supra*, in §61, all the way down to the counterexample of a primary proposition, to which the assent is on the contrary undeniable, even under the assumptions of the *exemplum fictum*: «Two is greater than one» (cf. *supra*, §61).

«GOD IS POWERFUL UPON EVERYTHING» | Arabic *inna Allāh qādir^{un} ‘alā kullⁱⁿ šayⁱⁿ*, Latin *Deus est potens super omnia*. The same example concerning God’s omnipotency as *potentia ordinata* and not *absoluta* occurs *infra*, §76. The section devoted to the proper discussion on God’s power is *infra*, *Metaphysics* III.b.8, §222, but cf. also the section on the «secret of divine foreordination» at the very end of *Metaphysics* V, §314.

«HE KNOWS EVERYTHING» | Arabic *huwa ‘ālim^{un} ‘alā kullⁱⁿ šayⁱⁿ*, Latin *scire omnia*. In this case, the Latin translation chooses an implicit subordinate clause, instead of a direct speech. The knowledge of God is analysed *infra*, in the section on the divine attributes, at *Metaphysics* III.3-6, §§203-213, which altogether form a discussion of God’s omniscience. Both these theological statements, concerning omnipotency and omniscience, seem at first glance true, because their denial is «counterintuitive» or ‘repulsive’ [Arabic *šunī*, Latin *absurda*]. However, despite being counterintuitive, their contradictory is true, not false: indeed, God cannot create «the like of Himself» [*miṭl nafsⁱ-hi*], nor can He know the like of Himself. Both theological propositions are thus shown to be false, if contrasted with the absolute truth of the oneness of God; for *tawḥīd* in the *MF* cf. also *supra*, *Logic* III, §27; *infra*, *Metaphysics*, Second Premise, §99; *Metaphysics* II, §189; *Physics* IV, §403 (as an example of knowledge of the speculative faculty of the soul).

THESE FAMOUS [PROPOSITIONS] DIFFER [...] NOR VICE VERSA | The germ of relativism, which was introduced as for the transmitted propositions *supra* (§63), is here expanded to a wide appraisal of the many variations of the famous propositions within different geographical, social, and cultural contexts (cf. also Latin: «secundum diversitatem usus et morum et terrarum et artificum», LOHR 1965: 277.638-639). The example of opposition between the famous propositions «among the physicians» [*inda l-aṭibbā*] and those held «among the carpenters» [*inda l-naḡḡārīna*] is particularly instructive for the medical context, close to Avicenna’s teaching. The Latin translation has *physicos* for *aṭibbā*, but *experimentales* for *naḡḡārīna*. Given the closeness to the root *ḡrb* of the ‘experimental’ propositions (which appear again shortly *infra*), it is likely that this is the cause of the mistranslation. THE PRIMARY [...] ARE [ALSO] FAMOUS | The final part of the long paragraph devoted to the famous premises clarifies that other kinds of propositions – the [(1)] primary (§61), some of the [(2)] sensible (§62), the [(4)] transmitted (§63) and the [(3)] experimented [ones] [here: *muḡarrabāt*] (§62: *taḡribiyyāt*) – are also «famous» [*mašhūra*], in broader sense. The famous premises here considered, however, are such for the pure «fame», and thus deserve the name in proper sense.

[§67] D107.13-24

The paragraph summarizes three further kinds of premises, namely [(8)] accepted, [(9)] conceded, and [(10)] similar premises. Only a description of these premises is given, but no concrete example is added.

THE MOST VIRTUOUS [...] PAST | The «accepted» or ‘received’ or ‘receptible’ propositions [*maqbulāt*] are described on the basis of the authors and authorities from whose moral and cultural prestige they

derive. These *auctores* are identified, much solemnly, with «the most virtuous men» [Arabic *afāḍil al-nās*, Latin *a sanctis hominibus*], «the greatest learned men» [Arabic *akābir al-ulamā'*, Latin *a maioribus sapientium*], and «the venerable masters of the past» [Arabic *mašāyih al-salaf*, Latin *ab antiquis et senibus*].

THE FAMOUS [ONE] [...] OPPONENT ALONE | The «conceded» [*musallamāt*] propositions are selectively accepted by the opponents [Arabic sg. *ḥaṣm*, Latin *adversarius*] in a dispute, having thus an eminently dialectical role. They are contrasted with the «famous» premises (see *supra*, §66), only inasmuch as the latter are conceded by the «mass» [*amma*], while the «conceded» in proper sense are accepted by the opponent alone [*faqaṭ*].

THOSE THAT ONE TENDS TO ASSIMILATE | Arabic *yuḥtālu fī tašbih-hā*, Latin *quas studet homo assimilare*. In theology, *tašbih* is properly speaking the ascription of human features to God, *i.e.* the anthropomorphosization of the divine. The common aspect with the propositions described here is the assimilation of superior and inferior degrees of reality, these premises being compared with the primary (§61), the experimental (§62) and the famous (§66), despite being inferior to them as for truth and validity.

[§68] D107.25-109

The paragraph concludes the analysis of the thirteen kinds of premises started in §60, dealing with the three last sorts of propositions: [(11)] seemingly famous, [(12)] opinable, and [(13)] imaginative.

ALTOGETHER | Arabic *kāffat^{am}*, in their totality.

AT THE BEGINNING OF THE OBSERVATION AND AT FIRST GLANCE | Arabic *bi-bādi^t l-rā' wa-awwal^t l-naẓar^t*, Latin *statim [...] in principio*, with omission of the words connected to the field of sight.

«HELP YOUR BROTHER, WHETHER HE IS AN OPPRESSOR OR AN OPPRESSED ONE» | After having carefully considered [*ta'ammala*], the soul knows that helping the «oppressor» (or 'unjust') [*ẓālim*] is not necessary (while the help provided to the «oppressed» [*mazlūm*] appears to be mandatory). The usage of the couple 'oppressor' and 'oppressed' in English guarantee the possibility to render the two terms with the same root, without recurring to a long periphrasis to translate the 'object' of the injustice [*mazlūm*], as opposed to its subject [*ẓālim*]; cf. in this direction the Latin rendition: «Aduiva fratrem tuum, cum nocet vel nocetur ei» (LOHR 1965: 277.661-662). Al-Ġazālī's stance about the help to be given to the oppressor is somewhat problematic in light of a *ḥadīṭ* of the Prophet reported by SAḤĪḤ AL-BUḤĀRĪ 2444, book 46, *ḥadīṭ* 5: «Narrated Anas: Allah's Messenger (ﷺ) said, "Help your brother, whether he is an oppressor or he is an oppressed one". People asked, "O Allah's Messenger (ﷺ)! It is all right to help him if he is oppressed, but how should we help him if he is an oppressor?" The Prophet (ﷺ) said, "By preventing him from oppressing others"». This kind of *ḥadīṭ* would indeed appear to support the trustworthiness of the «seemingly famous» proposition, validating it; but al-Ġazālī might have been unwilling to accept the soundness of this particular *dictum*. On the issue cf. also the long, but somewhat confusing, note *ad locum* provided by Dunyā.

DESPITE THE INTUITIVE UNDERSTANDING OF THE POSSIBILITY OF ITS CONTRADICTORY | Arabic *ma'a l-šū'ūr^t bi-ḥimkān^t naqīḍ^t-hi*, Latin *quamvis animus percipiat posse esse eius oppositum*.

BECAUSE OF THE AWAKENING OF DESIRES AND [THEIR] REPULSIONS | Arabic *bi-l-tarjīb wa-l-tanfīr*, Latin *vel appetendum vel respuendum*. The capacity of the «imaginative» [*muḥayyalāt*] premises to elicit desires and repulse in the soul is said to be the key-element of their influence, despite their being outright «false» [*kāḍiba*].

THE CONFECTIONERY IS ASSIMILATED TO THE DUNG | Arabic *yušbahu al-ḥalāwat^u bi-l-ādīrat^t*. Cf. Latin: «Sicut hoc quod dicitur: 'Mel videtur esse stercus'» (LOHR 1965: 278.672). For a thorough discussion

of this example – linked with poetical syllogism on the basis of §73, *infra*, where the imaginative premises are said to be suitable for that kind of argumentation – see WELS 2011.

THE CIRCUMSTANCES IN WHICH IT IS MORE LIKELY TO EMPLOY THEM | Arabic *mazānn isti'māl-hā*, Latin *in qua facultate unaquaeque versetur*.

[§69] D110.1-7

The section starting here has the aim of sorting out the thirteen kinds of premises distinguished in the preceding paragraphs (§§60-68) into the various kinds of possible logical argumentations (cf. *supra*, §59, for the list of the five types of syllogisms). Each kind of proposition properly belongs to one kind of syllogism, of which constitutes a fitting premise. In this introductory paragraph, the premises suitable for the demonstrative kind of syllogism are singled out, namely the [(1)] primary (§61), the [(2)] sensible (§62), the [(3)] experimental (§62), the [(4)] transmitted (§63), and the [(5)] premises whose middle term is immediately known to the mind (§64).

COURSES OF THESE PREMISES | Arabic *mağāri hādīhi l-muqaddimāt*, Latin *de acceptione propositionum in facultatibus*.

THEY ARE FITTING | Arabic *taşlahu*, Latin *congruunt*.

THE DEMONSTRATIVE SYLLOGISMS | Arabic *al-aqīsa al-burhāniyya*, Latin *argumentationibus demonstrativis*.

PRIMARY [PROPOSITION] | The names of the five different kinds of premises suitable for proper demonstrations are given here in the singular. The Latin translation, however, has them in the plural, as in their respective occurrences in the preceding paragraphs.

THE UTILITY OF THE DEMONSTRATION [...] CERTAINTY | The concept of «utility» [*fā'ida*], which was applied *supra* (§3) to logic as a whole, is here restrained to «demonstration» [*burhān*], and identified with the «manifestation of the truth» [*zuhūr al-ḥaqq*] and the «obtainment of certainty» [*ḥuṣūl al-yaqīn*]. Dunyā, *ad loc.*, quotes al-Gazālī's *Mi'yār al-ilm* for an analogous statement. Every kind of argumentation expounded in what follow will have a section devoted to its utility.

[§70] D110.8-111.12

The paragraph presents the premises suitable for the dialectical syllogism, *i.e.* the [(7)] famous (§66) and the [(9)] conceded (§67), and analyses, in fourth points, the utility of dialectic.

THAT WHICH ACCOMPANIES THEM | Arabic *wa-mā ma'a-hā*, Latin *cum ceteris quattuor*. As the Latin version makes explicit, what is meant is the four other kinds of premises listed just *supra* (§69) together with the primary propositions, namely the sensible, the experimental, the transmitted, and those whose syllogism and middle term is with them by nature. These, indeed, are the stronger kinds of premises suitable for the demonstrative syllogism, which may then *a fortiori* be employed in the inferior level of argumentation – that of the dialectical syllogism – as well. However, they are used in the dialectic only as far as they are «conceded by virtue of the fame» [*musallama bi-l-şuhra*]. This explanatory expression condenses, in a way, the two aforementioned kinds of premises: the «conceded» [*musallamāt*] and the «famous» [*maşhūrāt*]. It is remarkable, in this direction, that *supra* in §67 the conceded and the famous propositions had already been matched.

TECHNIQUE | Arabic *šinā'a*, but *A* reads *ṣ. al-ğadal*. The reading at the basis of the Latin translation seems to have been **ğadalī*, interpreted as the practitioner of dialectic: «nihil aliud attendit dialecticus nisi hoc» (LOHR 1965: 278.686).

UTILITIES | Arabic *fawā'id*, Latin *utilitas* [...] *multiplex*.

THE FIRST ONE [...] FALSIFIED | The first benefit which can be drawn from dialectic is the «silencing with arguments» [*ifhām*] of busibodies [sg. *fuḍūlī*] and innovators [sg. *mubtadi'*], who, despite being on the right path to reach the truth [*yasluku ʔarīq^a l-ḥaqqⁱ*], ultimately fall short from it. Following the variant reading witnessed by *A* [*yasluku ġayr^a ʔarīqⁱ l-ḥaqqⁱ*], the Latin translation has: «Et incedentem extra viam veritatis» (LOHR 1965: 278.689). The figures of low-level speculators here introduced are rendered in Latin respectively as *praesumptuosum* and *iacentem se scire*, the second of which in particular appears far from Dunyā's Arabic.

THE SECOND [...] OF THE SCIENCE | The second utility, or benefit, of dialectic consists in the possibility of using it to allow higher-level students to reach a proper grasp of the truth, despite their inability to use proper demonstration.

PARAENETIC | Arabic *wa'zī*, Latin *exhortatione*.

CULMINATION | Arabic *durwa*, Latin *ad gradum superiorem*.

COMPREHENSION | Arabic *iḥātā*, Latin *apprehendere*. Instead of «the conditions of the demonstration» [*šurūṭ al-burhān*], the sentence is completed in the Latin version by *legem demonstrationis*, which leads to hypothesise a reading like **šar'* in the Arabic antigraph.

THIS IS THE CONDITION [...] SCIENCE | The last sentence clarifies once more that the recipients of this particular instantiation of the utility of dialectic are indeed higher-level, intelligent scholars. Actually, the major part of the «jurisprudents» [*fuqahā'*] and of the «researchers» [*ṭalaba*] of the science (or knowledge) are in such a condition that they can draw benefit from dialectic (not being able to fully use demonstration).

THE THIRD [...] DEMONSTRATION | The third kind of benefit drawn from dialectic considers the «apprentices» [*muta'allimūna*] of the «particular sciences» [*al-'ulūm al-ğuz'iyya*], among which «medicine» [*ṭibb*] and «geometry» [*handasa*] are singled out as examples. Moving from the Aristotelian consideration that the principles of every science are not known in that science, the text claims that dialectic can be useful in order to give the apprentices notice of those principles and of other «famous» propositions proper of each discipline, pending the possibility of an actual demonstration. Cf. also *infra*, *Logic* V, §84, for an implicit reprise of this argument.

IF THEY WERE URGED TO THEM [BEFORE TIME] | Arabic *law šūdirū 'alay-hā*. The rare form *šūdirū*, which also elicited a footnote on the part of Dunyā («he means: if it were requested to them the concession of [the principles] [*taslīm*] and their reception, without establishing [them]»), is to be analysed as the passive perfect of the III stem of the root *ṣ-d-r*. While the main meaning of the III stem is 'to seize', the sense of 'to urge', 'to press hard' is also attested in WEHR 591^b and appears far more appropriate for a passive verb whose implicit subject are the aforementioned «apprentices». The Latin translators also appeared to have had difficulties with this verb, since they rendered periphrastically with: «Sed nec recipient ea posita» (LOHR 1965: 278.701-702).

THE FOURTH [...] SCRUTINY | The fourth utility of dialectic is its capacity to single out both the contradictory statements about a given problem (*i.e.* «the two extremes» [*ṭarafā*] of the contradictory). This «scrutiny» [*ṭaftīš*] is useful in that it can help finding the truth more easily.

AN AUTONOMOUS BOOK | Arabic *kitāb^{um} bi-ra'sⁱ-hi*. What has been said in the present paragraph about the «technique (or 'discipline') of the dialectic» [*šinā'a al-ğadal*] is deemed by al-Ġazālī to be sufficient [*yakfi*]. This is corroborated by the reference to an autonomous book on the topic, which presupposes Avicenna's corresponding passage in the *DN*: «Mais quant à la manière de connaître les principes de la dialectique et d'acquérir leur pratique, cela ne nous servirait de rien dans ce livre où nous avons pour but la vérité» (ACHENA-MASSÉ 1955 (I): 75.16-19). There, Avicenna does not explicitly mention a book on dialectic, but he does so for the parallel cases of rhetoric (here §72) and poetics (here §73, without however a reference to the autonomous book concerning that topic). The *MF*

present various further cases of cross-references to philosophical books not pertaining to the project of the work: cf. *infra* §72 (reference to rhetoric); *Metaphysics* IV, §293 (reference to mathematics, more precisely astronomy); *Physics* III, §368 (reference to optics); *Physics* IV, §389 (reference to optics): cf. *infra ad loc.* for further discussions.

[§71] DIII.13-21

The premises suitable for the sophistical syllogism are the [(6)] estimative (§65) and the [(10)] similar (§67) propositions. The analysis of sophistic is not useful but to learn how to defend oneself from sophistical arguments employed by others. Two subtypes of syllogisms (or more generically argumentations) in which sophistical premises turn out to be useful are distinguished: the testing syllogism, and the syllogism of the resistance.

MISLEADING SYLLOGISMS | Arabic *al-aq̄sa al-muġālīṭiyya*, Latin *argumentationi sophisticae*. Of the two terms given *supra*, in §59, to describe this kind of syllogism, only the proper Arabic *muġālīṭi* is used here, which was rendered *supra* as *deceptivus*. However, the Latin translation uses here *sophisticus*, rather corresponding in Arabic to the calque from the Greek *sūfistā'i*.

THEY INFORM [YOU] SO THAT YOU BEWARE AND YOU DEFEND YOURSELF | Arabic *tu'arrifu li-tahḍara watawawāqā*, Latin *ut sciantur ad cavendum eas*. The «utility» [*fā'ida*] of the premises of the sophistical syllogism is only identified in the defense they implicitly provide against themselves.

«TESTING SYLLOGISM» | Arabic *qiyās^{an} imtiḥānīyy^{an}*, Latin *argumentatio temptativa*. Cf. ACHENA-MASSÉ 1955 (I): 75.26: «syllogisme probatoire». This is a kind of sophistical syllogism used in order to test the argumentative qualities of a candidate.

DISCLOSURE | Dunyā prints *ifḍāḥ*, but WEHR 839^b-840^a does not attest the IV form with that meaning; an almost identical reading *iftiḍāḥ*, in the VIII stem, would perhaps be more regular.

THEN IT WILL BE DISPUTED | Dunyā prints *yunāzaru*, which I interpret as a passive impersonal. Given however the following verb in the first person of the plural, it might be more natural to read as well *nunāziru* instead of *yunāziru*.

«SYLLOGISM OF THE RESISTANCE» | Arabic *qiyās^{an} 'inādīyy^{an}*, Latin *argumentatio deceptiva*. Cf. ACHENA-MASSÉ 1955 (I): 75.29: «syllogisme d'adversité». *Supra*, §59, the adjective *deceptivus* had rather been used to translate the Arabic *muġālīṭi*, the general sophistical syllogism of which the «syllogism of the resistance» (or 'of the opposition') is presented as a mere subspecies. The value of this argumentation appears to touch somehow on the political sphere, as it is used against «he who makes the common people believe that he is knowing» [*man yuḥayyilu ilā l-'awāmm*], a pseudo-wise man who uses alleged wisdom as a weapon to «seduce» or even subjugate people [*yastatbi'u-hum*]. Revealing the «weakness» [*ʿaǧz*] and the «insufficiency» [*quṣūr*] of such a demagogue, the sophistical syllogism becomes an instrument of opposition or resistance [*'inādī*], inasmuch as it makes the people «abandon him» [*ya'tadūna bi-hi*].

[§72] DIII.22-112.2

The paragraph presents the fitting premises for the rhetorical and the juridical syllogisms, *i.e.* the [(8)] accepted (§67), the [(11)] seemingly famous (§68), and the [(12)] opinable (§68). More generally, all argumentations which do not aim to certainty (but to persuasion: cf. *infra*) can profitably employ these kinds of premises. For an analysis of the 'rhetorical' premises as expounded in Avicenna's *Iṣārāt* cf. AOUAD 1999.

THE RHETORICAL AND JURIDICAL SYLLOGISM | Arabic *al-qiyās al-ḥiṭābī wa-l-fiqhī*, Latin *argumentationis rhetoricae et legalis*.

FOR ALL THAT THROUGH WHICH CERTAINTY IS NOT RESEARCHED | Arabic *kull mā lā yaṭlubu bi-hi al-yaqīn^a*. The Latin translation adds to the denial of the research of certainty the positive aim of this kind of argumentations, namely persuasion (which might correspond for instance to an Arabic antigraph with **iqnā^ʿ*): «et omnis argumentationis quae non intendit certificare, *sed persuadere*» (LOHR 1965: 279.725-726, emphasis added).

IN WINNING OVER THE SOULS [...] FROM THE FALSE | The «utility of the rhetoric» [*fāʿida al-ḥiṭāba*] is identified with its capacity of «winning over» or ‘attracting’, ‘bending’, «the souls» [*istimāla al-nufūs*], and of «making them desire the true» [*tarjībⁱ-hā fi l-ḥaqqⁱ*] and *wa-l-tanfīr* n making them desire the true, and in «repelling», or discouraging them «from the false» [*tanfīrⁱ-hā ʿanⁱ l-bāṭilⁱ*]. The ability to arouse desire [*tarjīb*] and repulsion [*tanfīr*] had been described *supra* (§68) as the prerogative of the «imaginative» premises, which are however not at stake here (they will be considered *infra*, §73). JANSSENS 2019: 92 remarks that this brief statement replaces a «list of concrete elements» in the *DN*. Cf. ACHENA-MASSÉ 1955 (I): 75.32-76.1: «[...] le syllogisme rhétorique qui est utile dans le gouvernement des hommes, dans les branches de la loi religieuse, dans le conseil, l’intimité, le reproche, la louange et le blâme, pour relever ou abréger le discours et tout ce qui y ressemble» (cf. Meškāt: 132.7-133.2).

ABOUT RHETORIC THERE IS AN AUTONOMOUS BOOK | As before in the case of dialectic (*supra*, §70), here as well the discussion is truncated with a reference to further bibliographical material which can be consulted on the topic. The reference is already in Avicenna: «Pour la rhétorique, il est une science spéciale (et un livre spécial qui nous ne servirait point ici)» (ACHENA-MASSÉ 1955 (I): 76.1-3). Here, as opposed to the preceding case of dialectic, Avicenna explicitly mentions a ‘book’ on the topic, and al-Ġazālī reuses the reference in the *MF*. If the mentioned book is to be considered Avicenna’s own treatise on rhetoric, al-Ġazālī’s insertion would be best understood as the result of a rather slavish technique of translation. However, it is possible that the reference to further books is maintained in the *MF* because al-Ġazālī understood it (and maybe Avicenna in the first place meant it) as an allusion not to Avicenna’s, but to Aristotle’s books on the topic. In this sense, the keeping of the quotation in the *MF* would not need to be seen as a sort of appropriation of further Avicennan material, as the reference to the remote Aristotelian source of the mentioned doctrines would be found already in Avicenna’s *DN*. In his notes *ad locum*, Lohr tacitly assumes that this is the case, and that the bibliographical reference is indeed to Aristotle (cf. LOHR 1965: 279 *ad* 709; *ad* 729).

[§73] D112.3-end of page

The paragraph states that the premises suitable for the poetical syllogism are the [(13)] «imaginative» propositions (§68), goes on to warn the reader that higher-level kinds of premises are not needed in rhetoric and poetry (despite not being harmful to them), and concludes by declaring that the only two typologies of syllogism which are worthy of serious consideration are the demonstrative one (‘positively’, in order to use it) and the sophistical one (‘negatively’, in order to beware it).

IMAGINATIVE | Arabic *al-muḥayyalāt*, Latin *transformativae*. The Latin translation appears to presuppose, rather than the root *ḥyl* of ‘imagination’, the different root *ḥwl*, which in many patterns

conveys the meaning of 'change'. In §59, however, the same term *muḥayyalāt* had been more accurately translated with the Latin *imitatoriae*.

POETICAL SYLLOGISMS | Arabic *al-aqīsa al-šī'riyya*, Latin *argumentationis sumicae*. Cf. *supra*, §59, for a discussion on the term.

[THIS] IS NOT A CONDITION FOR THEM | What is meant is that the use of 'superior' kinds of premises – the five first kinds, which are suitable for the demonstrative syllogism: cf. *supra*, §69 – is not a necessary «condition» [*šart*] in the case of «rhetoric» and «poetry» [Arabic *šī'r*, Latin *sumicam*], since they also work with 'inferior' kinds of premises, and rather the premises are used in those context only for their «fame» or their «imagination» ('imaginative content') [Arabic *taḥayyul*, Latin *in quantum transformativae*; see *supra*]. This *caveat* mirrors the one that had been advanced *supra*, §70, concerning the use of higher-level premises in dialectic, and is also present in the corresponding passage of the *DN*. There, Avicenna actually makes two separate warnings, one for rhetoric and the other for poetics, which al-Ġazālī reunites here.

CLARIFICATION | Arabic *bayān*; untranslated in Latin.

[§74] D113-114.21

In this «Epilogue of the speech on the syllogism», which concludes the fourth treatise of *Logic*, the text presents ten causes or «occasions» of error in the logical argumentation. In the present paragraphs the first four causes are presented: (1) argumentative confusion and disarray with respect to the necessary ordering; (2) unwarranted modification of the middle term; (3) unwarranted modification of the minor or major terms; (4) presence of ambiguous terms within the syllogism.

EPILOGUE | Arabic *ḥātima*. The Latin rendition «finitur [tractatus de argumentatione]» (LOHR 1965: 280.740) reveals that this was interpreted as the conclusion of the preceding discussion. Accordingly, Lohr prints it at the end of the preceding section, rather than as a title at the beginning of the present one, as in Dunyā's text. The comparison with the analogous title «Epilogue of the speech on the attributes» at the end of *Metaphysics* III (see *infra*, §239) seems however to confirm the soundness of Dunyā's paging as opposed to the different solution witnessed by the Latin version.

REASONS THAT TRIGGER ERROR | Arabic *maṭārāt al-ġalaṭ*. Cf. *supra*, *Logic* II, §20, where the same Arabic term was employed in order to introduce the 'occasions of error' in definition.

GARBING [OF THE ERROR] | Arabic *talbīs*. What is meant is the point of the argument in which the error is concealed. The word *talbīs* in itself might also have the value of 'deception' or 'deceit' (WEHR 1004^a).

THE AFOREMENTIONED HIERARCHICAL ORDERING | Arabic *al-tartīb al-maḍkūr*, Latin *ordinem praescriptum*. Cf. *supra*, §55 (and the following example of ordering taken from Euclid, §§56-57).

OCCURRENCE | Arabic *wuqū'*. The Latin version of the sentence is partially *ad sensum*: «ad hoc ut omnino eodem modo sumatur in utraque propositione» (LOHR 1965: 280.749-750).

IF [THEN] ONE SAID [...] SIMPLE «DRINK» | The examples aim to highlight the fact that in the conversion (for which cf. *supra*, *Logic* III.6, §33), and more generally in all the operations of the syllogistic, it is necessary to take every term as it is, not changing it in the slightest when changing proposition. In particular, the presence of the particle *fī*, «in», must be taken in due consideration and be maintained throughout the conversion. The examples involve the two terms «[earthen] jug» [Arabic *dann*, Latin *lagena*] and «drink» [Arabic *šarāb*, Latin *vinum*], which mirror previous and further examples like those given in *Logic* III.5, §32, *Metaphysics* I, §166, and *Physics* II, §347. The Arabic *šarāb* is more generic than *vinum*, but also admits the meaning of 'wine' (WEHR 540a); the Latin choice approaches however even more the present examples to the other ones quoted, in which the more specific *ḥamr* appears instead of *šarāb*. The corresponding example in the *DN* uses instead

«man» and «house» («No house is in a man», and what follows) to convey the same meaning (cf. ACHENA-MASSÉ 1955 (I): 85.25-86.7).

UNION OF THE TWO TERMS | Arabic *ijtimā' al-ḥaddayni*, Latin *coniungi duos terminos*.

WHAT WE HAVE MENTIONED ABOUT THE CONDITIONS OF THE CONTRADICTORY | Cf. *supra*, *Logic* III, §§31-32. The requirement of invariance of the terms (point (3) here) is expressed in particular in conditions (iii), §31 and (iv)-(vi), §32 *supra*; point (4), namely the requirement of absence of «ambiguous» terms [*muštarika*] is expressed in conditions (i)-(ii) *supra*, §31.

[§75] D114.22-116.4

Three further reasons that trigger error within the syllogism are introduced and explained: (5) grammatical ambiguities, such as the possible ambiguous reference of pronouns, which could generate confusion; (6) use of indefinite, *i.e.* unquantified, propositions; (7) hasty assent given to propositions just because the possibility of (the truth of) their contradictory has not been carefully considered.

THE PARTICLES OF THE PERSONAL PRONOUN | Arabic *ḥurūf al-ḍamīr*. The lexicon here employed specifically refers to Arabic grammar, and the example given *infra* also derives from a fairly typical Arabic turn of phrase. This entails the necessity of an acclimation, on the parts of the Latin translators, to the new linguistical context: «ut observes copulam et nomina» (LOHR 1965: 280.772). THE DIRECTIONS OF ITS [POSSIBLE] USAGE | Arabic *ḡihāt iḡtimāl^h-hi*. What is meant is the usage of the *ḍamīr*.

«ALL THAT THE INTELLIGENT KNOWS, [IT/HE] IS AS HE KNOWS IT» | Arabic *kull^h mā 'arafa-hu al-'āqil^h, fa-huwa ka-mā 'arafa-hu*, Latin *Quidquid scit sapiens, sic est ut scit*. The necessity of an explicit subject in English prevents the ambiguity of the Arabic sentence, which can rather be maintained in languages – like Latin – where the subject is not always expressed. The key-element of the sentence is the referent of the pronoun *huwa*, which might be either the sole «intelligent» [*'āqil*], or the entire phrase «all that the intelligent knows». In the first case, what the statement expresses is the identity of knower and known; in the second, the correspondence of the known object with the knowledge that the *'āqil* has of it. This is expressed in the text with the grammatical terminology of the 'return' of the pronoun [*yarḡi'u ilā*] either to the «knower» [*'ālim*] (first case) or to the known [*ma'lūm*] (second case). The corresponding example in the Persian of the *DN*, as translated in ACHENA-MASSÉ 1955 (I): 86.27-28, sounds: «Toute personne ayant su une chose, elle fut telle qu'elle sut»; the note *ad locum* (*ivi*: 231) explains that the ambiguity arises in Persian because of the lack of gender in Persian pronouns. Al-Ġazālī's Arabic translation, then, despite still referring to the peculiar construction of a pronoun, changes the grammatical aspect at stake, while maintaining the meaning of Avicenna's example.

«IS» | Arabic *huwa*, Latin *est*. The insertion of the pronoun *huwa* is a typically Arabic philosophical way or expressing copulative sentences, alongside the zero-copula construction.

INDEFINITE [PROPOSITIONS] | Arabic *al-muḥmalāt*, Latin *indefinitas*. Cf. *supra*, *Logic* III.2, §28, on indefinite expressions.

IS DEFINED | Arabic *ḥuṣīra*, Latin *determinaretur*. In §28, *supra*, the same root was used to designate «definite» propositions [*maḥṣūra*], with the technical meaning of «quantified» propositions which is also at stake here.

THEY TRANSFORM THE TRUTH | For «truth», Dunyā's Arabic has *ṣidq*, while the Latin translation's *credulitatem* seems to presuppose an antigraph with **taṣḍīq*. The 'judgment of assent on the truth' of the proposition, as *taṣḍīq* might be paraphrased in the context, could be seen as a more precise

description, as it is more particularly this, and not generically the ‘truth’, which changes with the shift from unquantified to quantified propositions.

«MAN IS IN LOSS» | Cf. *Qur’ān* 103.2. See *supra*, *Logic* III.2, §28, for the same example. This occurrence of the Qur’ānic quotation is not translated into Latin, together with the entire passage that comments on it («As a matter of fact [...] generality [of the cases]»).

«THE FRIEND OF YOUR ENEMY IS YOUR ENEMY» | A very similar proposition had been given *supra*, §68, as an example of opinable premises [(12)].

NOT ABSOLUTELY NECESSARY | Arabic *ġayr^m wāġib^m bi-l-ḍarūratⁱ*, literally ‘not necessary by necessity’. Cf. Latin *non esse universale necessario*.

«GOD IS POWERFUL UPON EVERYTHING» | Cf. *supra*, §66, for the same proposition given as an example of famous premise [(7)]. The omnipotency of God is once more explained to be, more specifically, power «upon everything that is possible in itself», and not upon everything *tout court*. Cf. also *infra*, *Metaphysics* III.b.8, §222, and *Metaphysics* V, §314, where the necessary qualification of divine omnipotency is described as the *sirr al-qadar*, namely the ‘secret of the divine decree’ or ‘foreordainment’, which ought not be diffused to the masses.

[§76] D116.5-117

Three further reasons that trigger error within the syllogism are introduced and explained, bringing the total to ten: (8) *petitio principii*, specifically intended as the use of the question itself of the syllogism as one of its premises; (9) circularity of demonstration; (10) usage of weak premises unwarranted by a tight link with the stronger kinds.

QUESTION | Arabic *mas’ala*, Latin *quaestio*.

IT WOULD ALREADY BE SEIZED BEFORE THE PROBLEM ITSELF | Arabic *qad ṣādarat ‘alā naḥsⁱ l-maṭlūbⁱ*, Latin *proponeretur id quod quaeritur*.

FORMULATION | Or more literally ‘expression’, *lafẓ*.

SIGN | Arabic *dalīl^m*, Latin *quasi probatio*.

«THE SOUL DOES NOT DIE, SINCE SHE ACTS ETERNALLY» | Arabic *inna l-naḥs^a lā tamūtu la-inna-hā fā‘ilat^m ‘alā l-dawāmⁱ*, Latin ‘*Anima non moritur, quoniam incessabiliter agit*’. The example of circular argumentation is taken from psychology; cf. *infra*, *Physics* IV, esp. §§412-423 on the immateriality and immortality of the intellectual soul.

THE TENTH ONE [...] AND THE LIKE | The tenth and last reason for error warns against the use of weak premises in the (demonstrative) syllogism. In so doing, it actually summarizes some considerations already emerged before, not only in the analytical discussion of the various kinds of premises (§§61-68) and in the following distributions of the premises in the various types of syllogisms (§§69-73), but also in this same *Epilogue* devoted to the reasons of error. Indeed, as noticed *ad locum*, examples that had been given for some kinds of premises – in particular for famous (§66) and opinable (§68) propositions – resurface in this section (*supra*, §75), while the text is warning against the sixth and seventh occasion of error. This tenth reason, then, was partially already contained in those expounded *supra*, but extends the warning against all kinds of weak premises, as only the five ‘strong’ kinds, already listed, as a matter of fact, in §69, are properly fitting for the demonstrative syllogism.

CONCLUDE THE TRUTH | Arabic *ṣādiq al-natiġa*, Latin *verissimae conclusionis*.

A CERTAINTY DEVOID OF ANY DOUBT WITHIN IT | Arabic *yaqīn^m lā šakk^a fī-hi*, Latin *certitudo absque ambiguitate*. In his footnote *ad locum*, Dunyā wonders whether the experimental propositions (see §62 *supra*) are able to provide such a certainty; Avicenna’s ‘scientific’ understanding of *taġriba*, as explained for instance by MCGINNIS 2004 (see *supra*, §62, for further references), should however

guarantee against such epistemological doubts.

Treatise V

[§77] D118-119

The Fifth chapter of *Logic* is described as dealing with the appendices of the syllogism and of the demonstration. The material here discussed broadly corresponds to Aristotle's *Posterior Analytics* [*Kitāb al-Burhān*] and is arranged in four sections. The first section deals with the four scientific inquiries distinguished at the beginning of the second book of the *An. Post.*, which are presented, subdivided and exemplified according to Avicenna's elaboration.

APPENDICES OF THE SYLLOGISM AND OF THE DEMONSTRATION | Arabic *lawāḥiq al-qiyās' wa-l-burhān'*. D-Alt also reports a further phrase in the title: «whose utility bends to it [*scil.* to demonstration]. They are four sections [*fūṣūl*]». This is also the text at the basis of the Latin translation: «Maneria quinta est de his quae sequuntur librum argumentationum; in qua est utilitas demonstrationis. Haec dividitur in quattuor species» (LOHR 1965: 282.2-3).

SCIENTIFIC PROBLEMS | Arabic *maṭālib 'ilmīyya*, Latin *de quaestionibus disciplinabilibus*. For the technical meaning of «problem» cf. *supra*, *Logic* IV, §36. For *maṭālib* as the plural of *maṭlūb*, cf. LAMEER 1994: 71 and fn. 8; in the text of the *MF*, however, *maṭālib* appears to be more precisely the plural of *maṭlab*, with the analogous meaning of 'problem' or 'question'; cf. also *infra*.

QUESTIONS | Arabic *as'ila*, Latin *quaestionibus*. The term here chosen by the Latin translators is the same used *supra* to render *maṭālib*. LAMEER 1994: 71 remarks that the Greek *προβλήματα* is rendered in at least one occasion in the Arabic translation of Aristotle's *Posterior Analytics* (II.14, 98^a1, Badawi 1948-1952: 452.6) with both the root *ṭ-l-b* and the root *s-'-l*, i.e. with the couple *masā'il wa-maṭālib*. The Latin superimposition of the two words is justified, moreover, by the fact that in the following list of the four scientific questions, each one is introduced with the word *maṭlab*, which appears to be here the singular of *maṭālib*, and which I have translated as «search [for]» (to avoid confusion with the «question» [*su'āl*] appearing instead in the explanation of each of the four but the last one; see *infra*).

«IF» | Arabic *hal*, Latin *An est?*. Cf. Aristotle's Greek *εἰ ἔστι* for the sense [(i.a)] of the question, and *τὸ ὄτι* for the sense [(ii.a)] of the question (*An. Post.* II.1, 89^b24). Cf. *infra* for the distinction between the two senses, and EICHNER 2010, STROBINO 2012: 367-371, and STROBINO 2015: 53 and fn. 6 for Avicenna's shift with respect to Aristotle's original terminology.

THE QUESTION CONCERNING THE EXISTENCE OF THE THING | Arabic *su'āl 'an wuġūd' l-šay'*, Latin *quaeritur an res habeat esse*.

«WHAT» | Arabic *mā*, Latin *Quid est?*. Cf. Greek *τί ἐστίν* (*An. Post.* II.1, 89^b24-25).

THE QUESTION CONCERNING THE QUIDDITY OF THE THING | Arabic *su'āl 'an māhiyyat' l-šay'*, Latin *quaeritur de quidditate rei*.

«WHICH» | Arabic *ayy*, Latin *Quale est?*.

THE QUESTION CONCERNING THE DIFFERENTIA OF THE THING | Arabic *su'āl 'an faṣṭ' l-šay'*, Latin *quaeritur differentia rei*. Cf. *supra*, *Logic* II, §18.

«WHY» | Arabic *limā*, Latin *Quare est?*. Cf. Greek *τὸ διότι* (*An. Post.* II.1, 89^b24). For a thorough analysis of Avicenna's global treatment of Aristotelian scientific questions, of which that of the *DN* – and in turn of the *MF* – is just a partial specimen, cf. STROBINO 2015.

THE RESEARCH OF THE CAUSE | Arabic *ṭalab' l-'illat'*, Latin *quaeritur causa rei*. The explanation of the fourth «search» is the only one not glossed in Arabic by means of the word *su'āl*, «question». The Latin translation, however, uses the same structure employed for the previous three cases,

employing again the verb *quaeritur*. This might be motivated by reasons of symmetry, or else by a different reading than Duniyā's in the antigraph of the Latin version.

THE PRINCIPLE OF THE EXISTENCE | Arabic *aṣl al-wuġūd*, Latin *an res habeat esse*. The first division [(i.a)] of the question «if» is the proper question on existence. The examples given involve the question if God and the void [*ḥalā'*] are «existent» [*mawġūd*].

THE STATE OF THE THING | Arabic *ḥāl al-šay'*, Latin *dispositio rei*. The second division [(i.b)] of the question «if» is about the existence of additional predicates of one thing (a function which in Aristotle's text was rather fulfilled, at least in part, by the question $\delta\tau\iota$). The examples given are «if God is willing» [Arabic *hal Allāh murād^m*, Latin *An Deus est volens?*] and the well-known «if the world has an origin» [*ḥādī^m*]. The examples are not random, but connected, as in the *TF* the origin of the world follows from God's will (cf. Discussion 1).

WHAT IS INTENDED BY THE SPEAKER | Arabic *murād al-mutakallim*, Latin *sensum loquentis*. The first division of the question «what» [(ii.a)] is concerned with the linguistic definition of an «expression» [*lafz*], in order to ascertain what the interlocutor precisely means. The example given is that of the explanation of *uqār* (cf. LANE 2110^a: «Wine [...] or wine that does not delay to intoxicate») with the more common word for «wine» [*ḥamr*], which reprises one of the examples of polyonymous expressions given *supra*, *Logic* I, §9. As already in that occurrence, the Latin version does not attempt a direct translation of the example, but provides an alternative. In this case, the example given in Latin calls into question a seemingly Greek expression: «ut cum dicitur de *anthropos necten*, quaeritur: 'Quid intelligatur per illud?' et respondetur: 'Homo ambulat'» (LOHR 1965: 282.18-19). Lohr (*ivi*: ad 18) admits to have found no Greek equivalent for the bizarre form *necten*. The same, strange form of the word is attested in the *Disticha Cornuti* (or *Cornutus*, or *Distigium*) by the English grammarian John of Garland (d. post 1258), a work which predominantly deals with Greek words transmitted into Latin, in particular in the distich: «Kyria chere geram cuius philantrōpos est bar / Per te doxa theos nectēn ēt ūrānīcīs ymas» (which translates to an invocation to the Virgin). The form *necten* is later glossed as such: «Necten in Greco est venire Latine: vnde dicit Pristianus in primo minoris, antropos necten, i.e. homo venit». The quotations of both the distich and the commentary on it appear in ALLEN 1914: 38-39, who cites them from the *incunabulum* of John of Garland's *Cornutus* printed by Peter van Os in 1481 in Zwolle (Netherlands), with the *Cornutus Novus* by Otto de Lunenborch and the commentary of Johannes Drolshagen (cf. the *Incunabula Short Title Catalogue* of the British Library, under the series number ig00081900). By contrast, the edition of the *Disticha Cornuti* by LIEBL 1888: 19 reads the text of the distich with the Latin 'translation' «venit» instead of the 'Greek' form *necten*. On the *Cornutus* of John of Garland cf. also LENDINARA 1991, who does not discuss, however, the case of «necten».

ALLEN 1914: 39 advances a possible explanation for the origin of the term also appearing in our text: «For this remarkable form I can only suggest ἡλθεῖν or ἦκειν: -en is probably the infinitive; ne might arise from en; and ct, through tt, from th». In likely confirmation of Allen's supposition, the reference to Priscian («Pristianus in primo minoris») made in the commentary on the distich by John of Garland quoted by Allen can indeed be traced back to the *Institutiones grammaticae* (CPL 1546, LLA 703), GL 3, liber 17, p. 124, l. 14 (book 17 of the *Institutiones* being the first of the two books commonly called *Priscianus minor*, after the sixteen books forming the *Priscianus maior*), where the clause is quoted in Greek with a form of ἡλθεῖν: «Articulus secundam notitiam suppositorum demonstrat. si enim dicam ἄνθρωπος ἦλθεν, primam notitiam ostendo; sin ὁ ἄνθρωπος ἦλθεν, secundam. deficit autem praepositivis articulis lingua Latina». The Greek phrase appears however not transliterated in Priscian, and in an entirely different context (namely a discussion on the articles) than the one we started from. On Greek-Latin bilingualism and interlinguistical discussion in Priscian see FORTES 2019 (esp. 31 and fn. 7 for reference to this passage). A promising path for uncovering the origin of the expression in the text of the Latin *MF* lies in the connection, already well ascertained in scholarship, between one of its translators, Gundissalinus, and the School of Chartres, where the interest in Priscianus was keen: in particular, Gundissalinus' reception of Thierry of Chartres (and

Petrus Helias) on Priscianus is documented in FREDBORG 1974; Gundissalinus' usage of William of Conches' *Glosulae super Priscianum* in his *De divisione philosophiae* is recalled in FIDORA 2011^b. Cf., for a synthesis, POLLONI 2015: esp. 10-11.

THE TRUTH OF THE THING IN ITSELF | Arabic *ḥaqīqa al-šayʿ bi-nafsi-hi*, Latin *veritas rei in se*. The second division of the question «what» [(ii.b)] abandons the merely linguistic level of the first one to focus rather on the quiddity itself, here paraphrased with the more generic *ḥaqīqa*, «truth», 'true [nature]' or essence of the thing. The example given in the Arabic text is once again concerned with *ʿuqār*, which I have in this case translated («'wine'») as to mark the difference from the preceding case, where only the linguistic utterance was concerned. The answer, in this case, is indeed a definition of the thing about which the question is asked: «It is the intoxicating drink obtained from grapes». The Latin translation builds here on its Greek-like rendition of the previous example: «cum quaeritur: 'Quid est anthropos?' respondetur: 'Animal rationale mortale'» (LOHR 1965: 282.20-21).

THE SEARCH FOR THE «WHAT» [...] NOT KNOWN | In complying with a need already present in Aristotle's *An. Post.*, the text aims here to give an order of priority to the four different 'divisions' of the questions considered. The linguistic sense of the question «what» is the most basic one, which has then the priority on the «if»; but the quidditative sense of «what» is posterior to «if». As for the relative order of the two senses of «if», the text is not explicit, but it seems obvious to prioritise the first (basic existential) over the second (which asks for some «state» of the thing). The order of the four sub-questions can then be reconstructed as follows: (ii.a) > (i.a) > [(i.b) >] (ii.b). For the logical ordering of the if- and what-questions in Avicenna's *Burhān* cf. STROBINO 2015: 55-57.

THE DIFFERENTIA AND THE PROPER CHARACTERISTIC | Arabic *al-faṣl wa-l-ḥāṣṣa*, Latin *de differentia vel de proprio*. Cf. *supra*, *Logic* II, §21 for *ḥāṣṣa*; when the *proprium* was introduced (§15), the Arabic term was used in the masculine [*ḥāṣṣ*]. In the introduction of the question «which», *supra*, only the «differentia», and not the «proper», was mentioned as a relevant answer to it. Of the question «which» no examples are given, nor are further subdivisions presented.

THE CAUSE OF THE EXISTENCE | Arabic *ʿilla al-wuḡūd*, Latin *causa esse rei*. The first respect under which the question «why» is considered [(iv.a)] is the question on the cause of the thing.

THE CAUSE OF THE CLAIM | Arabic *ʿilla al-daʿwā*, Latin *causa sententiae*. Under this second respect [(iv.b)], the question «why» asks about the reason of the *daʿwā* of the interlocutor, *i.e.* of his or her «claim», allegation, or utterance. The examples of both questions involve fire and burnt garments, which will resurface, in an entirely different context, in the discussion on providence and theodicy: cf. *infra*, *Metaphysics* III.b.7, §§219-221.

[§78] D120-121.4

The second section of the fifth treatise deals with the distinction between the why-demonstration and the that-demonstration. In the present paragraph, both are introduced and examples of each one are given.

DEMONSTRATION OF THE WHY | Arabic *burhān limā*, Latin *demonstratio de quare*. The first kind of demonstrative syllogism is defined as «that which conveys the cause of the existence of the conclusion» [*yufidu ʿillat^a wuḡūd^t l-natiġat^t*] (cf. *supra*, §77, the first sense of the question «why» [(iv.a)]). The example given is the 'demonstration' of the existence of the «smoke» [*duḥḥān*] on the basis of the existence of the «fire» [*nār*], which is its cause.

DEMONSTRATION OF THE THAT | Arabic *burhān inna*, Latin *demonstratio quia est*. For the vocalization as *burhān inna*, rather than *inna* as in Dunyā, cf. BERTOLACCI 2012^a: 291-292 and fn. 4 (also to be seen for a critical reappraisal of previous scholarship on the issue). The second kind of demonstrative

syllogism is defined as «that which conveys the cause of the judgment about the existence» [*yufīdu ‘illat’ l-taṣḍīq bi-l-wuḡūd*] (cf. *supra*, §77, the second sense of the question «why» [(iv.b)]). In a reverse situation with respect to the one exemplified in the case of the demonstration of the why, the demonstration of the that is instantiated by the statement that there is fire, based on the existence of the smoke. The smoke, the «caused» [*ma‘lūl*], is merely a sign [Arabic *yadullu*, Latin *innuit*], albeit a necessary one, of the existence of its «cause» [*‘illa*], i.e. the fire. Accordingly, deriving the existence of the cause from the caused is merely a demonstration of the that, and not of the why. For a Greek occurrence of an analogous example, used as an instance of ‘tekmeriodic’ or evidential argumentation, cf. PHILOPONUS, *In Phys.* 9.18-19, quoted in LAMMER 2018: 52: «An example [would be] if someone, upon seeing smoke, said that there was a fire there, because he has argued for what is prior from what is in nature posterior» (transl. OSBORNE 2009, modified by Lammer). For *dalāla* (here alluded in the use of the verb *dalla*, ‘be a sign of’) as translation of the Greek τεκμήριον – with the meaning of ‘clear evidence’ – cf. LAMMER 2018: 52.

CAUSE OF THE EXISTENCE OF THE SMOKE | Reading *wuḡūd* instead of Dunyā’s misprint *wuḥūd*.

THIS, THEN, IS THE INTENT [...] OF THE WHY | D-Alt only reads the beginning of this sentence: *fa-hādā huwa l-murād* («this, then, is the intent»), omitting the rest. The Latin translation presents a conformably abridged version of this conclusive statement: «Et hic est noster sensus» (LOHR 1965: 283.53).

[§79] D121.5-end of page

The paragraph provides an addition to the characterization of the why-demonstration introduced *supra*, §78. The demonstration of the why also works if the middle term is a cause for the being of the major term in the minor. For the Avicennan background cf. STROBINO 2016.

INSEPARABILITY | Arabic *talāzum*, Latin *comitantia*.

CHARACTERIZATION | Arabic *ittiṣāf*, Latin [*causa*] *informandi*.

ESSENTIAL ATTRIBUTE | Arabic *ṣifa datiyya*, Latin *essentialis proprietas*.

IT IS NOT A CONDITION [...] THE MAJOR TERM | Cf. *An. Post.* B [II] 16, 98^b29-31: «Hence when the explanation holds the object must hold; but when the object holds it is not necessary for everything explanatory to hold – rather, something (but not everything) explanatory must hold» (transl. BARNES 1993: 70).

[§80] D122.1-19

The third section of the fifth treatise deals with the four aspects of demonstrative science distinguished in Aristotle’s *Posterior Analytics*: subject-matters, essential (or *per se*) accidents, questions, principles. In this first paragraph of the section, subject-matters are discussed in greater detail.

ON THE MATTERS AROUND WHICH THE DEMONSTRATIVE SCIENCES REVOLVE | Arabic *fī l-umūr llatī ‘alay-hā madār’ l-‘ulūm’ l-burhāniyyat’*, Latin *de his in quibus potius continentur scientiae demonstrativae*. Literally ‘the things around which is the pivot (or ‘crucial point’ or ‘axis’) of the demonstrative sciences’.

THE SUBJECT-MATTERS | Arabic *al-mawḍūʿāt*, Latin *subiecta*.

THE ESSENTIAL ACCIDENTS | Arabic *al-aʿrāḍ al-dāʿiyya*, Latin *accidentia essentialia*. Cf. *infra*, §81, for a discussion.

THE QUESTIONS | Arabic *al-masāʾil*, Latin *quaestiones*. Cf. *supra*, §77, for the rendition of *asʿila* as «questions», and *infra*, §§82-83, for a discussion.

THE PRINCIPLES | Arabic *al-mabādīʿ*, Latin *principia*. Cf. *infra*, §84, for a discussion.

WHOSE STATES ARE RESEARCHED WITHIN THAT SCIENCE | Arabic *wa-yuṭlabu fī dāʿilika l-ʿilmī aḥkām^u-hu*, Latin *cuius proprietates inquiruntur in ea*. For the rendition of *aḥkām* [sg. *ḥukm*] with states cf. *supra*, *Logic* IV, §65, and GAUTHIER 1904.

THE HUMAN BODY [...] FOR THE LAW | Five examples of subject-matters of particular sciences are given: (i) the «human body» [*badan al-insān*] for «medicine» [*tibb*], (ii) the «measure» [*miqdār*] for «geometry» [*handasa*], (iii) the «number» [*ʿadad*] for «arithmetics» [*ḥisāb*], (iv) the «sound» [or 'tune', *nağma* or *nağama*] for «music» [*mūsiquā*], and finally (v) «the actions of those who are obliged to observe the precepts of religion» [*afʿāl al-mukallaḥina*] for the «law» [*fiqh*]. The Latin translation is regular until the last example, with which the translators appear to have struggled: «et civilis scientiae controversia» (LOHR 1965: 284.75). The Latin *controversia* translates in the Prologue of the *MF* one of the occurrences of the Arabic *tahāfut* ('incoherence') (cf. *supra*, §1), while in *Logic* IV, §51 it renders *nizāʿ*. For the rendition of *nağama* as 'musical note' cf. ALONSO 1963: 69 and fn. 46, also with reference to FARMER 1929; for an update on Arabic musical lexicon cf. now SAWA 2015.

IT IS NOT UPON THE JURISPRUDENT [...] ACTION | Arabic *fa-laysa ʿalā l-faḥīḥi an yaṭbuta an li-l-insānī fiʿl^m*. The Latin translation replaces the Arabic example reproducing once more the preceding one of music: «Quoniam nec musicus debet probare esse tonus» (LOHR 1965: 284.77), as remarked by JANSSENS 2019: 94 fn. 54, who hypothesises that «the use of *fiqh* might stem from a later revision, either by al-Ghazālī, or by one of his followers. However, in the actual state of affairs it is impossible to settle this delicate issue». Another explanation, also based on the hardship of translation of the previous occurrence of *fiqh*-related matters, would be that the Latin translator found the example of music more immediate, and easier to render in Latin context. As remarked as well by JANSSENS 2019, *ibidem*, the *fiqh*-example chosen by al-Ġazālī is not in Avicenna's *DN*, both here and in the immediately preceding example.

IT IS UPON HIM [...] CONCEPTION | Having clarified that the expert of every particular science does not have the task of establishing [*itbāt*], i.e. of demonstrating the existence of, the subject-matter of his discipline, his or her duty is described as an action of 'understanding' the subject [*alay-hi an yaḥfama*], through «definitions» [*ḥudūd*] and according to «conception» [*taṣawwur*].

[§81] D122.20-123.9

The second element of the demonstrative sciences to be analysed are the essential (or *per se*) accidents. These are properties of the subject-matter of every science, which are to be found in it alone; examples concerning geometry and medicine are given. The demonstration of their existence within the subject-matter of the science is identified with the aim of that science.

THE PROPERTIES [...] OUTSIDE IT | Arabic *al-ḥawāṣṣ allatī taqaʿu fī mawḍūʿ dāʿilika l-ʿilmī*, Latin *proprietates, accidentes illi subiecto tantum et non alii*. The Latin rendition of the relative clause *allatī taqaʿu* with the present participle *accidentēs* is etymological (Arabic *waqaʿa* = Latin *cado*, here in a composite in the sense of 'occurring'). The comma added by Lohr after *proprietates*, which clarifies that *accidentēs* is not immediately an attribute of the previous noun, is particularly appropriate in the light of the Arabic original.

LIKE THE TRIANGLE AND THE SQUARE | Arabic *ka-l-muṭallaṭ wa-l-murabbaʿ*, Latin *triangulatio et quadratura*. The abstract terms employed into Latin might be intended to convey the meaning of ‘triangle-ness’ and ‘square-ness’. Identical Latin translations of *muṭallaṭ* and *murabbaʿ* are to be found also *infra*, *Metaphysics*, Premise I, §95.

HARMONY | Arabic *tanāsub*, Latin *proportio*.

THE ILLNESS AND THE HEALTH FOR THE ANIMAL | The Latin translation has a slightly altered text, as it changes the order of illness and health, adds the qualification «for the body», and reads ‘animals’ in the plural; cf. LOHR 1965: 284.87-88: «sicut sanitas et aegritudo corpori animalium».

IT IS ONLY DEDUCED FROM THE COMPLETION OF THAT SCIENCE | Arabic *fa-innamā yastafādu min tamāmī dālika l-ʿilmī*, Latin *non cognoscitur nisi ex complexione ipsius scientiae*. The existence of the essential accidents within the subject-matter of each science is precisely identified with the «intent» [*murād*] of that science, and is thus demonstrated only once the science has been ‘completed’ or thoroughly investigated.

[§82] D123.10-23

The third element of the demonstrative sciences to be analysed are the questions, *i.e.* the statements susceptible of being demonstrated in a science. Various possible denominations are proposed, and a basic distinction is drawn between (a) questions whose subject-matter is the subject-matter of the science to which they belong, and (b) questions whose subject-matter is one of the essential accidents of the subject-matter of their science.

QUESTIONS | Arabic *masāʿil*, Latin *quaestiones*. For a rendition of the same term as «problems [related to the subject matter]» see AHMED 2011: 98 (§119).

THE GATHERING OF THESE ESSENTIAL ACCIDENTS WITH THE SUBJECT-MATTERS | The characterization of the «questions» is given in the terms of the two previous elements discussed, *i.e.* the «essential accidents» [*aʿrād dātīyya*] of §81, seen in their ‘union’, ‘combination’ or «gathering» [Arabic *ijtimāʿ*, Latin *cohaerentiam*] with the «subject-matters» [*mawḍūʿāt*] dealt with *supra* in §80.

THAT WHICH IS SOUGHT FOR BY EVERY SCIENCE | Arabic *maṭlūb kullīn ʿilmīn*, Latin *hoc est quod petitur in omni scientia*.

ABOUT WHICH ONE ASKS WITHIN [EACH OF THE SCIENCES] | While the first part of the description employed the term *maṭlūb*, connected with the denomination *maṭālib*, here the questions are characterized as that which is asked [Arabic *yasʿalu*, Latin *interrogatur*] in every science, using thus the root of *masāʿil*. The emphasis on the different possible names will become explicit just *infra*.

INASMUCH AS ONE ASKS [...] «QUESTIONS» | The relevant terminology is the same already underlined *supra*, with the couple *yasʿalu / masāʿil* (cf. Latin *interrogatur / quaestiones*). As in Latin, in English it is difficult to maintain the same etymology as the Arabic does. An attempt in that direction would be that of using the couple *inquire / inquiries*.

INASMUCH AS THEY ARE SEARCHED [...] «RESEARCHES» | The Arabic couple involved is *tuṭlabu / maṭālib*, rendered in Latin as *petuntur / petitiones* (and cf. *supra* the translation of *maṭlūb* as *hoc [...] quod petitur*). The English translation tries as well to use etymologically linked terms, although this means abandoning the rendition of *maṭālib* as «problems» (cf. *supra*, §77).

INASMUCH AS THEY ARE THE CONCLUSION [...] «CONCLUSIONS» | Inasmuch as they are the «conclusion of the demonstration», *i.e.* of the demonstrative syllogism [*natīja al-burhān*], the questions can also be called «conclusions» [*natāʿij*]. Properly speaking, thus, the «questions» [*masāʿil*] of a science become «conclusions» only inasmuch as they are demonstratively proven in that science. For an analysis of the lexicon of «questions» in both Avicenna and al-Fārābī cf. EICHNER 2010.

THESE NAMES AND EXPRESSIONS [...] CONSIDERING [THE THING] | Arabic *taḥṭalifu hādīhi l-asāmī wa-l-‘ibārāt’ bi-ḥtilāf’ l-i’tibārāt’*, Latin *variantur nomina secundum varietatem interpretationum*. The Arabic text has a slight wordplay between ‘*ibārāt*’ (‘expressions’) and ‘*i’tibārāt*’, the corresponding verbal noun of the VIII stem (‘considerations’, ‘ways of considering’), lost into Latin because ‘*ibārāt*’ is not translated. Since ‘*ibāra*’ is the Arabic counterpart of *interpretatio* in the title of Aristotle’s *De interpr.*, it is possible that the antigraph of the Latin translation read ‘*ibārāt*’ instead of the very close ‘*i’tibārāt*’ at the end of the clause. As remarked by JANSSENS 2019: 94-95, these lines and their onomastic emphasis have no counterpart in the *DN*. For him, however, they might derive from the *Maqūlāt* of the *K. al-Šifā’* or the *Išārāt* (maybe combined with the *Nağāt*) for the «triple denomination», although at fn. 55 he himself admits that the link is «vague».

THE SUBJECT-MATTER [...] IN THAT SCIENCE | Arabic *fa-immā an yakūna mawḍū‘-hā mawḍū‘a dālīka l-‘ilm’ aw al-a‘rād’ al-dātiyyat’ fi dālīka l-‘ilm’ li- mawḍū‘-hi*. Cf. Latin: «aut subiectum quaestionis erit subiectum eiusdem scientiae, aut accidentia essentialia subiecti eiusdem scientiae» (LOHR 1965: 284.103-285.105).

[§83] D123,24-125,9

The paragraph distinguishes five ways in which the scientific question relates to the subject-matter, or the essential accidents of the subject-matter, of the science to which it belongs: four are further subdivisions of case (a) distinguished *supra*, §82, namely of the situation in which the subject-matter of the scientific question is the subject-matter of the science (with various qualifications); the last one is case (b) distinguished *supra*, namely the case in which the subject-matter of the scientific question is one of the essential accidents of the subject-matter of the science.

THE SUBJECT-MATTER ITSELF | Arabic *nafs al-mawḍū‘*, Latin *ipsum tantum subiectum*. [(aa)]: this is the most basic form of case (a) distinguished *supra* (§82), in which the subject-matter of the scientific question immediately coincides with the subject-matter of the science to which it belongs. As a matter of fact, measure is immediately the subject-matter of geometry, and number of arithmetics: cf. the examples given shortly *infra*.

«EVERY MEASURE [...] DIFFER FROM IT» | D-Alt reads *aw yubāyīnu* («or it differs from it»), which appears to have been the reading at the basis of the Latin translation: «Omnis mensura est communicans mensurae eiusdem generis vel incommunicans», LOHR 1965: 285.108-109. I have translated on the basis of Duniyā’s *wa-lā yubāyīnu*, which seems more accurate here.

PARTICIPATES | Arabic *mušārik*, Latin *communicans*.

«EVERY NUMBER [...] AND NINE» | In the *DN* this example is given using also number 4, and not only number 5 as in the *MF*; cf. JANSSENS 2019: 95 fn. 56.

THE SUBJECT-MATTER WITH AN ESSENTIAL MARK | Arabic *al-mawḍū‘ ma‘a aṭarⁱⁿ dātiyyⁱⁿ*, Latin *ipsum subiectum, sed cum impressione essentiali*. Duniyā reads *amr*, but Latin «cum impressione essentiali» (LOHR 1965: 285.113) leads one to suppose a reading **aṭar* in the antigraph, whose meaning appears here more precise; cf. also the variant reading of *A* reported *infra*. [(ab)]: in this situation, the subject-matter of the scientific question is the subject-matter of the science to which the question belongs, but with a further essential qualification. The example given is that of «number» (subject of arithmetics) «divided in two» [*munaṣṣaf*], not taken absolutely.

DIFFERENT | Arabic *mubāyīn*, Latin *incommunicans*. Cf. *supra* the rendition of *mušārik* as *communicans*, hence the present translation.

THE NUMBER DIVIDED IN TWO WAS ASSUMED | Reading *uḥīda*, as *supra*, instead of *aḥad* (without diacritics) printed by Duniyā.

A SPECIES OF THE SUBJECT-MATTER OF THE SCIENCE | Arabic *naw^{an} mawḏū^d l-‘ilmⁱ*, Latin *species subiecti*. [(ac)]: in this third case, the subject-matter of the scientific question is a species of the subject-matter of the science to which it belongs, like six – as a perfect number (cf. *infra* the example) – is a species of the genus «number», in itself the subject-matter of arithmetics.

«SIX IS A PERFECT NUMBER» | Arabic *al-sitta ‘adad^{an} tāmm^{an}*, Latin *Senarius est numerus perfectus*. A «perfect number» is a positive integer equal to the sum of its positive divisors, excluding the number itself. The positive divisors of 6 – excluding itself – are 1, 2 and 3, and 1+2+3=6. For the ancient Greek notion of τέλειος ἀριθμός cf. EUCLID, *Elementa*, VII, Definition 22, in HEATH 1908 (II): 278 (and see also 293-294 for a commentary and analogous definitions in Theon of Smyrna and Nicomachus of Gerasa). It is quite strange to me that the «six» itself is qualified as a species of the number, as I would have expected the attribute to belong rather to the class of «perfect numbers» of which six is but an instance. The meaning can however be maintained if one is to suppose that it is the six *as member of the set of perfect numbers* to be described here as a «species» of the subject-matter of arithmetics.

A SPECIES [OF THE SUBJECT-MATTER], WHICH ACCOMPANIES ITSELF TO AN ESSENTIAL ACCIDENT | Arabic *naw^{an} ma‘a ‘araḏ^{an} dātīyy^{an}*. D-Alt reads *aṭar* instead of ‘*araḏ*, followed by the Latin translation: «species, sed cum impressione» (LOHR 1965: 285.126). The presence of this variant reading in this point of the text – where Dunyā’s text has ‘*araḏ* – might be seen as a sign of the soundness of the correction in *aṭar* of the more generic *amr* printed by Dunyā *supra*, since that occurrence was precisely glossed with ‘*araḏ* («an essential mark, I mean the essential accident», cf. *supra*, case [(ab)]). [(ad)]: this fourth case is the one which qualifies the most the basic identification of the subject-matter of the scientific question with the subject-matter of the science (case [(aa)] *supra*). As case (ab) qualifies case (aa), likewise the present case (ad) qualifies case (ac) by adding the determination of an essential accident not to the subject-matter itself, but to a species of it, like in the case of the consideration of a «straight line» (cf. example *infra*) in geometry.

STRAIGHT LINE | Arabic *ḥaṭṭ mustaqīm*, Latin *linea recta*. The «line» is indeed a species of measure, the subject-matter of geometry, while «straight» is an essential accident of it.

ACCIDENT | Arabic ‘*araḏ*. D-Alt reads once *aṭar*, mirrored by the Latin version: «impressio tantum» (LOHR 1965: 285.131). The final case corresponds to situation (b) described above in §82, namely the case in which the subject-matter of the scientific question is (one of) the *per se* accidents of the subject-matter of the science. The example given is that of the «triangle» for geometry (that triangles, squares, and so on are essential accidents for measure had already been stated *supra*, §81).

[§84] D125.10-end of page

The fourth element of the demonstrative sciences to be analysed are the principles. The principles are distinguished in primary (the axioms) and non-primary, which are in turn subdivided into «subject principles» and «postulates». JANSSENS 2019: 95 remarks that al-Ġazālī does not mention definitions «as a ‘foundation’ (*aṣl*) in demonstrative science (DN 144,1-2)», and surmises that this derives from his identification of the «principles» of a science with the «premises conceded» within that science.

PRINCIPLES | Arabic *mabādī’*, Latin *principia*.

THE PREMISES CONCEDED IN THAT SCIENCE | Arabic *al-muqaddimāt al-musallamāt fī dālīka l-‘ilmⁱ*, Latin *propositiones concessas in arte illa*. Here and in the immediately following occurrence of *ilm*, the Latin translation has *ars*, which would seem more adequate for an Arabic reading like **ṣinā‘a*.

BY MEANS OF WHICH THE QUESTIONS OF THAT SCIENCE ARE ESTABLISHED | Arabic *allatī tuḥbatu bi-hā masā’il dālīka l-‘ilmⁱ*, Latin *quibus probantur quaestiones ipsius artis*. I restore the *bi-hā* deleted by Dunyā on

the basis of *A*.

AXIOMS | Arabic *ʿulūm^{am} mutaʿārafat^{am}* (literally ‘generally recognized knowledges’, cf. Greek κοίνας ἐννοιαί, Euclid’s own alternative for ἀξιώματα or ‘worthy things’), Latin *per se nota*.

IN THE FIRST [BOOK] OF EUCLID | Arabic *fi awwal^l Uqlīdis*, Latin *in principio Euclidis*. In the example of an axiom, just like in the following example of postulate, the quotation of Euclid is explicit and nominal, and quite accurate in identifying the intended (and indeed very famous) passages. The Arabic *awwal* might also be interpreted more generically as «beginning» (as the Latin version seems to presuppose), but the fact that the axioms and the postulate quoted are indeed in the first book of the *Elements* (cf. *infra*) suggests a more on point translation. For a complete list of the explicit nominal quotations of Euclid in the *MF* and in its source, the *DN*, cf. Introduction, §1.6.1 (see respectively Table 8 – for the *DN* – and Table 9 – for the *MF*).

«WHEN EQUAL [...] WILL BE EQUAL» | The example of axiom as first, «primary» [*awwalīyya*] knowledge is unsurprisingly taken from the *Elements*, as it is a combination of Common notions 3 and 2 (in this order): cf. *Elementa*, I, Common notions 2-3, HEATH 1908 (I): 155 (see 223-224 for a commentary). Cf. also *supra*, §61, where other axioms of Euclid’s were given as examples of primary propositions, in the context of the analysis of the thirteen kinds of premises.

THE APPRENTICE | Reading *mutaʿallim*, as in *Dunyā*, instead of *muʿallim* of *A*, followed in this by the Latin translation: «a magistro» (LOHR 1965: 286.145).

WILLINGLY | Arabic *ʿan ṭayyibⁱⁿ nafsⁱⁿ* (literally ‘from a good soul’; cf. Modern Standard Arabic *ʿan ṭayyibⁱⁿ ḥāṭirⁱⁿ*), Latin *credens*.

SUBJECT PRINCIPLES | Arabic *uṣūl mawdūʿa*, Latin *principia proposita*. JANSSENS 2019: 95 translates the Arabic expression as «posited foundations».

RESISTANCE | Arabic *ʿinād*, Latin [*si autem*] *dubitaverit*.

POSTULATES | Arabic *muṣādarāt*, Latin *prologus*. The Latin rendition of the term is somewhat etymological, moving from the possible (and perhaps ordinary) sense of the name of place of the same root as ‘point of departure’. For an analogous ‘etymological’ choice, in a different context in the *Logic* of the *Nağāt*, cf. the translation as «pre-positing (a problem)» in AHMED 2011: 81 (§93); for the technical rendition as «postulates» in this place of the *MF* cf. JANSSENS 2019: 95, also confirmed by the very example – indeed, one of Euclid’s postulates – given just *infra*.

«IT IS INEVITABLE [...] DRAWN» | Cf. *Elementa*, I, Postulate 3, HEATH 1908 (I): 154, and 199-200 for a commentary stressing the implicit assumption of an infinite space which can be seen as deriving from this postulate. Cf. indeed the Latin translation, which appears to have stressed (perhaps on the basis of a slightly different Arabic text than *Dunyā*’s) this very aspect: «Necesse est concedere super punctum quodlibet, *quantumlibet occupando spatium*, circulum constitui posse» (LOHR 1965: 286.149-150, emphasis added).

IT IS PROPOSED TO THEM | Arabic *yušādīru ʿalay-hā*, Latin *proponitur eis hoc*.

[§85] D126.1-16

The fourth and last section of the fifth treatise of *Logic* expounds the conditions which the premises of the demonstration must meet for the demonstration to be valid. In the present paragraph, the four characteristics of premises – their being true, necessary, primary, and essential – are introduced, and the attributes of truth and necessity are analysed in greater detail.

TRUE | Arabic *ṣādiqa*, Latin *verae*.

NECESSARY | Restoring, on the basis of *A*, *wa-ḍarūriyya* deleted by *Dunyā*. Cf. Latin *et necessariae*.

PRIMARY | Arabic *awwalīyya*, Latin *primae*.

ESSENTIAL | Restoring, on the basis of *A*, *wa-dātiyya* deleted by Dunyā. Cf. Latin *et essentiales*.

«CERTAIN» | Arabic *yaqīniyya*, Latin *certissimae*. JANSSENS 2019: 95 and fn. 57 references for this identification of *ṣādiq* and *yaqīn* Avicenna's *K. al-Nağāt*, ed. DĀNĪSPĀZŪH 1985: 126.3-4 and 130.9. In AHMED 2011: 95-96 (§112), *yaqīniyyāt* is translated as «[premises of] certitude», and identified with primary, experimental and sensible propositions, just like in the present passage (although experimental propositions are not explicitly mentioned).

LIKE THE PRIMARY [...] BEFORE | Cf. *supra*, *Logic* IV, §69, for the list of five kinds of premises suitable for the demonstrative syllogism, whose aim is that of generating certainty in the conclusion. For the expression *wa-mā ma'a-hā* as a shortcut to embrace the other strong kinds of premises together with the paradigmatic «primary» propositions, cf. also *supra*, §70.

LIKE «ANIMAL» FOR «MAN», NOT LIKE «WRITING» FOR «MAN» | Arabic *miṭl 'al-ḥayawān' li-l-insān'*, *lā miṭl 'al-kātib' li-l-insān'*, Latin *ut animal homini, non ut scriptor homini*. The example, which is absent from the *DN* (cf. JANSSENS 2019: 95), appears to identify the feature of 'necessity' of the premises with the first sense of «essential» distinguished *infra*, §88 (and exemplified precisely by the being of 'animal' in 'man').

FROM THEM | *i.e.* from the premises involved in the demonstration.

[§86] D126.17-127.11

The paragraph analyses the third condition for the premises of the demonstration distinguished *supra* (§85), namely their being primary. JANSSENS 2019: 96 and fn. 58 remarks that the treatment of «primary» contained in this paragraph is «strongly reworded» with respect to the *DN*, and that he «could not find a direct source in other works of Ibn Sīnā» for this elaboration.

THAT THE PREDICATE IN THE PREMISE IS ESTABLISHED FOR THE SUBJECT QUA SUBJECT | Arabic *an yakūna al-maḥmūl^l fi l-muqaddimat^t tābit^{an} li-l-mawḍū^d li-ağ^l l-mawḍū^d*, Latin *cum praedicatus propositionis est proximus subiecto propter subiectum*. The Latin reading «est proximus subiecto» presupposes an erroneous reading at the place of *tābit^{an}* in the Arabic antigraph used for the translation (for instance **qarīb^{an}*, albeit palaeographically quite far from *tābit^{an}*). The sense of «primary» here employed is quite different from the one describing the «primary» premises (which are like axioms, cf. §84). Under this meaning, it rather designates the belonging of the predicate to the subject *qua* subject. The focus is on the immediate character of this predication, *i.e.* on the fact that the property which is predicated must immediately belong to the subject, without any «intermediary» [*wāsiṭa*]. This entails a reference to the 'vertical' inclusion of genera and species. Considering for instance the series 'body' > 'animal' > 'man' (where every element is a species of the preceding one, and a genus of the following) the character of being primary obtains when corporeality is predicated of animal – as there are no intermediaries between one and the other in the series –, but not of man – since 'animal' is interposed between 'man' and 'body'. The example of 'writing' adds the case of accidental characteristics which may further determinate a species, like 'man'. In this case as well, the relevant explanatory subject for the predicate of 'writing' is the closest available universal, *i.e.*, 'man', and not a farther removed one as 'animal': it is indeed because of humanity, and not because of animality, that some men can write.

ESSENTIALITY | Reading *dātiyya* instead of Dunyā's misprint *dāniyya*.

[§87] D127.12-128.3

The paragraph introduces the analysis the fourth condition for the premises of the demonstration distinguished *supra* (§85), namely their being essential. This is reworded as the exclusion of extrinsic accidents from the consideration of each science.

THE ALERT AGAINST THE EXTRINSIC ACCIDENTS | Arabic *ih̄tirāz min al-a'rāḍ al-ġaribat*, Latin *in quibus nihil est de accidentibus extraneis* (the Latin rendition is partially *ad sensum*). The examples of extrinsic accidents listed in the paragraph include «beauty» [Arabic *ḥusn*, Latin *pulchritudo*] and «contrariety» [Arabic *muḍādda*, Latin *contrarietas*] for the subject-matter of geometry, and «roundness» [Arabic *istidāra*, Latin *rotunditas*] for the subject-matter of medicine.

DOES NOT SPECULATE | Reading *yanzuru* instead of Duniyā's misprint *ينظر*. Cf. also *infra* the *yanzuru* correctly printed for the example concerning the «physician».

BY VIRTUE OF A MORE COMMON DESCRIPTIVE FEATURE | Arabic *bi-waṣf^m a'amm^a*, Latin *propter aliud quod est communius eo*. The Latin translation remains the same *infra*, where the Arabic text reads instead *bi-am^m a'amm^a* («for a more common thing»).

INDEED, THEY BEFALL THE MEASURE | Arabic *fa-inna-hā talḥaqu l-miqdār^a*, Latin *Haec autem accidunt mensurae*.

PHYSICIAN | Arabic *ṭabīb*, Latin *medicus*.

«THIS WOUND HEALS SLOWLY [...] FIGURES» | For the medical-geometrical example concerning the roundness of the «wound» [*ġurḥ*, pl. *ġirāḥ*], JANSSENS 2019: 96 and fn. 59 references «undeniably» Avicenna's *al-Muḥtaṣar al-awsaṭ fi-l-manṭiq*, ed. TĀNĪ 1976: 260.19-261.2, although the same example is also present in the *Logic* of the *Nağāt* (AHMED 2011: 102, §124), and it is indeed already Aristotelian: cf. *An. Post.* 79^a13-16; and cf. also PHILOPONUS, *In An. post.*, 182.9-183.3 (see LAMMER 99 fn. 166). The Latin version translates the first two occurrences of *ġurḥ* as *plaga*, but renders the one contained in the statement of the physician as *vulnus*. No variants are however reported in Duniyā's edition.

[§88] D128.4-16

The paragraph distinguishes two senses in which a predicate can be called «essential»: (a) when the predicate is in the subject, like 'animal' is an essential predicate of 'man'; (b) when the subject is in the predicate, like 'snub' for the 'nose', and 'straight' for the 'line'.

IT IS ESSENTIAL IN THE PREMISES | Reading *fi l-muqaddimāt dātīyy^{am}* as in D-Alt as reported by Duniyā, instead of Duniyā's text *fi l-mas'ala* («in the question»). The variant is corroborated by the reading of both the Latin translation (cf. LOHR 1965: 287.192: «in propositionibus essentialis») and Arabic ms. *Y*, and by the following discussion (see *infra* the beginning of §90).

A CERTAIN DISTINCTION | Arabic *farq^m mā*, Latin *aliqua differentia*.

[THE PREDICATE] ENTERS IN THE DEFINITION OF THE SUBJECT | Arabic *an yakūna dāḥil^{am} fi ḥadd^l l-mawḍū^q*, Latin *ut praedicatum intret in definitione subiecti*. According to the classification developed by STROBINO 2016 for Avicenna's *Burhān* (cf. in particular II.2, 125.7-10, translated *ivi*: 187), this first sense of «essential» [(a)] would correspond to the «per se 1» (cf. STROBINO 2016: esp. 187-190). The example given is the basic case of the relationship between a genus and a species within it, but the passage of the *Burhān* generalizes the issue on the basis of the Porphyrean hierarchical structure of genera, species and differentiae, as thoroughly illustrated in STROBINO 2016: 187-188. The terminology here

chosen by al-Ġazālī to describe this first kind of essential / *per se* predicate – its ‘entering’, or ‘being included’ in the definition [*dāḥil^m fī ḥadd^f l-mawḍū^d*] – partially mirrors and combines Avicennan expressions also present in the *Burhān*: cf. in particular the «items that are “included in the quiddity” (*dāḥila fī l-māhiyya*)» and the «items that are “parts of the definition” [...] (*ağzā’ al-ḥadd*)» mentioned at points (iii)-(iv) of the comprehensive list of different formulations given in STROBINO 2016: 189-190.

THE SUBJECT ENTERS IN ITS DEFINITION, NOT THAT IT ENTERS IN THE DEFINITION OF THE SUBJECT | Arabic *an yakūna al-mawḍū^a dāḥil^m fī ḥadd^f-hi, lā huwa dāḥil^m fī ḥadd^f l-mawḍū^d*, Latin *ut subiectus intret in definitione praedicati, non e converso*. The second sense of «essential» [(b)] corresponds to «per se 2» in the classification proposed by STROBINO 2016: esp. 190-194. In the passage of *Burhān* II.2, 126.4-8, translated by Strobino *ivi*: 190, both examples given in the *MF* would fall under the first of the cases in which a ‘per se 2’ obtains: «in the definition of the accident one takes either: (i) the substrate (*al-ma’rūḍ lahū*), like ‘nose’ in the definition of ‘snubness’, ‘number’ in the definition of ‘even’, and ‘line’ in the definition of ‘being straight’ (*istiḳāma*) or ‘being curved’ (*inḥinā’*)».

BEING SNUB-NOSED | Arabic *fuṭūsa*, Latin *simus*.

[THE NOSE] UNDOUBTEDLY ENTERS IN ITS DEFINITION | Arabic *fa-daḥala fī ḥadd^f-hi la maḥalata*, Latin *Nasus igitur est in definitione simi sine dubio*. The Latin translation supplies the referents for the implicit subject of the verb *daḥala*, and the suffix pronoun of *ḥadd*, which are respectively the «nose» [*anf*] and the «snub-nosed» [*aftas*].

[§89] D128.17-129.3

The paragraph aims to exclude the essential predicate in the first sense distinguished *supra*, §88, from being a predicate of the scientific questions which ought to be proven in a science, on the basis that it is already included in the notion of the subject. Thus, the essential in the first sense (= *per se* 1) does not need to be demonstrated within the science that studies that subject.

TRIANGLE | The example given by al-Ġazālī – and absent in the *DN*: cf. JANSSENS 2019: 96 – is the predicate of being a «figure» [*šakl*], which essentially belongs to the «triangle» [*mutallat*] in the first sense (see *supra*, case [(a)] in §88) since ‘[plane] figure’ is a genus for ‘triangle’. Geometry, then, does not have among its scientific questions – its theorems to be proven, as it were – the fact that the triangle is a figure, because this is already assumed with the consideration of the triangle itself, and does not need any demonstration within this science.

ITS STATES | Arabic *aḥkām^a-hu*, Latin *ea quae praedicantur de eo*.

THE KNOWLEDGE OF THAT, THEN, PRECEDES IT. | Arabic *fa-l-ilm^u bi-hi yataqaddamu ‘alay-hi*. What is meant is that the knowledge of the essential predicate according to the first sense distinguished *supra* (§88) – for instance, ‘animal’ – must precede in the sciences that of the subject – for instance, ‘man’ –; otherwise, indeed, the subject itself would not be known, and its «states» could not be investigated either. Cf. Latin: «Scientia igitur praedicati praecedit scientiam subiecti» (LOHR 1965: 288.212-213).

[§90] D129.4-end of page

The final paragraph of the fourth section of the fifth treatise, which concludes the entire *Logic*, aims to exclude that both premises of a demonstrative syllogism in a science have essential predicates in the first sense described above (§88). In that case, indeed, the syllogism would not be productive of

new scientific knowledge, as it would limit itself to state what was already implicitly assumed in the consideration of the subject of the scientific inquiry.

THE TWO PREDICATES OF THE TWO PREMISES | Arabic *maḥmūlā l-muqaddimatayni*, Latin *duo praedicata duarum propositionum*. The two premises of a demonstrative syllogism within a given science are intended here.

ESSENTIAL BY VIRTUE OF THE OTHER NOTION | Arabic *dātīy^{an} bi-l-ma'nā al-āḥar^a*, Latin *essentialia secundum intentionem secundam*. Cf. the second sense of «essential» [(b)] distinguished *supra*, §88. Both premises can have a predicate essential in sense (b) (= per se 2), but it is not allowed that both predicates are essential in sense (a) (= per se 1). As also remarked by JANSSENS 2019: 96, the concrete example of a syllogism is added by al-Ġazālī.

THE CONCLUSION WOULD BE KNOWN BEFORE THE PREMISE | Arabic *al-natīġa takūnu ma'lūmat^{an} qabl^a l-muqaddimat^t*, Latin *Conclusio enim prius esset cognita quam propositio*. The circumstance would of course make the syllogism – although formally valid and materially concluding to the truth – superfluous from a scientific point of view, as it would not add anything to the scientific enterprise.

THE ESSENCE OF THE ESSENTIAL ACCORDING TO THAT NOTION IS ESSENTIAL | Arabic *dāt^t l-dātī bi-dālika l-ma'nā dātīy^{an}*, Latin *essentiale essentialis secundum primam intentionem essentialis est*. The Latin version explicits the reference to the «first» notion of 'essential' (sense [(a)] in §88).

IT IS INEVITABLE THAT HE IS CONCEPTUALIZED IN THE FIRST PLACE | Arabic *fa-la budd^a an yakūna awwal^{an} mutaṣawwar^{an}* (literally: 'it is inevitable that he is a first conceptualized'), Latin *necesse est prius imaginari hominem*. The root (and the verbal form) of the passive participle *mutaṣawwar* is common with that of «conception» [*taṣawwur*].

THIS IS WHAT WE WANTED [...] IF GOD MOST HIGH WILL WANT | I translate the complete conclusive formula as it is found in D-Alt, as reported by Dunyā, instead of Dunyā's printed text (which finishes at «[its] account»: *hādā mā aradnā tafhīmⁱ-hi wa-ḥikāyat^t-hi*). The aim of 'making understand' the doctrines of the philosophers [Arabic *tafhīm*] is accompanied by that of 'accounting for' them [*ḥikāya*]. This terminological choice can be seen as a reference to the uncommitted programmatic «account» outlined in the *Prologue* (cf. *supra*, §1). The uncommitted stance (in itself motivated by al-Ġazālī's mature 'theological' positions), which scholarship has sometimes tried to confine to the sole *Prologue*, appears then to be confirmed also throughout the work further by hints interspersed within the text (cf. SHIHADÉH 2011: 85). The hypothesis of a later addition of the sole *Prologue* – with self-apologetic goals – to an originally purely and genuinely philosophical writing would thus be challenged by the presence of these further claims of *désengagement* with respect to Avicenna's material. The Latin translation, as edited by Lohr, has a text longer than Dunyā's printed conclusion (as it adds the specification «about logic», *de logica*), but considerably shorter than the formulation given by A (as it omits all reference to the further treatise about metaphysics): «Hoc autem est, quod volumus ostendere et facere intelligi de logica. Finitur tractatus de logica». The absence of reference to the following *Metaphysics* in the Latin translation can also be a product (and a sign) of the separate tradition that the three treatises of the *MF* (and the *Logic* in particular) experienced in the Latin world: cf. on this MINNEMA 2013: esp. 55, reprised in SIGNORI 2019: 521 and fn. 182.

METAPHYSICS

الإلهيات

Preface

[§91] D133

The Preface to *Metaphysics*, as such, is added by al-Ġazālī. However, it also partially reproduces some aspects of the general Preface to the *DN*, where Avicenna had outlined the plan of his Persian *summa*, dwelling on the exceptional inversion of the treatment of metaphysics and physics within it. In this introductory section to the *Metaphysics* of the *MF*, al-Ġazālī attributes to an unnamed group (clearly composed however of philosophers) the use and habit of putting the *Physics* before *Metaphysics*, and goes on to give – presenting them as his own – Avicenna’s reasons for choosing the reverse order of the two sciences. The *Preface* continues with a table of contents of the *Metaphysics* of the *MF*, which is entirely al-Ġazālī’s addition.

KNOW THAT THEIR CURRENT HABIT | Arabic *a’lam anna ‘ādat^a-hum ġāriyyat^{an}*. Dunyā reports that the initial imperative [*a’lam anna*] is absent in *A*; likewise, the Latin translation omits it: «Usus fuit apud phylosophos» (cf. MUCKLE 1933: 1.3). As made explicit by the Latin version, the philosophers here are referred to – as often throughout the text – with a generic third person in the plural (here with the suffix pronoun *-hum*, ‘their’). As mentioned in the Introduction, §2.2, Muckle’s Latin edition – as opposed to Lohr’s critically (and carefully) edited one – is highly defective: its indications will accordingly be taken more cautiously in what follows.

MAKING THE NATURAL [SCIENCE] PRECEDE | Arabic *bi-taqdīmⁱ l-ṭabī‘ī*, Latin *preponere naturalem scienciam*.

HOWEVER, WE PREFERRED TO MAKE THIS [SCIENCE] PRECEDE | Arabic *wa-lakinnā āṭarnā taqdīm^a hādā*, Latin *Nos autem eligimus preponere divinam*. According to a typical trend, the Latin translation makes the implicit referents of the Arabic text explicit, in this case substituting the demonstrative *hādā* with the adjective *divinam* (impl. *scientiam*), i.e. one of the names of *Metaphysics*. The action of setting forth the *Metaphysics* with respect to the common usage of the philosophers is described as a ‘preference’ (verb *āṭara*, in the IV form), just like in the general preface to the whole *DN* (not the preface of the sole *Metaphysics*, whose material rather corresponds, in the *MF*, to the *Premises* starting *infra*, §92). Cf. ACHENA-MASSÉ 1955 (1): 22.3-7: «La préférence [Persian *ih̄tiyār*] fut donnée à ce que, la logique terminée, l’on s’attache à commencer par la science supérieure, pour passer graduellement aux sciences inférieures [et cela] contrairement à l’usage et à la coutume». The same choice was made by Avicenna in his *al-Mašriqīyyūna* [*The Easterners*]: cf. *Mantiq al-Mašriqīyyūna*, ed. Cairo 1910: 8.9-10. Avicenna’s disciple Bahmanyār ibn Marzubān also adopted a similar structure, with metaphysics as ontology preceding natural science, for his *K. al-Taḥṣīl*: cf. JANSSENS 2003^a and Introduction, §1.3. For further discussion on the peculiar structure of the *MF* in its dependence on the *DN* cf. the Introduction §1.4 (see esp. §1.4.2).

MORE IMPORTANT | Arabic *aḥamm*, Latin *magis necessaria*.

VARIETY | Arabic *ḥilāf*, Latin *diversitas*. While it is intuitively reasonable that a more important science should, or at least might, come first in the order of exposition, and thus the first reason adduced for the setting forth of *Metaphysics* is indeed explanatory (although debatable), it is not immediately

clear why the presence of a «greater» [*akṭar*] variety within metaphysics should account for its anticipated discussion.

IT IS THE GOAL OF THE SCIENCES AND THEIR AIM | Arabic *ġāyat^u l-‘ulūmⁱ wa-maqṣid^u-hā*, Latin *finis omnium scientiarum et inquisitionis earum*. This description of *Metaphysics* as the apex and culminating point of the entire scientific enterprise perfectly suits Avicenna’s own understanding of Aristotle’s ‘first philosophy’. For Avicenna’s claim that ‘metaphysics’ is not only – according to the Arabic translation of its Greek name – *mā ba‘d^u l-ṭabī‘a* (‘what is after nature’), but also that which is *before* nature in rank [*mā qabl^u l-ṭabī‘a*], cf. *K. al-Šifā’, Ilāhīyyāt*, I.3, ed. QANAWATĪ-ZĀYID 1960: 22, MARMURA 2005: 17. For an analysis of chapter I.3 of the *Ilāhīyyāt* of the *Šifā’*, with remarks on the definition of metaphysics as ‘before nature’, cf. LIZZINI 2005: esp. 339-340.

POSTPONED | Arabic *yu‘aḥḥiru*.

BECAUSE OF ITS OBSCURITY | Arabic *li-ġumūḍ^u-hi*, Latin *propter difficultatem et obscuritatem suam*. The Latin translation presupposes another term before *ġumūḍ*, for instance **li-‘us[u]^r-hi*. Cf. indeed *infra*: «since it is hard to inquire about it» [Arabic *wa-‘asura al-wuqūf ‘alay-hi*, Latin *et quia difficilius est eam scire*].

DURING THE SPEECH | Arabic *fi ḥalālⁱ l-kalām*, literally ‘in the interstice of the speech’, whence the Latin rendition: «Nos autem interponemus aliqua [de naturalibus]», cf. MUCKLE 1933: 1.9. The likely event of being in the necessity of introducing notions of the inferior sciences – which, under the normal ordering of the *iter studiorum*, would have already been treated before the divine science – within the discussion of metaphysics is also underlined in the general Preface to the *DN*. Cf. ACHENA-MASSÉ 1955 (1): 22.7-9: «Donc si en quelque endroit l’on ne peut se dispenser de renvoyer à l’une des sciences inférieures, on le fera».

[THOSE PARTS] OF THE NATURAL [SCIENCE] | Arabic *min al-ṭabī‘ī*, Latin *de naturalibus*. JANSSENS 2019: 96 remarks that the specification that the ‘inferior science’ mentioned in the general preface to the *DN* is the natural science is added here by al-Ġazālī. Actually, in the corresponding passage of Avicenna’s Persian *summa* the mention of the «inferior sciences» [Persian *‘elme-hā ye-zūrīn*] was meant to encompass not only physics, but also the mathematical section that was planned in the work, and that was later added by Avicenna’s disciple al-Ġūzġānī. Al-Ġazālī’s mention of the sole natural science, then, is not only a specification of what was implicit in Avicenna, but rather a conscious limitation of the scope of the philosophical disciplines to be discussed, in line with the omission of mathematics declared in the *Prologue* (see *supra*, §1). The structure of the *MF* outlined in the Prologue, and hereby confirmed, is thus equivalent to that of the ‘original’ Avicennan portion of the *DN*, without the mathematical additions by al-Ġūzġānī.

INTENT | Arabic *maqṣūd*. The Latin translation has a turn of phrase that, while capturing the sense, omits the translation of *maqṣūd*: «sine quibus non potest divina intelligi» (MUCKLE 1933: 1.10).

WE WILL PRESENT IN DETAIL THE ACCOUNT [...] TREATISES | Arabic *wa-nastawfī ḥikāyat^u maqāṣid^u ḥadā l-‘ilmⁱ fī muqaddimatayni wa-ḥamsⁱ maqālātⁱ*, Latin *et complebimus id quod dicturi sumus de intencionibus huius divine sciencie in duabus proposicionibus et quinque tractatibus*. For the use of the word «account» [*ḥikāya*] and its implication for the aim of the work cf. *supra*, *Prologue*, §1, and *Logic* V, §90 for a further discussion. The presence of the key-word of the title, *maqāṣid*, also give this preface to *Metaphysics* a distinct connection with the general prologue to the entire work, stressing al-Ġazālī’s plan to provide an objective exposition of philosophy. While the global structure of the section on *Metaphysics* is outlined in this paragraph, cf. *infra*, §§92-99 for the two announced premises. As it is also remarked by JANSSENS 2019: 96, the structural arrangement of the material is once again al-Ġazālī’s own responsibility, and the preface to *Metaphysics* in the *DN* does not have, accordingly, a section corresponding to the present one.

THE FIRST TREATISE | The topic of the first treatise of *Metaphysics* is summarized as dealing with the «divisions» [*aqṣām*] and the «states» [*aḥkām*] of the «existence» [*wuġūd*]. See Latin: «de divisionibus esse et de iudiciis eius» (MUCKLE 1933: 1.13). Cf. *infra*, §§100-175.

THE SECOND [TREATISE] | The topic of the second treatise is the «cause» [*sabab*] of the entire

«existence» – *i.e.* of all beings –, immediately identified with «God Most High» [*Allāh ta‘ālā*]. See Latin: «de causa universi esse que est deus altissimus» (MUCKLE 1933: 1.14). Cf. *infra*, §§176-195.

THE THIRD [TREATISE] | The third treatise will deal with the «attributes» [*ṣifāt*] of God. See Latin: «de proprietatibus eius» (MUCKLE 1933: 1.14-15). Cf. *infra*, §§196-244.

THE FOURTH [TREATISE] | The topic of the fourth treatise concerns God’s ‘works’ or ‘acts’ or «actions» [*af‘āl*], and also deals with the «relation» [*nisba*] of the «existents» [*mawǧūdāt*] to Him. See Latin: «de operibus eius et de comparacione eorum que sunt ad ipsum» (MUCKLE 1933: 1.15-16). Cf. *infra*, §§245-293.

THE FIFTH [TREATISE] | The fifth treatise deals with the «modality» [*kayfīyya*] (in other contexts, also ‘quality’ in categorical sense) of the existence (*i.e.* of the reception of existence) of all beings «from Him» [*min-hu*]. See Latin: «quomodo habent esse ex illo» (MUCKLE 1933: 1.16-17). Cf. *infra*, §§294-314.

ACCORDING TO THEIR SCHOOL OF THOUGHT | Arabic *‘alā madhāb’-hi*, Latin *secundum intencionem eorum*. Much like the mentions of «account» [*ḥikāya*] at the end of *Logic V* (see *supra*, §90) and just *supra* in the present paragraph, this specification as well can be traced back to the *Prologue* (cf. *supra*, §1), where the plan of expounding objectively the *madāhib* of the philosophers was set forth; and much like the frequent use of *ḥikāya*, it seems to confirm from within the text the distantiated stance with respect to philosophy often described as only present in the *Prologue*.

Premises

[§92] D134.1-11

The first premise of *Metaphysics* starts by recalling the doctrine – taken from the *Posterior Analytics* and discussed at the end of *Logic* (cf. *supra*, *Logic* V, esp. §80) – according to which every science has a subject-matter, whose states are studied within that science. Those topics, although logical in origin, have indeed a clear metaphysical side *iuxta* Avicenna’s conception of the hierarchy of the sciences, which structurally culminates with the science of metaphysics. The paragraph goes on to distinguish beings according to their dependence on, or independence from, human actions, which will form the basis for the following classification of the sciences.

STATES | Arabic *aḥwāl*, Latin *disposicionibus*.

THAT WHOSE EXISTENCE [DEPENDS] ON OUR ACTIONS | Arabic *mā wuġūd^u-hu bi-af’āl^l-nā*, Latin *ea que habent esse ex nostro opere*. The examples given are several, all encompassed by the label of «human works» [*al-a’māl al-insāniyya*], which in Arabic anticipates the denomination used for the «practical» philosophy [*‘amalī*: cf. *infra*, §93]. The mentioned activities include the «policies» [*siyāsāt*], the «governments» [*tadbīrāt*], the «acts of devotion» [*‘ibādāt*], the «exercises» [*riyādāt*] (the root is the same of ‘mathematics’, which is however a theoretical science and would be therefore out of place here; in Christian context, *riyādāt* may also mean ‘religious exercises’: WEHR 426^b), the «battles» [*muġāhadāt*], but the list is by no means presumed to be exhaustive.

THAT WHOSE EXISTENCE DOES NOT [DEPEND] ON OUR ACTIONS | Arabic *mā laysa wuġūd^u-hu bi-af’āl^l-nā*, Latin *ea que non habent esse ex nostro opere*. The examples given are both material and natural – such as the «sky» [*samā’*] and the «earth» [*arḍ*], and then the «plants» [*nabātāt*], the «animals» [*ḥayawān*] and the «minerals» [*ma’ādīn*] – and immaterial and supernatural – such as the «essences» [*dawāt*] of the «angels» [*malā’ika*], the «demons» [*ġinn*] and the «devils» [*šayāṭīn*]. These latter examples, heavily drawing from the Islamic set of spiritual entities, are absent from the *DN* (cf. ACHENA-MASSÉ (1): 89.8-9), and only receive a condensed translation in the Latin version: «spiritus et cetera huiusmodi» (MUCKLE 1933: 1.26). The abundance of additional references to angels, spirits, and the like, is a very distinct feature of the *MF*, with respect to its Avicennan source.

[§93] D134.12-21

Shifting the attention from the existing things (§92) to the sciences that study them, the present paragraph distinguishes two macro-subdivisions within philosophy: the practical science and the speculative, or theoretical, science. Of both, al-Ġazālī emphasizes the ethical utility, during life and in the hereafter, thus connecting this passage to the one on the utility of logic in the *Preface* to the first section of the *MF* (cf. *supra*, §3).

THE PHILOSOPHICAL SCIENCE | Arabic *al-‘ilm al-ḥikmī*, Latin *cognicio sapiencie*. The use of the adjective *ḥikmī* substitutes the noun *ḥikma* (‘wisdom’, ‘philosophy’), as it mirrors the Persian formulation of the *DN* (ed. 1.11): *‘elme-hā ye-ḥikmat*, rendered in Achena-Massé as «sciences philosophiques».

Recently, Frank Griffel has compellingly argued that *ḥikma* replaces the Greek calque *falsafa* as general expression for what we would call ‘philosophy’ in Islamic thought of the 12th century; cf. GRIFFEL 2021: esp. 96-107 and *passim*. The Latin translation of this passage is prominently quoted at the beginning of the *Quaestiones super libros Physicorum* transmitted by the 14th century ms. Erfurt, Wissenschaftliche Allgemeinbibliothek (dep. Universitätsbibliothek), Amplon. 2^o 349, ff. 1^{ra}-68^{vb}: «Secundum quod dicit Algazel in principio Metaphysicae suae, cognitio sapientiae dividitur in duo, quorum primo facit cognoscere humanas actiones [...]». The *Quaestiones* have been variously attributed to Boethius of Dacia, Peter of Auvergne and Siger of Brabant; cf. GRABMANN 1928: 88-89 and, for the record of the *incipit*, THORNDIKE-KIBRE 1963: col. 1422. For their inclusion into the most recent list of Peter of Auvergne’s extant authentic works (at least in the section common to the different manuscripts transmitting them) see LANZA-TOSTE 2015: 437-438. The same *incipit* is registered by GLORIEUX 1971: 144 n. 119 (a) as belonging rather to Gérard de Nogent’s (rector of the University of Paris in 1292) *Commentarium in Isagogem Porphyrii*.

THAT BY VIRTUE OF WHICH THE STATES OF OUR ACTIONS ARE KNOWN | Arabic *mā yu’rafu bi-hi aḥwāl^l af’āl^l-nā*, Latin *quod facit scire dispositiones nostrorum operum*.

PRACTICAL SCIENCE | Arabic *‘ilm^{an} ‘amalīyy^{an}*, Latin *scientia activa*.

ITS UTILITY [...] CORROBORATED | The «utility» [*fā’ida*] of the practical science has two facets, one concerning the regulation of our «affairs» [*maṣāliḥ*] in «this world» [*al-dunyā*], and the other addressed to the «hereafter» [*al-āḥira*] through the reinforcement and the asseveration of our «hope» [*raḡā’*]. The Latin translation paraphrases the Arabic term for ‘hereafter’ with the locution *de vita eterna*.

THE APPEARANCE OF ALL THE EXISTENCE | Arabic *hay’a l-wuḡūd^l kull^l-hi*, Latin *forma universi esse*. This ‘appearance’ or copy of all the existent will be received «in our souls» [*fī nufūs^l-nā*] not randomly, but in a hierarchically ordered manner, *i.e.* according to the same *tartīb* with which the existents are arranged in reality. The mental, intellectual copy of the world is thus bound to follow the same fundamental structure that rules the world itself, according to the divine foreordination of it.

LIKE THE VISIBLE FORM IS ACQUIRED IN THE MIRROR | Arabic *ka-mā taḥṣulu al-ṣūrat^a al-mar’īyyat^a fī l-mir’āt^l*, Latin *sicut describitur forma visibilis in speculo*. The simile that links the reproduction of the «appearance» of all beings in the soul to the reproduction of the visible image in the mirror is absent in the *DN*. Indeed, the identification of mirror and soul is a typical Ḡazālian motif, which is to be found most notably in his retelling of the story of the rival Chinese and Byzantine artists in the *Mizān al-‘amal* (cf. *infra*, *Physics* V.5, §435, for a wider discussion). The present passage must also be connected to the parallel passage on the utility of logic in the *Preface to Logic* (cf. *supra*, §3), where the imagery of the mirror is also prominent. Indeed, since the «utility» of practical science was explicitly mentioned just *supra*, it is reasonable to suppose that the present is, symmetrically, a description of the utility of the speculative science. This links even more tightly this passage to §3, as both places put much emphasis on the ethical (and even eschatological) consequences of theoretical refinement.

NOW, THE ACQUISITION [...] AS IT WILL BE [EXPLAINED] | Cf. *infra*, *Metaphysics* III, §238, and *Physics* V.3, §§428-429. The passage of the *Preface to Logic* already quoted (see *supra*, §3) also underlines the tight link which connects theoretical knowledge and eternal happiness, in a distinctly intellectual theory of ethics. As before in the case of the practical science, also the utility of the theoretical one is shown to be twofold, as it provides a «virtue» (or ‘excellence’) [Arabic *faḍīla*, Latin *summa nobilitas*] «in the present state» [Arabic *fī l-ḥāl*, Latin *in presenti*], but also a cause for the happiness in the hereafter [Latin *in futuro*].

SPECULATIVE SCIENCE | Arabic *‘ilm^{an} nazāriyy^{an}*, Latin *scientia theoretica*. Since the *MF* will only deal with speculative (or theoretical) philosophy, GRIFFEL 2021: 433 and 478 fn. 58 argues that the title *Summa theoricæ philosophiæ* (for him wrongly spelled *theoreticæ*), with which the work was also known in the Latin world, comes from this section. *Contra*, JANSSENS 2011^b argued that it might be a reflex of the Persian title of the *DN*, although this seems unlikely.

[§94] D134.22-136.3

The classification of the sciences continues by presenting the respective subdivisions of practical and theoretical philosophy. The present paragraph deals in particular with the three subdivisions of the practical science: (a.1) politics, (a.2) economics, and (a.3) ethics. Its conclusion justifies the threefold subdivision by analysing the various relations that man entertains with himself (ethics) (a.3), with the restricted community of his household (economics) (a.2), and with the broader community of mankind (politics) (a.1).

SCIENCE OF THE GOVERNMENT OF THE COOPERATION OF MAN WITH PEOPLE, [TAKEN] COLLECTIVELY | Arabic *al-'ilm bi-tadbīrī l-mušārahātī llatī li-l-insānī ma'a l-nāsī kāffat^m*, Latin *sciencia disponendi conversacionem suam cum omnibus hominibus*. [(a.1)] The first subdivision of practical science is identifiable with politics.

MAN [...] COMPANY OF MANKIND. | The sentence contains two times the term *ḥalq*, in the singular, which I have translated once as «creature» and once as «mankind» another possible rendering of the conclusion of the clause would thus be «with [other] creature[s]», but it seems more meaningful that the company sought by man is with other men, and not with generic other 'creatures'.

THAT IS NOT ORDAINED [...] A SPECIFIC WAY. | Although convoluted, the sentence appears to state that the utility – both earthly and transcendent – of the practical science of politics does not obtain in any case, regardless of the social organization, but only along specific lines, in particular those determined by Islamic revealed Law (see *infra*). JANSSENS 2019: 97 paraphrases the sentence as «man on his own cannot acquire happiness either in this life or in the hereafter», and further notices: «I did not find them in exactly this form in Ibn Sīnā, but they basically correspond with what he says in the *Ilāhiyyāt*, X, 2-3».

THE SCIENCES OF THE REVEALED LAW | Arabic *al-'ulūm al-šar'īyya*, Latin *sciencia fidei*. The Islamic *šarī'a* is here declared to be the «principle» [*aṣl*] of the science that rules the cooperation of mankind, with a distinctly religious interpretation of politics which, although also present in the *DN* (where the principle is said to be the «knowledge of the nature of religions»), appears more strictly Islamic in al-Gazālī's elaboration. The «perfection» [*takammul*] of this science is rather reached with the «political sciences» [*al-'ulūm al-siyāsāt*] which govern the «cities» [*mudun*] and the «hierarchical ordering of their inhabitants» [*tartīb ahlī-hā*]. This latter terminology is clearly reminiscent, in a nutshell, of al-Fārābī's political discussion, since the very title of his *Principles of the Opinions of the Inhabitants of the Virtuous City*. Cf. the Latin rendition: «sciencie dispositionum que necessarie sunt ad regendas civitates et cives earum» (MUCKLE 1933: 2.19-21).

THE SCIENCE OF THE GOVERNMENT OF THE HOUSEHOLD | Arabic *'ilm tadbīrī l-manzilī*, Latin *sciencia disponendi domum propriam*. The Arabic expression literally translates the Greek οἰκονομία as science of the ruling of the οἶκος, and the [(a.2)] second subdivision of the practical science is thus to be identified with Aristotle's economics. Within the 'household' [*manzil*], relationships with the «wife», the «son» and the «servant» are mentioned, making it clear that the point of view of the analysis is always that of a married adult man.

THE SCIENCE OF MANNERS | Arabic *'ilm al-aḥlāq*, Latin *sciencia moralis*. While the first two subdivisions of the practical science were only given a description, as opposed to a proper denomination, the [(a.3)] third part of practical philosophy immediately receives a specific qualification. JANSSENS 2019: 96 translates this as «science of morals», and remarks that in the *DN* the expression is rather «science of the self» (ed. MO'IN 1952: 3.11), and qualifies this as a «striking change» (whose source would be the «*Manṭiq al-Mašriqīyyīn* (or a similar text)»). However, the justification of the tripartite subdivision given just *infra* makes it clear that ethics is indeed the aspect of practical philosophy dealing with man taken in the relationship to himself, which quickly bridges the gap to Avicenna's

denomination of it as «science of the self».

[§95] D136.4-9

Speculative science, just like its practical counterpart, is subdivided as well into three sciences: (b.1) metaphysics, (b.2) mathematics, and (b.3) physics. The passage, although very short, corresponds to a place of the *DN* (ed. MO'IN: 3,5-9 = French translation in ACHENA-MASSÉ (1) 1955: 90.17-25 = English translation in MOREWEDGE: 12.4-10), which bears crucial indications for determining the issue of the alteration in structure of the Persian *summa* (and in turn of the *MF*), with respect to traditional systems of Aristotelian philosophy. In particular, the ordering of the three sciences is presented *per se*, and not *quoad nos*, with metaphysics in the first place (as the most noble of the sciences for the excellence of its object: cf. *infra*, §96), and then mathematics and physics. The emphasis on the reciprocal ordering is very perceivable, because each science also receives a denomination specifically concerning it: «first» for metaphysics, «middle» for mathematics, «lowest» for physics.

«DIVINE [SCIENCE]» | Arabic *al-ilāhī*, Latin *scientia divina*. The first denomination given for metaphysics is the one which also gives the title to the metaphysical section of the *MF*, in compliance with Avicenna's own *usus*: cf. the sections titled *Ilāhīyyāt* in his various encyclopaedic works.

«FIRST PHILOSOPHY» | Arabic *al-falsafa al-ūlā*, Latin *philosophia prima*. Starting from al-Kindī's *On First Philosophy* [*Fī al-falsafa al-ūlā*] (English translation in IVRY 1974 and ADAMSON-PORMANN 2012: 3-57), and on the basis of course of Aristotle's πρώτη φιλοσοφία, the expression *al-falsafa al-ūlā* commonly designates the science of metaphysics in Arabic context. In the corresponding passage of the *DN*, we rather find the two expressions «superior science» [*elm-e barīn*] and «science of the primordial» [*elm-e pišīn*]. The adjective «first» [*ūlā*] in the expression «first philosophy», which substitutes both locutions, is thus to be taken in the sense of both 'superior', first in rank, and 'originary', first in some sort of logical order (which would need further clarification).

«MATHEMATICAL [SCIENCE]» | Arabic *al-riyāḍī*, Latin *vel mathematica*. The ordering of the two denominations *riyāḍī* and *ta'līmī* is reversed in the Latin translation.

«DISCIPLINARY [SCIENCE]» | Arabic *al-ta'līmī*, Latin *scientia disciplinalis*. Cf. al-Fārābī's reference to mathematics as *ilm al-ta'ālīm* in his *Iḥṣā' al-ūlūm*, Ch. 3 (ed. BŪ MALḤAM 1996: 49-65), rendered in Latin as *scientia doctrinarum* (SCHUPP 2005: 64).

«MIDDLE SCIENCE» | Arabic *al-ilm al-awsaṭ*, Latin *scientia media*. Cf. the corresponding Persian expression in the *DN*, «intermediate science» [*elm-e miyāngīn*].

«NATURAL SCIENCE» | Arabic *al-ilm al-ṭabī'ī*, Latin *scientia naturalis*.

«LOWEST SCIENCE» | Arabic *al-ilm al-adnā*, Latin *scientia infima*. Cf. the corresponding Persian expression in the *DN*, «inferior science» [*elm-e zīrīn*]. The three Persian expressions *elm-e barīn* (superior science, metaphysics), *elm-e miyāngīn* (intermediate science, mathematics), and *elm-e zīrīn* (inferior science, physics) are clearly meant to establish a hierarchy. This is maintained in the Arabic text of the *MF*, provided that one intends the phrase «first philosophy» [*al-falsafa al-ūlā*] as meant to give an actual relative position to the science it names with respect to the other sciences, and not only as fixed expression to designate metaphysics.

[§96] D136.10-137

The justification of the threefold subdivision of theoretical philosophy is based on an analogous tripartite consideration of the existing things on the basis of their relationship with matter. After

having expounded in detail this ontological distinction, the paragraph concludes by retracing the three kinds of things previously distinguished to the parts of theoretical philosophy which deal with them. Things totally independent from matter form the object of metaphysics; things independent only in estimation form the object of mathematics; things fully dependent on matter form the object of physics. The ontological classification here expounded in the *MF* is reprised – together with the one contained in the Latin translation of Avicenna’s *K. al-Madḥal* (see HUDRY 2018 for the edition of the Latin text; DI VINCENZO 2021 for the corresponding Arabic text) – in Gundissalinus’ *De divisione philosophiae* (cf. FIDORA-WERNER 2007: 66-68, §§14-15). On the issue cf. HUGONNARD-ROCHE 1984: esp. 44-45. The ontological classification provided in the *MF*, with the examples of each kind given in the text and the corresponding philosophical sciences, is summarized in the following table.

TABLE 28. *Classification of the sciences on the basis of the ontology of their objects*

Things known intellectually			
[(b.1)] Independent from matter		Dependent on matter	
Impossible to be established in matter	Not necessarily in matter	[(b.3)] Needing a specified matter	[(b.2)] Resulting in estimation without a specified matter
essence of the intellect; [essence of God]	unity; cause	man; plants; minerals; sky; earth; bodies	triangle; square; long; circular
METAPHYSICS		PHYSICS	MATHEMATICS

THINGS KNOWN INTELLECTUALLY | Arabic *al-umūr al-ma‘qūla*, Latin *omnia que intelliguntur*.

FREE FROM MATTER AND FROM THE DEPENDENCE ON CHANGING AND MOBILE BODIES | Arabic *barī‘a ‘anī l-māddatī wa-l-ta‘aqqulī bi-l-aḡsāmī l-mutaḡayyiratī l-mutaḡarrikatī*, Latin *omnino extra materiam nec coherent eorporibus convertibilibus et mobilibus*. ‘Changing and mobile bodies’ are rather the object of physics or natural science, for which cf. *infra*. This set of immaterial items is described altogether as forming the domain of metaphysics, although further subdivisions of it are possible, and will indeed be presented in what follows.

THE PERMANENCE OF SOME OF THESE THINGS IS IMPOSSIBLE WITHIN MATTER | Arabic *yastahīlu tubūt ba‘ḏ-hā li-l-mawāddī*, Latin *quedam sunt que impossibile est existere in materia*. Here and in further occasions, the Arabic text presents a plural of ‘matter’ [sg. *mādda*, pl. *mawādd*], which is very difficult to translate literally in English, unless by adopting a periphrasis like ‘material [bounds]’. The example given for this subdivision of the immaterial realm is the «essence of the intellect» [*dāt al-‘aql*], although also the «essence of God» [*dāt Allāh*] mentioned *supra* would of course belong to this class. The Latin translation presents indeed God and the angel, rather than the intellect, as relevant examples: «sicut est deus, et essencia angelica» (MUCKLE 1933: 3.6-7). This alteration in translation was already noticed in HUGONNARD-ROCHE 1984: 66 fn. 35.

AS FOR OTHERS, IT IS NOT NECESSARY THAT THEY HAVE MATTER | Arabic *ba‘ḏu-hā fa-lā yaḡibu la-hā an yakūna fī l-mawāddī*, Latin *Quedam vero sunt que licet non habeant debitum existendi in materia [...]*. The examples given for this second subdivision of the immaterial domain are «unity» and «cause»,

as these could indeed be accidentally linked to matter, despite not being dependent on it at all.

CAUSE AND ONE | Reading *'illat^{am} wa-wāhid^{am}* as in D-Alt, instead of Dunyā's text *'illat^{am} wāhidat^{am}* (which would translate to «one cause»). Cf. also the Latin translation, concordant with A: «corpus enim dicitur unum et dicitur causa» (MUCKLE 1933: 3.9-10).

DEPENDENT FROM MATTER | Arabic *muta'allaqa bi-l-māddatⁱ*, Latin *Vel pendent ex materia*. This second macrodivision of beings does not immediately correspond to the subject-matter of a philosophical science, but would need further subdivision to branch into the objects of physics and mathematics.

THEY NEED A SPECIFIED MATTER | Arabic *yuḥtāḡu ilā māddatⁱⁿ mu'ayyanatⁱⁿ*, Latin *non possunt existimari sine materia propria*. The Latin version anticipates here the concept of estimation, which in the original Arabic refers rather to the sole subdivision (b.2) (see *infra*). The list of examples of material items bound to a specified matter [(b.3)] coincides with that of natural objects whose existence is independent from us given *supra*, §92, with the sole replacement of «animals» (§92) with «man» (here).

IT IS POSSIBLE TO OBTAIN THEM IN ESTIMATION WITHOUT A SPECIFIED MATTER | Arabic *yumkinu taḥṣīlu-hā fi l-wahmⁱ barī'at^{am} 'an māddatⁱⁿ mu'ayyanatⁱⁿ*, Latin *aut possunt estimari sine materia propria*. The examples of these intermediate beings [(b.2)] are geometrical entities like triangle, square, long and circular.

WITHOUT REGARD TO MATTER | Arabic *min jayrⁱ l-tifātⁱⁿ ilā māddatⁱⁿ*, Latin *absque ulla consideratione materie*. The objects of mathematics are in matter (which distinguishes them from the objects of metaphysics), but can also do without it in estimation (which distinguishes them from the objects of physics). The intermediate character of the mathematical science (cf. *supra* the denominations proposed in §95), thus, depends on the very nature of the objects it studies.

THE SCIENCE THAT OCCUPIES [...] THE NATURAL [SCIENCE] | Reading the complete text as attested in D-Alt, as opposed to the shorter text – without the words *bi-l-kullīyyatⁱ huwa al-ilāhī wa-l-'ilm allaḡi yatawallā al-naẓar fī-mā huwa barī'^{am} 'anⁱ l-māddatⁱ* – printed by Dunyā.

[§97] D138-139.5

The Second Premise of the section on *Metaphysics* deals with the subject-matters of the theoretical sciences distinguished *supra* (§§95-96), with the aim of better understanding the subject-matter of their culmination, metaphysics itself. The analysis begins in this paragraph with the examination of the subject-matters of the natural and the mathematical science.

CHANGE | Arabic *tagāyyur*, Latin *permutationem*.

NOT CONCERNING THEIR SURFACE AND THEIR MEASURE | Arabic *lā min ḥaytu misāḥatⁱ-hā wa-miqdārⁱ-hā*, Latin *non secundum quod habent numerum, mensuram*. «Measure» is explicitly identified as one of the subject-matters of mathematics *infra* in this paragraph, and likewise the «figure» [*ṣakl*] and the «roundness» [*istidāra*] mentioned just *infra* clearly pertain to the subject-matter of geometry. It might be worth noticing here, moreover, that in the *Risāla fī aqsām al-'ulūm al-'aqlīyya* (ed. 'Aṣī 1989: 112.5-11), Avicenna lists among the secondary subdivisions of the mathematical sciences [*al-aqsām al-far'īyya li-l-'ulūm al-rīyāḡīyya*] (and indeed not of the natural ones) also a *'ilm al-misāḥa* ('Aṣī: 112.7), commonly identified by the translators of the text with the science of geodesy. The Latin translation *numerum* for *misāḥa* seems to imply a different reading in the Arabic antigraph, or a serious misunderstanding on the translators' part.

NOR CONCERNING THE RELATION [...] OTHER [PARTS] | Arabic *lā min ḥaytu nisba ba'ḡⁱ aḡzā'^x-hā ilā ba'ḡⁱⁿ*, Latin *nec secundum quod partes eorum comparantur aliis*.

NOT EVEN [...] GOD MOST HIGH | Arabic *lā min ḥaytu kawnⁱ-hā fi'l^a Allāh ta'ālā*, Latin *nec secundum*

quod sunt factura dei altissimi. Concerning the various restrictions of the subject-matter of natural science given in the text, JANSSENS 2019: 97 writes: «al-Ghazālī considers that the proper place for such investigation is the mathematical science of astronomy, hence not physics, and that their considerations as things made by God falls as well outside the scope of physics proper – suggesting, without explicitly saying it, that this must be examined inside the science of metaphysics (if so, he once more fully respects Ibn Sīnā’s approach on this subject)». It seems to me that the epistemological approach clearly is this one, which builds on the previous considerations concerning the logic of subject-matters of the sciences expounded *supra* in *Logic V*.

THE NATURAL [SCIENCE] | Arabic *al-ṭabīʿī*. The Latin version interprets the Arabic term as indicating the scholar of natural science (rather than as an adjective of the implicit *ʿilm*): «naturalis autem tractator» (MUCKLE 1933: 4.7).

ONLY INASMUCH AS IT CHANGES AND TRANSFORMS ITSELF | Arabic *min ḥayṭu taḡayyur^l-hi wa-istihālat^l-hi faqaṭ* (literally ‘concerning its change and its transformation alone’), Latin *nisi secundum quod permutantur et convertuntur tantum*.

[§98] D139.6-14

The paragraph lists various branches of the natural and the mathematical sciences, and it does so with typical Avicennan terminology, even when detaching from the *DN*. The basis for the detachments, *i.e.* for the wider list of subsections of the natural science here provided, is represented by Avicenna’s *Epistle on the Divisions of the Intellectual Sciences* [*Risāla fī aqsām al-ʿulūm al-ʿaqlīyya*], where the metaphorical terminology of «roots» and «branches» is throughout coherently employed (for the edition of the Arabic text see ‘Aṣī 1989; and for various translations MAHDI 1967 (English), MICHOT 1980 (French, partial, but with relevant improvements to the *constitutio textus*); MIMOUNE 1984. The same terminology is also employed in the classification of the sciences presented at the beginning of the section on the natural sciences in al-Ġazālī’s own *TF*: cf. MARMURA 2000: 161-162 (this section is also translated in French in MICHOT 1980: 72-73). This is a witness of the *longue durée* of this Avicennan classification in al-Ġazālī’s thought, even in a paradigmatically anti-philosophical treatise such as the *TF*.

BRANCHES | Arabic *furūʿ*, Latin *ramos*. The arboreal metaphor, which juxtaposes «branches» as derivative disciplines to «roots» [*uṣūl*] as fundamental sciences, is typical of Avicenna’s terminology of the classification of the sciences. As already remarked by JANSSENS 2019: 97 (and fn. 61), the ramification of the natural sciences is not given in the corresponding passage of the *DN*, although present as such almost entirely in Avicenna’s *Divisions of the Intellectual Sciences*: cf. the Arabic text of the chapter on the *Aqsām al-ḥikma al-farʿīyya al-ṭabīʿīyya* in ‘Aṣī 1989: 110.7-111.7, and the French translation (with corrections to the Arabic text not adopted by ‘Aṣī) in MICHOT 1980: 66-67.

MEDICINE | Arabic *ṭibb*, Latin *medicinam*. See Avicenna’s corresponding *qism* in ‘Aṣī 1989: 110.8-10; MICHOT 1980: 66-67, and al-Ġazālī’s presentation of it in *TF*, MARMURA 2000: 162.13-16.

THE [ART OF] TALISMANS | Arabic *ṭilasmāt*, Latin *ymagines*. See Avicenna’s corresponding *qism* in ‘Aṣī 1989: 111.1-3; MICHOT 1980: 67 («talismans»), and al-Ġazālī’s presentation of it in *TF*, MARMURA 2000: 162.28-31 («talismanic things»).

THE [ART OF] SPELLS | Arabic *naranġāt*, Latin *incantaciones*. See Avicenna’s corresponding *qism* in ‘Aṣī 1989: 111.3-6; MICHOT 1980: 67 («amulettes») and al-Ġazālī’s presentation of it in *TF*, MARMURA 2000: 162.32-33 («magic»). The text of Avicenna’s *Epistle*, and of the *TF* as well, read in the corresponding passages *nīranġāt* rather than *naranġāt*, just as D-Alt as reported by Dunyā, which leads to think that this might indeed be the originary reading of al-Ġazālī’s text, as well.

THE [ART OF] MAGIC | Arabic *sihr*, Latin *allecciones* (literally ‘sortings’). Magic, or ‘bewitchment’, ‘beguilement’ is the only subdivision of natural sciences here presented by al-Ġazālī that is not mentioned in Avicenna’s *Epistle on the Divisions of the Intellectual Sciences*. MARMURA 2000: 162.32 translates as «magic» the *nīranġāt*, for which cf. *supra*. For the rendition here adopted of *naranġāt/nīranġāt* as «spells», and *sihr* as «magic», cf. rather the translation of the title of al-Bāqillānī’s (d. 1013) treatise *Kitāb al-bayān ‘an al-farq bayna al-mu‘ġizāt wa-l-karāmāt wa-l-ḥiyal wa-l-kahāna wa-l-sihr wa-l-naranġāt* in MCCARTHY 1958.

ROOTS | Arabic *uṣūl*, Latin *radices*.

SCIENCE OF GEOMETRY | Arabic *handasa*, Latin *sciencia geometrie*. Cf. the corresponding Avicennan division in ‘Aṣī 1989: 111.9.

ARITHMETICS | Arabic *ḥisāb*, Latin *sciencia numeri*. In Avicenna’s *Epistle*, arithmetics is called *‘ilm al-‘adad*, which literally corresponds to the Latin translation: cf. ‘Aṣī 1989: 111.9.

ASTRONOMY | Arabic *hay’a*, Latin *sciencia de forma mundi scilicet astrologia*. The name of ‘astronomy’ is immediately glossed with the clause «I mean the appearance [*hay’a*] of the world», which can value as well as etymological explanation of the Arabic terminological choice. The Latin version gives the explanation before translating the name of the science. The name *hay’a* for astronomy is Avicennan; cf. also ‘Aṣī 1989: 111.9.

MUSIC | Arabic *mūsīqā*, Latin *musica*. I restore the text *wa-l-mūsīqā* of *A*, deleted by Dunyā. Cf. the corresponding Avicennan division of mathematical sciences in ‘Aṣī 1989: 111.9-10. The four divisions of mathematics here mentioned form the mathematical section of the *DN* added by Avicenna’s disciple al-Ġūzġānī (d. 1070), in the order (i) geometry, (ii) astronomy, (iii) arithmetics, (iv) music (*i.e.* making each pure mathematical science immediately precede its applied counterpart). In the general preface to the *DN*, only the two applied sciences – astronomy and music – are explicitly mentioned, seemingly at the level of the other fundamental divisions of the sciences (logic, metaphysics and physics): cf. MO‘IN 1952: 3.3-6.

SCIENCE OF PERSPECTIVES | Arabic *‘ilm al-manāẓir*, Latin *sciencia de aspectibus*. This is the science of optics; cf. Avicenna’s presentation of the *‘ilm al-manāẓir wa-l-marāyā* (‘science of perspectives and mirrors’) as derivative science of geometry in ‘Aṣī 1989: 112.9.

SCIENCE OF THE TRACTION OF WEIGHTS | Arabic *‘ilm ḡarr al-aṭqāl*, Latin *sciencia de ponderibus*. This is to be identified as the science of mechanics, presented with the same denomination – but as a *‘amal*, ‘art’, rather than as a science, *‘ilm* – as a derivative division of geometry in Avicenna, as well: see ‘Aṣī 1989: 112.8.

SCIENCE OF THE MOBILE SPHERES | Arabic *‘ilm al-akar al-mutaḥarrika*, Latin *sciencia de machinis mobilibus*. That *akar* is to be intended here as a plural of ‘sphere’ [*kura*], despite the reasonable guess of the Latin translation, seems to be confirmed by the comparison with the Persian of the *DN*: «science des sphères mobiles» (ACHENA-MASSÉ 1955: 92.23). This subdivision is not mentioned as such in Avicenna’s *Risāla*, where a *‘amal al-ḥiyal al-mutaḥarrika* rather makes its appearance: cf. *infra*.

ALGEBRA | Arabic *‘ilm al-ḡabr*. Dunyā reports that in *D*-Alt the expression *‘ilm al-ḡabr* is replaced by *‘ilm al-ḥiyal* (‘science of artifices’). Since among the divisions of mathematics listed by Avicenna there actually is an «art of the mobile artifices» [*‘amal al-ḥiyal al-mutaḥarrika*] (‘Aṣī 1989: 112.7), the text of *D*-Alt has some plausibility. It is also the text at the basis of the Latin translation: «sciencia de artificiis, et ingeniis» (MUCKLE 1933: 4.17), with a likely double translation for *ḥiyal*. For «algebra» as a subdivision of arithmetics in Avicenna cf. however the *‘amal al-ḡabr wa-l-muqābala*, (‘the art of algebra and balancing’) in ‘Aṣī 1989: 112.6-7.

[§99] D139.15-140.7

The subject-matter of metaphysics is identified in the present paragraph as absolute existence, of

which some primary divisions are presented. Derivative divisions, which apply to existing things after their acquisitions of more fundamental features, do not form the object of metaphysics, and are rather dealt with in one of the aforementioned inferior sciences.

ITS SUBJECT-MATTER | *Dunyā* deletes, erroneously, the expression *fa-mawḍūʿ-hu*, which is rather essential to the entire reasoning of the Second Premise.

ABSOLUTE EXISTENCE | Arabic *al-wuḡūd al-muṭlaq*, Latin *esse simpliciter vel absolute* (with a double translation for *muṭlaq*). The expression *al-wuḡūd al-muṭlaq*, as such, appears to be proper in particular of al-Ġazālī's *MF*, while Avicenna employs the similar, but different formulas *wāḡib al-wuḡūd muṭlaqan* ('the absolutely necessary existent') and *al-wuḡūb al-muṭlaq* ('absolute necessity') in the *K. al-Šifā* and the *K. al-Naḡāt*: cf. DAIBER 2004: 141. From the *MF*, the expression *al-wuḡūd al-muṭlaq* was extracted by Raimundus Lullus, who took it as meaning *ens necessarium* (thus precisely corresponding to the Arabic *wāḡib al-wuḡūd*): cf. DAIBER 2004: 139-142 and AKASOY 2009: 140 for a discussion.

APPENDAGES | Arabic *lawāḥiq*, Latin *consequencia*.

LIKE ITS BEING SUBSTANCE AND ACCIDENT | Arabic *ka-kawn^u-hu ḡawhar^{an} wa-ʿaraḍ^{an}*, Latin *substantia et accidens*. For the proper discussion on the division of being into substance and accident cf. *infra*, *Metaphysics* I.1, §§101-138 (but with a conspicuous insertion on the nature of the body at §§106-120).

UNIVERSAL AND PARTICULAR | Arabic *kullīyy^{an} wa-ḡuzʿīyy^{an}*, Latin *universale et singulare*. Cf. *infra*, *Metaphysics* I.2, §§139-147.

ONE AND MANIFOLD | Arabic *wāḥid^{an} wa-kaṭīr^{an}*, Latin *unum et multa*. Cf. *infra*, *Metaphysics* I.3, §§148-153.

CAUSE AND CAUSED | Arabic *ʿillat^{an} wa-maʿlūl^{an}*, Latin *causa et causatum*. Cf. *infra*, *Metaphysics* I.5, §§156-161.

IN POTENCY AND IN ACTUALITY | Arabic *bi-l-quwwatⁱ wa-bi-l-fiʿlⁱ*, Latin *in potencia et effectu*. Cf. *infra*, *Metaphysics* I.7, §§166-168.

CONFORMABLE AND CONTRARY | Arabic *muwāfiq^{an} wa-muḥālīf^{an}*, Latin *conveniens et inconveniens*. This distinction does not find an immediate correspondence among the divisions of existence extensively discussed in the following first treatise of *Metaphysics*, as opposed to the other couples here mentioned.

NECESSARY AND CONTINGENT | Arabic *wāḡib^{an} wa-mumkin^{an}*, Latin *quod debet vel quod est necesse esse et possibile* (with double translation 'quod debet esse'/'quod est necesse esse' for *wāḡib*). Cf. *infra*, *Metaphysics* I.8, §§169-175.

THE THINGS SIMILAR TO THESE | Arabic *wa-amṭāl^u-hu* (or better: *amṭāl^u-hā?*), Latin *et similia*. Among the other possible distinctions of being it is easy to include the further divisions actually considered *infra*, in *Metaphysics* I, and not mentioned before: anterior and posterior (*Metaphysics* I.4, §§154-155); finite and infinite (*Metaphysics* I.6, §§162-165). This list of general features of being *qua* being can be put in connection with the first of the fundamental divisions of the divine science given in Avicenna's *Risāla*: cf. AṢĪ 1989: 112.13-15 (where these are called 'common notions' [*al-maʿānī al-ʿamma*]); MICHOT 1980: 68.

ARE APPENDED | Arabic *talḥaqu*, Latin *consecuntur*. The English translation tries to maintain for the verb the same root of «appendages» [*lawāḥiq*], just as the Latin version employes *consequentia* and the verb *consequor*. *Metaphysics* deals with the 'immediate' appendages, or consequences, of existence, *i.e.* the immediate divisions that can be traced within being; further subdivisions of already qualified beings are rather the prerogative of the particular sciences, like «measure» for geometry, «number» for arithmetics, and the «natural body» subject of qualitative change (hence the example with «blackness» and «whiteness») for physics proper.

TO THIS SCIENCE | *i.e.* to metaphysics.

[§100] D140.8-16

The paragraph concludes the analysis of the subject-matter of metaphysics by acknowledging the pertinence of philosophical theology to metaphysics proper, inasmuch as beings are divided into cause and caused (see *supra*, §99), and God is the cause of all existents. This acknowledgment

ONENESS OF THE CAUSE | Arabic *waḥda al-sabab*, Latin *de unitate cause*.

THE NECESSARY EXISTENT | Arabic *wāḡib al-wuḡūd*, Latin *nesesse esse*. God as Necessary Existent and cause of all existing beings is the topic of the second treatise of *Metaphysics*: cf. the table of contents given *supra* (Preface to *Metaphysics*, §91) and the actual discussion *infra*, *Metaphysics* II, §§176-195.

ON HIS ATTRIBUTES | Arabic *fi šifāt-hi*, Latin *de proprietatibus eius*. This summarizes the topic of the third treatise of *Metaphysics*: cf. *supra* the table of contents of §91, and *infra*, *Metaphysics* III, §196-244.

ON THE DEPENDENCE ON HIM OF THE REMAINING EXISTENTS | Arabic *fi ta'alluq' sā'ir' l-mawḡūdāt bi-hi*, Latin *quod reliqua encia pendent ex ea* (feminine referred to *causa*). This is a paraphrase for the cosmological material dealt with in the fourth treatise of *Metaphysics*: cf. *supra* the table of contents of §91, and *infra*, *Metaphysics* IV, §245-293.

ON THE WAY OF THEIR DERIVING FROM HIM | Arabic *waḡh ḥuṣūl'-ha min-hu*, Latin *qualiter fluxerunt, ex ea*. This reformulates the subject-matter of *Metaphysics* V: cf. *supra*, §91, and *infra* the actual treatise at §§294-314. Globally, then, the reformulation of the subject-matter of metaphysics that concludes the Second Premise retraces the table of contents given in the Preface to *Metaphysics* of §91, and works as a further introduction, and a framework, for the discussion of the single topics provided in the rest of the treatise.

THE ONENESS OF GOD | Arabic *tawḥīd*, Latin *de unitate*.

DIVINE SCIENCE | Arabic *al-'ilm al-ilāhī*, Latin *scientia divina*. Properly speaking, the «divine science» is identified here with the specific part of metaphysics which deals with the central tenet of Islamic theology, *i.e.* the absolute unicity of God. There is, thus, a small onomastic tension, since *Ilāhīyyāt* ('divine [things]') is also the general denomination used for *Metaphysics* as a whole.

SCIENCE OF SOVEREIGNTY | Arabic *'ilm al-rubūbiyya*, Latin *scientia dominacionis*. For the science of *tawḥīd* and of God's *rubūbiyya* in Avicenna's *Epistle on the Divisions of the Intellectual Sciences*, see the exposition of the third of the primary divisions of metaphysics in 'Aṣī 1989: 112.17-113.9; MICHOT 1980: 68. The term, in the plural («lordly things»), appears as the title of one of the subsections of the science of metaphysics in al-Lawkarī's *Bayān al-ḥaqq bi-ḍimān al-ṣidq*; cf. on this JANSSENS 2012^a: 7 and fn. 3 (see also GRIFFEL 2021: 186-187; 389-390).

AS OPPOSED TO THE MATHEMATICAL [THINGS] | Restoring the expression *bi-ḥilāf' al-riyāḍīyyāt'* as read by A, which Dunyā erroneously deletes. The end of the passage reproduces in a nutshell the classification of the sciences on the basis of their truthfulness and trustworthiness advanced *supra* in the general Prologue to the *MF* (§1), although no mention of the falsity of metaphysics (which was there strongly affirmed) is made here. As already in the Prologue, this is a Ġazālīan addition, with no correspondence in the *DN*.

Treatise I

[§101] D140.17-141.9

After a short premise which states once again the topic of the first treatise of *Metaphysics*, i.e. the divisions of existence, the present paragraph introduces the first of the eight subdivisions that will be analysed: substance and accident. This distinction is cursorily compared to that occurring through differentiae and species, but the core argument of this and the following paragraph is rather to the effect that it is impossible to give either a definition or a description of 'existence'.

THE DIVISIONS OF EXISTENCE | Arabic *aqsām al-wuḡūd*, Latin. Cf. *supra*, *Metaphysics*, Preface, §91 and Second Premise, §99, for two anticipations of the topic of the first treatise. These «divisions» [*aqsām*] will be expounded in various «subdivisions» [*taqsīmat*], where their «states» [*aḥkām*] and their «essential accidents» [*al-a'rād al-dātiyya*] also find place. For this terminology, reminiscent of Aristotle's discussion in the *Posterior Analytics*, cf. *supra*, *Logic* V, §§80-81.

SUBSTANCE | Arabic *ḡawhar*, Latin *substanciam*.

ACCIDENT | Arabic *'araḍ*, Latin *accidens*.

SUBDIVISION | Here: *inqisām*. The term «subdivision» in the text usually translates the verbal noun of the II stem *taqsīm*. Arabic is however far richer in verbal nouns than English or other European languages, thus making some superimpositions in translation – especially in the case of different forms of the same root – almost unavoidable.

THROUGH THE DIFFERENTIAE AND THE SPECIES | Arabic *bi-l-fuṣūl wa-l-anwā'*, Latin. The comparison with this kind of subdivision (which presupposes the presence of a genus, and which cannot therefore be applied properly speaking to existence) appears to be a Ḡazālīan addition. Remarking on this, JANSSENS 2019: 97 and fn. 62 references however the *Naḡāt*, ed. DĀNİŞPĀŽŪH 1985: 495.6, as a source.

DEFINITION | Arabic *ḥadd*, Latin *diffinicio*.

DESCRIPTION | Arabic *rasm*, Latin *descriptio*. For the notions of «definition» and «description» and their distinction cf. *supra*, *Logic*, Preface, §2, and especially *Logic* II, §19. Existence is technically undefinable because – *iuxta* Aristotle – it does not have a genus, and technically undescrivable because every description of it would be *per obscurius*, being existence the most manifest notion.

[§102] D141.10-20

The paragraph concludes the reasoning on the impossibility of defining and describing existence started *supra*, §101, and presents the subdivision between beings which need, and beings which do not need, a receptacle of inherence.

IN ARABIC | Arabic *bi-l-'arabiyya*. As customary, the Latin version does not translate this linguistical insertions in the text of the *MF*: cf. also *supra*, *Logic* III.2, §27, for examples of analogous omissions.

ONE SHIFTS TO PERSIAN | Arabic *yabdulu* [or *yubaddilu*] *bi-l-'aḡamiyya*. The expression '*aḡamī*' here employed can also have a more general meaning of 'barbarian', 'non-Arabic', which could be more appropriate here. In the previous occurrence of it (*supra*, *Logic* III.2, §27), the adjective surely meant 'Persian', as it was followed by a sentence in that language. Given the peculiar status of the *MF* as

elaborative Arabic translation of a Persian work, however, the specific meaning of Persian seems the best option. This is also confirmed by the presence of the very same example in the Persian text of the *DN*, as well: «Par exemple, si l'on dit en arabe 'être', on le commente en persan [...]» (ACHENA-MASSÉ (1): 94.17-19).

WHAT IS MEANT WITH [THAT] EXPRESSION | Arabic *al-murād bi-l-laḥẓ*¹. The implicit referent of this linguistic clarification seems to be the linguistic sense of the question 'what it is', for which cf. *supra*, *Logic* V, §77. Al-Ġazālī, here and elsewhere, is very sensible to distinguishing the substantial, actual meaning of expressions (their *murād*, or 'intended' meaning) from their merely conventional usage, and he tends accordingly to qualify as nominalistic some philosophical disputes which he interprets as based, by and large, on such linguistic grounds (*i.e.* on the *laḥẓ*, rather than the *murād* of the considered notions). Cf. on this also the Introduction, esp. §1.7.1.

PREVENTED | Arabic *mumtani'āni*, Latin *habere non potest*.

YOUR END | Arabic *ġāyatu-ka*, Latin *ad ultimum*.

«EXISTENCE IS THAT THING WHICH SUBDIVIDES ITSELF INTO TEMPORALLY ORIGINATED AND ETERNAL» | This sentence is given as an example of what one could say in a hypothetical effort of «describing» [*rasm*] or «making know» [*ta'rīf*] existence, against the interdiction of describing and defining advanced *supra*, §101. It is then shown shortly *infra* to be a faulty example, which does not describe existence at all. Since the example is added by al-Ġazālī, it is significant that the two predicates of existence chosen for the exemplification are precisely «temporally originated» (or 'having an origin') [*ḥādīṭ*] versus «eternal» [*qadīm*], as their opposition confirms the temporal meaning of *ḥādīṭ* also in the several other examples concerning the world's origin in time listed *supra*, Introduction, §1.8.2. JANSSENS 2019: 97-98 and fn. 63 references the *Ilāhīyyāt*, ed. QANAWATĪ-ZĀYID 1960: 30.6-8, as a source. However, the example of the *Ilāhīyyāt* is «'active/passive' instead of 'originated/eternal'», as admitted by Janssens himself *ivi*: 98, and as such it is clearly not relevant to the purpose of ascertaining al-Ġazālī's own contribution to the elaboration of Avicenna's text. Cf. the Latin version: «esse est quod dividitur in incipiens, et non incipiens» (MUCKLE 1933: 5.27).

IS PRIMARILY OBTAINED | Arabic *yaḥṣulu* [...] *ḥuṣūl^m awwalīyy^m*, Latin *concipitur* [...] *prima conceptione* (the translation is also influenced by the presence of the Arabic *taṣawwūr* in the same sentence).

AN EXISTENT THAT NEEDS A RECEPTACLE IN WHICH TO SUBSIST | Arabic *ilā mawġūdⁿ yuḥtāġu ilā maḥallⁿ yaqūmu fi-hi*, Latin *id quod eget subiecto in quo subsistit*. This first subdivision is immediately identified with the «accidents» [*a'rād*].

THAT WHICH DOES NOT NEED [A RECEPTACLE] | Arabic *mā lā yuḥtāġu ilā dālīka*, Latin *id quod non eget subiecto*. As it will be made clear soon in the following paragraphs, and then reiterated several times, this subdivision of being corresponds to the substance.

[§103] D141.21-142.11

The paragraph presents a further subdivision of the first typology of beings distinguished *supra* in §102, *i.e.* those things which need a receptacle for their existence. This subdivision is articulated on the basis of the behaviour of the receptacle in the presence of the thing received in it. The material is slightly rearranged with respect to the *DN*, which immediately presents the distinction between accident – case (a.1) here – and substance – of which case (a.2) here only represents a subdivision. The slight variation in arrangement will however be recomposed very soon, in the following §104.

THAT WHICH INHERES IN A RECEPTACLE [...] WITHOUT THAT ACCIDENT | Arabic *mā yaḥullu fi maḥallⁿ dālīka l-maḥallⁿ yataqawwamu bi-naḥṣ-¹hi, dūna dālīka l-'araḍ¹*, Latin *id quod venit in subiectum, iam constitutum per se sine illo accidente*. Case [(a.1)] is further detailed by explaining that the

«inherence» [*ḥulūl*] of the accident (with an anticipation of the technical convention expounded *infra*, §104) does not change at all the essence of the receptacle, this being confirmed by the fact that the answer to the essential sense of the question ‘what it is’ – *i.e.* the quiddity of the receptacle – remains unchanged after the coming of the accident. The example given is that of the inherence of «blackness» [*sawād*] in receptacles like the «garment» [*tawb*] and the «man» [*insān*]: being black, as a matter of fact, does not change their being respectively a garment and a man, and these, in turn, can be respectively a garment and a man even without being black. Avicenna’s example in the *DN* is the inherence of «whiteness» in the «garment».

THAT WHICH INHERES [...] THE RECEPTACLE SUBSISTS THANKS TO IT | Arabic *mā yaḥullu fī l-maḥall’ fa-taqawwama ḥaqīqat’ l-maḥall’ bi-hi*, Latin *id quod adveniēns constituit essenciam subiecti*. Case [(a.2)] is further explained by stating that the answer to the quidditative sense of the question ‘what’ for the receptacle does change with the inherence of this second kind of things.

THE FORM OF MAN IN THE SEMEN | Arabic *ṣūra l-insān’ fī l-nutfat’*, Latin *forma hominis in spermate*. Just like «accident» in case [(a.1)] *supra*, the use of «form» here anticipates the technical terminological convention given *infra*, §104.

THE FORM OF THE MOUSE IN THE DUST | Arabic *ṣūra l-fa’rat’ fī l-turāb’*, Latin *forma muris in terra*. Both examples are added by al-Ġazālī, who rearranges here a distinction that Avicenna presents in the *DN* within the reasoning on substance (ed. MO’IN 1952: 10.1-3). That form is substance will be said in the *MF* just *infra*, §104. The effect of the change in exposition from the *DN* to the *MF* is highlighting the fact that there are non-accidental things which nonetheless inhere in a receptacle. While remarking on the issue, JANSSENS 2019: 98 references Avicenna’s *K. al-Šifā’, al-Ātār al-’ulwiyya*, MUNTAŞIR-ZĀYID-ISMĀ’IL 1965: 77.3-4 (with *madar* rather than *turāb*). The notion of «dust» as receptacle of generation will be hinted at also *infra* in the *MF*, in the discussion on proximate and remote potency of *Metaphysics* I.7, §167 (with two very similar examples to the ones here employed), and reaffirmed again in *Metaphysics* V, §303. On spontaneous generation in Avicenna, Janssens references KRUK 2002: esp. 336-337. However, it cannot be omitted that the topic of spontaneous generation also constitutes an asset of the Seventeenth discussion of al-Ġazālī’s *TF*; cf. in particular MARMURA 2000: 173.11-13, where the mouse generated from ‘dust’ (here: ‘earth’) reappears: «Moreover, we have seen genera of animals that are [spontaneously] generated from earth [*turāb*] and are never procreated – as, for example, worms – and others like the mouse [*fa’r*], the snake [*ḥayya*] and the scorpion [*’aqrab*] that are both [spontaneously] generated and procreated, their generation being from the earth [*turāb*]». For a discussion on this passage, its substantial Avicennan allegiance (for which cf. esp. *al-Ātār al-’ulwiyya* 76.18-77.4) and its reuse in Averroes, cf. BERTOLACCI 2013^d, also for the further bibliography therein quoted.

WHEN IT HAS BECOME A MAN | D-Alt reads here *ma’a ṣūrat’ l-insān’*, «together with the form of man», which conveys a perfectly reasonable meaning.

[§104] D142.12-143.3

A lexical convention adopted by the philosophers is explained: if the receptacle is self-subsisting even without the inhering thing, that thing is called «accident», and the receptacle «subject»; if the receptacle does not subsist as such without the inhering thing, that thing is called «form», while the changeable receptacle takes the name of «matter». Form and matter are substances.

THE COLOUR AND THE FORM OF HUMANITY | Arabic *al-lawn wa-ṣūra al-insāniyya*, Latin *Calor* [sic pro *color*] *ergo et forma humanitatis*. The comparison with the Arabic clarifies that the reading *calor* chosen by Muckle is a palaeographical error occurred in the Latin transmission, on the basis of an original

**color*, the right translation of the Arabic *lawn*.

BETWEEN THE TWO RECEPTACLES | Arabic *bayna l-maḥallayni*, Latin *inter ea in quibus subsistunt*.

BETWEEN THE TWO THINGS INHERING | Arabic *bayna l-ḥāllayni*, Latin *inter se* (referred to *color* – or *rectius color*, see *supra* – and *forma humanitatis*, the two subjects of the sentence). The Latin text does not have, thus, a translation of the technical terms *maḥall* and *ḥāll*, respectively the name of place and the present participle of the verb *ḥalla*, with the generic meaning of ‘descending’, and the philosophical sense of ‘inhering». «Receptacle» [*maḥall*] is thus literally ‘the place of descending’ of a *ḥāll*, i.e. more technically its ‘place of inherence’. In Avicennan philosophy it is used as technical expression to designate a substratum of inherence

THE TECHNICAL USAGE OF TWO DISTINCT EXPRESSIONS | Arabic *iṣṭilāḥ ‘alā ‘ibāratayni muḥtalifatayni*, Latin *ut conveniamus in duabus appellationibus (sic) diversis*. The Arabic *iṣṭilāḥ* – densely present in this paragraph – is consistently employed by al-Ġazālī in various contexts throughout the *MF*, always with the aim of underlining the linguistic, lexical nature of some philosophical distinctions. This happens most notably in the discussion on the doctrine of substance, and on the possibility of its attribution to God: cf. *infra*, *Metaphysics* II.11, §188. As shown in the Introduction, §1.7, this tendential ‘nominalistic’ attitude has important parallelisms in the *TF*, thus contributing to bridging the gap between the latter work and the *MF*.

«ACCIDENT» | Arabic *‘arad*, Latin *accidens*. As already anticipated in §103 *supra*, «that which behaves like the colour and the heat for the garment» – namely, not changing the quiddity of the receptacle when supervening in it – is technically called «accident».

«SUBJECT» | Arabic *mawḍū‘*, Latin *subiectum*. The «receptacle [*maḥall*] of the accident» receives the technical name of «subject». The term *mawḍū‘* is ambiguous in the philosophy expounded in the *MF*, as it can refer to this particular kind of substratum, but also to the subject-matter of a science (cf. *supra*, *Logic* V.3, esp. §80, and *Metaphysics*, Premises, §§92-100) and to the logical subject of a proposition (cf. e.g. *Logic* IV, §33, §§36-37, etc.).

«FORM» | Arabic *ṣūra*, Latin *forma*. What «behaves like humanity» – namely, that which changes the quiddity of the receptacle in which it inheres – is technically called «form».

«MATTER» | Arabic *hayūlā*, Latin *yle* (sic pro *hyle*). The receptacle of the form is called «matter», here designated with the Arabic *hayūlā*, a philosophical calque from the Greek ἕλη also preserved into Latin. As noticed by TAUBE 2016: 57 (reprised in ROMANCHUK-GOFF 2020: 221), it is remarkable that the same calque from the Greek is somewhat surprisingly preserved (in many of its occurrences throughout the *MF*) in all the diverse linguistic domains in which the work was translated and read: «a Greek word [...] that survived the transition from Arabic [...] into Hebrew [...] and subsequently into Ruthenian» (where it became гюли [*hyiyuly*]). On the circumstances of the Slavic translation of the *MF* cf. the Introduction, §2.4.2.3.

The present one is the first occurrence of the crucial Aristotelian couple of matter and form, if one is to exclude the extended application of the two concepts to syllogism: cf. *supra*, *Logic* IV, §34 (where «matter» was called *mādda* and not *hayūlā*; the two terms seem to be interchangeable in the *MF*, but it is worthwhile to notice that *hayūlā* is rightly perceived by al-Ġazālī to be more technically connotated in Peripatetic direction: cf. also *infra*, §117, and *supra*, Introduction, §1.7.1). For Avicenna’s limpid claim of the substantiality of matter cf. LAMMER 2018: 119, and especially his long and illuminating fn. 39, with a critical reappraisal of preceding scholarship on the topic.

THE WOOD [...] OF THE ASH. | After having expounded the conceptual distinction of the four different technical terms, al-Ġazālī shows the relative application of the various notions. For instance, «wood» [*ḥaṣab*] is a «subject» for the «form of the bed» (or ‘throne’, ‘elevated seat’) [*sarīr*], because it is still wood after having taken the form of bed; but it is «matter» for the form of the «ash» [*ramād*], since ash replaces wood. There is a small onomastic tension here, as the example of the technical sense of «accident» is the «form» of something; but the tension can be resolved by arguing that forms like the form of the bed are accidental, and not substantial like the form that makes the wood wood, and the ash ash. On the substantiality of inhering things cf. also *infra*, §105. The entire example is added

by al-Ġazālī: cf. JANSSENS 2019: 98, who does not find Avicennan parallels for the passage.

«SUBSTANCE» | Arabic *ġawhar*, Latin *substantia*. Since «substance» technically designates «every existent which is not in a subject» – definition that will become crucial *infra*, *Metaphysics* II.1, §188 –, form is a substance (as it inheres in matter, not in a subject); likewise, matter is also a substance, as it never inheres in a subject. The plural pronoun («they characterized») refers to the philosophers; cf. Latin: «eo quod sic convenerunt philosophi» (MUCKLE 1933: 7.9).

AS IT WAS SAID BEFORE | That form is not in a subject, but precisely in matter, is the technical convention expounded in this same paragraph. In this case, the backward reference is thus to a portion of the text almost immediately preceding the one in which the crossreference itself occurs, making its utility fairly limited.

[§105] D143.4-end of page

Four kinds of substances are listed: matter, form, body and intellect.

IT IS WHAT IS SELF-SUBSISTING | Arabic *huwa al-qā'im bi-nafsⁱ-hi*, Latin [*intelligentia separata*] *per se existens*. The Latin version refers this phrase to the «abstract intellect» mentioned just before.

THE COMBINATION OF THE TWO IS [AGAIN] A SUBSTANCE. | Arabic. D-Alt has an even more explicative clause: «and the complex of the two is the body, and the body [as well] is a substance». Cf. MUCKLE 1933: 7.18: «coniunctum ex utroque quod est corpus est substantia».

EXPOSITION | Arabic *šarh*, Latin *expositio*.

EXPLANATION | Arabic *tafsīr*, Latin *secundum quod [in appellationibus convenerunt]*.

DEMONSTRATION | Arabic *burhān*, Latin *demonstrationibus*.

ACCORDING TO WHAT WILL BE ABUNDANTLY EXPOUNDED [LATER ON] | Cf. *Metaphysics* IV.

THE DIRECT TESTIMONY OF THE SENSES | Arabic *mušāhada*, Latin *visui*.

SIGN | Arabic *dalīl*, Latin *probatio*. While one of the kinds of substance, *i.e.* body, is immediately known thanks to sensible perception, the other three kinds – matter, form, and intellect – need a «sign» which indicates their existence.

THEY HAVE APPLIED [...] INHERES [IN THAT RECEPTACLE] | The opposition is the aforementioned one between *maḥall* and *ḥāll*; the philosophers, once again adumbrated behind the third-person plural, have applied the name of «substance» to both of them – matter as *maḥall*, form as *ḥāll*.

THEY HAVE BEEN IN DISAGREEMENT WITH THE THEOLOGIANS | Arabic *ḥālafū fī ḥādā l-mutakallimīna*, Latin *in quo discordamus ab imperitis*. The first-person plural and the mistranslation of *mutakallimīna* as *imperiti* ('inexperienced', 'unskilled') in the Latin version are severely misleading, as they obliterate the opposition between the thesis of the philosophers (form is substance) and the thesis of the theologians (form is an accident). The interesting observation on the difference of the philosophical and theological approach in the conception of form is Ġazālīan, without correspondences in the *DN*. JANSSENS 2019: 98 qualifies the passage «as a kind of warning note», and remarks on the curious Latin translation, calling for a supplement of inquiry about it.

ACCORDING TO THE THEOLOGIANS | Arabic *inda l-mutakallimīna*, untranslated in Latin.

THEY HAVE EXCLUDED [THIS] | I translate the verb *yastab'adūna* of D-Alt, instead of *yastadallūna* printed by Dunyā. «They» are here again the philosophers, and Avicenna in particular, as the following quotation is taken almost *verbatim* from the *DN* itself: cf. ACHENA-MASSÉ (1) 1955: 95.20-26. By quoting as such Avicenna's explanation, al-Ġazālī actually distantiates himself from it. The passage, indeed, globally emphasises al-Ġazālī's own 'conventional' explanation, which underlines the merely linguistic aspect of the divergence between the two groups.

[§106] D144.1-16

The paragraph introduces the subsection on the «true nature of the body» (§§106-109), defining the body as the three-dimensional substance, composed of matter and form and sole substance to be perceived through the senses. This discussion pertains to metaphysics inasmuch as it considers the body in its essence, and not as subject to physical change: under that consideration, bodies will be the subject-matter of natural philosophy. For a fine doctrinal and linguistical analysis of the corresponding passage in the *DN*, also in relation to parallel passages in other Avicennan *summae*, cf. LAMMER 2018: 130-131.

SPEECH ABOUT THE TRUE NATURE OF THE BODY | Arabic *al-qawl fī ḥaqīqatī l-ǧismī*, Latin *Capitulum de assignacione diffinitionis corporis*. The Latin title of the section seems to presuppose a different Arabic text, with a mention of «definition» [**ḥadd*] absent in Dunyā's text.

BODY | Arabic *ǧism*, Latin *corpus*. Of the three possible denominations for «body» in the philosophical jargon of the *MF*, *ǧism* is the most generic one, while *badan* tends to apply more commonly to the human body, and *ǧirm* to the heavenly bodies.

EVERY SUBSTANCE [...] RIGHT ANGLES | Arabic *kull^m ǧawhar^m yumkinu an yafrīda fī-hi ṭalāta^m imtidādāt^m mutaḳāṭī^m alā zawāyā qā'imat^m*, Latin *omnis substancia in qua possunt poni tres distensiones intersecantes se, secundum rectos angulos*. It would seem more natural to translate here «three dimensions», instead of «extensions», but I prefer to reserve the word 'dimension' for *bu'd* [pl. *ab'ād*], which occurs just *infra* coupled with *imtidād*.

ESSENCE OF THE CREATOR MOST HIGH | Arabic *dāt al-bārī ta'ālā*. D-Alt reads *al-ilāhī*, '[the essence] of the god', which was probably the reading of the antigraph of the Latin translation: «dei altissimi» (MUCKLE 1933: 8.9).

A CONTINUOUS EXTENSION | Arabic *imtidād^m alā l-ittiṣālī*, Latin *distensionem continuam*.

BEING DIVIDED | Arabic *inqisām*, Latin *divisionis*.

BEING DISJOINED | Arabic *infīṣāl*, Latin *separationis*.

LINE | Arabic *ḥaṭṭ*, Latin *linea*. The «line» is monodimensional, or, according to the terminology here employed, 'extended' «in only one direction» [*ǧiha*]; thus, it only has «length» [Arabic *ṭūl*, Latin *longitudo*].

PLANE | Arabic *saṭḥ*, Latin *superficie*. The «plane» is bidimensional (extended in two directions); it has both «length» and «breadth» [Arabic *arḍ*, Latin *latitudo*].

[§107] D144.17-145.15

The paragraph gives a supplement of information concerning the right angles and the necessary tridimensionality of the body, with the help of three figures. Cf. for them *Appendix 2*.

WHEN IT RATHER HAS AN INCLINATION | Arabic *mayl bi-hi*. *A*'s variant reading *amyal^m ilā*, which could be translated with «[when] it is more inclined toward [...]», maintains a reasonable meaning and should not be discarded *a priori*. However, the Latin text: «si vero inclinata fuerit» (MUCKLE 1933: 9.4) seems in this case closer to Dunyā's reading, and I have accordingly translated Dunyā's text.

[FIGURE 2] | As opposed to Figure 3 and Figure 4, Figure 2 – the first appearing in this paragraph – is absent in the *DN*, both as edited in MO'IN 1952: 11, and as translated in ACHENA-MASSÉ (I) 1955: 96. In fact, the asterisk-like Figure 2 is somewhat superfluous with respect to the other two, as it only shows

the existence of non-right angles, which is however a case already contemplated in Figure 4. The addition of it to the text might be the fruit of al-Ġazālī's choice, but given its trivial function it might also derive from a copyist's need for more clarity; in this latter case, however, the copyist in question should have added also the textual introduction for the figure, *i.e.* the two words «like this» [*miṭla hādā*]. In any case, these could have been supplied very easily, as they are also a primer for the two remaining figures. The Latin translation has all three figures of Dunyā's Arabic text (MUCKLE 1933: 8-9).

DEPTH | Arabic *'amq*, Latin *profunditas*. The third 'dimension', which is proper to body alone and which was not mentioned *supra* (§106), receives here its actual denomination.

«ACUTE» | Arabic *ḥādḍa*, Latin *acutus*.

«OBTUSE» | Arabic *munfariġa*, Latin *expansus*.

[§108] D145.16-146.11

The paragraph introduces a clarification concerning the definition of body advanced *supra* (§107), showing that its essential feature – given by the bodily form – is the potential acquisition of three-dimensionality, rather than its actual possess. For various studies on the bodily or corporeal form in particular in Avicennan and post-Avicennan context, cf. HYMAN 1965, STONE 2001 and most recently SHIHADDEH 2014.

NEGLIGENCE | Arabic *tasāhul*, Latin [*diffinicio*] *incircumspecta*. As expounded in the remainder of the paragraph, the «negligence» in the definition of body consists in giving the false impression that it is characterized by the actual possess of the three dimensions. Rather, it is the potential possess to properly define it, as it is made clear in what follows with the example of the wax.

A SPAN | Arabic *šibr*, Latin *unius palmi*.

TWO FINGERS | Arabic *išba'ayni*, Latin *duorum digitorum*. WEHR: 586^a defines the *išba'* as a linear measure corresponding, in the Egyptian variant, to 3.125 cm.

THICKNESS | Arabic *sumk*, Latin *spissitudinem*.

LENGTH, BREADTH AND DEPTH | Restoring *wa-l-'amq* deleted by Dunyā, on the basis of *A*. The addition is certainly repetitive, but such is globally the scholastic style of the passage; and cf. also the Latin text: «et spissitudinis» (MUCKLE 1933: 9.19).

THE BODILY FORM WOULD NOT BE REPLACED AT ALL | Arabic *al-šūra al-ġismiyya lam tatabaddal ašl^m*, Latin *forma vero corporea nullo modo mutata est*. The «bodily form», which consists in being susceptible of receiving determinations of measure, does not vary as the single determinations of measure, or dimensions, vary. Indeed, the «wax» [*šam'a*; the noun of unity can also designate the 'wax candle'] can be molded in any form (thus receiving different dimensions), without losing in any case its status of body. The example of the wax for the metaphysical determination of the features of the body has a long-lasting history, reaching at least until Descartes' renowned 'wax argument' in the *Meditations on First Philosophy* (II); for the not trivial relations between Avicenna's and Descartes' arguments cf. BÄCK 1999.

EXTRINSIC ACCIDENTS WITH RESPECT TO THE ESSENCE OF CORPOREALITY | Arabic *a'rāḍ ḥāriġa 'an dātⁱ l-ġismiyya*, Latin *accidentes sunt extra essenciam corporis*. The «measures» [*maqādīr*] are extrinsic with respect to the essence of the body, albeit they can in some cases be an «inseparable concomitant» [*lāzim^m lā tufāriqu*] for it, as in the case of the «shape» [*šakl*] of the sky. In the fixed Aristotelian cosmology, indeed, the skies always maintain their measure and their form, and as such it is inseparable from them. Nonetheless, their measure does not constitute the essence of their being bodies.

ETHIOPIAN | Arabic *ḥabašī*, Latin *ethiopi*. The case of the «Ethiopian blackness» is used as an example of inseparable accident in Porphyry's *Isagoge*, ed. 12.26-13.8; for the discussion of the doctrine of the inseparable concomitant in the *MF* cf. *supra*, *Logic* II, §14, where the «Black person» [*zanǧī*] is mentioned instead of the Ethiopian.

[§109] D146.12-end of page

The paragraph concludes the clarification started *supra* (§108), stating *expressis verbis* that the measure is accidental to the body, while the bodily form as potency to three-dimensionality is essential to it.

A GREATER OR A SMALLER MEASURE | Arabic *miqdār^{an} akbar^a wa-aṣḡar^a*, Latin *maiolem, et minorem mensuram*. The Latin reading corresponds in this case to Dunyā's text, while D-Alt has the reverse order of the two comparatives.

THE SIGN THAT MEASURE IS NOT [...] AS FOR MEASURES. | The conclusion of the paragraph gives a further sign [Arabic *yadullu*, Latin *significatur*] that measure is not the true nature of the body, based on the fact that bodies all have different measures, and thus they are all different (there is a «distinction [*farq*] among them») under this respect. On the contrary, they share in the same bodily form, which may thus rightly constitute their common «true nature» [Arabic *ḥaqīqa*, Latin *veritas*].

[§110] D147.1-12

The paragraph introduces a new section, which consists in an ample doxography about the composition of the body. Three schools of thought, or opinions, concerning this matter are listed here, and will be treated one by one in the following paragraphs (§§111-120).

PEOPLE | Arabic *al-nās*, Latin *homines*.

THE COMPOSITION OF THE BODY | Arabic *tarkīb al-ǧism*, Latin *de compositione corporis*.

COGNIZANCE | Arabic *wuqūf*, Latin *scire*.

SOMEONE SAID | Arabic *qā'il^m yaqūlu*, Latin *quidam...dixerunt* (or: *alii...dixerunt*). Each of the three positions here presented is introduced with this same formula.

THREE SCHOOLS OF THOUGHT | Arabic *ṭalāta maḏāhib^a*, Latin *sentencie tres*.

SOMEONE SAID [...] THOSE SUBSTANCES. | [(a)] The first *maḏhab* to be expounded is the atomistic doctrine, *i.e.* the idea that the body is composed of «unities» [*āḥād*] «not dividing into parts» [*lā tataǧazza'u*], neither in the mind («in estimation» [*bi-l-wahm^t*]) nor in reality («in actuality» [*bi-l-fi'l^t*]). The 'Muslim' atoms here described are not the Democritean ones, but they are rather more similar to the 'minimal parts' proposed by Epicurus, as they are both physically and conceptually indivisible, having no shape (on the issue of the Greek origins of kalām-atomism cf. MCGINNIS 2022: §1; DHANANI 1994: 106-123, esp. Premise [D], 121-123; and DHANANI 1996). The 'atom' is called here «individual substance» [*ǧawhar fard*], according to a usage proper to *kalām*. Cf. also DHANANI 1994: 55-60. The Latin translation appears to be based on a partially different Arabic text: «Quidam enim dixerunt corpus esse compositum ex partibus indivisibilibus intellectu et effectu que dicuntur athomi. Illi vero vocabant eas unitates, et substancias impares, et ex his componi corpus dixerunt» (MUCKLE 1933: 10.11-14). The critique of atomism will be developed in the following §§111-116.

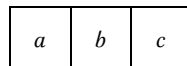
SOMEONE SAID [...] NO MULTIPLICITY. | [(b)] The second *madhab* presented is the doctrine that body is not composed at all. This position will be refuted *infra*, §§117-118. In the *DN*, the order of the first two *madāhib* is inverted: cf. ACHENA-MASSÉ (I) 1955: 98-99.

SOMEONE SAID THAT IT IS COMPOSED OF FORM AND MATTER | [(c)] The third and last *madhab* is the one that the text of the *MF*, following of course Aristotle's and Avicenna's hylomorphic account, will accept (§§119-120). An analysis of the inseparability of matter and form will follow, at §§121-126.

[§111] D147.13-148.3

The refutation of atomism starts here by presenting the first [(a.1)] of a series of six facts, which altogether form the sign – or inductive proof – against the existence of minimal, conceptually indivisible parts. For the treatment of the «geometrical proofs» [*adilla handasiyya*] against the atoms in al-Ġazālī's *TF* cf. Discussion 18 in MARMURA 2000: 183: «For the discussion of the question of the indivisible part [*al-ḡuz' alladī lā yataḡazzà*] is lengthy, and [the philosophers] have concerning it geometrical proofs [*adilla handasiyya*] that would take long to discuss». The first proof here expounded presupposes a row of three atoms, whose reciprocal contact is analysed, as in the following figure. Each one of atoms *a* and *b* is called «extreme» [*tarf*] in the text; atom *b* is called «middle» [*wasf*]. Cf. AVICENNA, *K. al-Šifā'*, *Physics* III.4, transl. MCGINNIS 2009 (II): 282-284 = ISB1 in DHANANI 2015: 82-83.

FIG. a.



THE SIGN OF THE FALSITY OF THE FIRST SCHOOL OF THOUGHT | Arabic *dalīl buṭlān al-madhabⁱ al-awwalⁱ*.

THE INVALIDATION OF THE ATOM | Arabic *ibtāl al-ḡawhar al-fard*.

THE CLARIFICATION [...] TWO SIX FACTS. | Arabic *bayān istiḥālatⁱ-hi bi-sittatⁱ umūrⁱⁿ*. The Latin translation has a condensed version of this introduction: «Destruitur autem prima sententia illorum qui dixerunt corpus esse compositum ex substanciis inparibus sex modis» (MUCKLE 1933: 10.18-20).

TANGENCY | Arabic *mumāssa*, Latin v. *tangere*. For the importance of the concept of *mumāssa* in Islamic atomism and its difficulties, cf. PINES 1936: 8-10.

WOULD TOTALLY INTERPENETRATE THE MIDDLE [ONE] | Arabic *mudāḥit^m li-l-wasfⁱ bi-kulliyatⁱ-hi*, Latin *unaqueque extremarum penetrabit mediam totaliter*.

THE MIDDLE WOULD BECOME AN OBSTACLE BETWEEN THE TWO EXTREMES | If the two atoms which form the extremes of the row touch the middle atom without being in reciprocal contact, then it must be surmised that they are in contact with different 'parts' of the middle atom – although the atoms are indivisible by hypothesis.

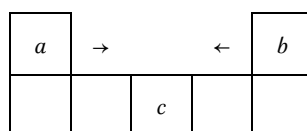
IT IS NOT POSSIBLE [...] A RECIPROCAL INTERPENETRATION | If one is to discard the idea that the middle atom has different 'parts', or 'sides', or 'edges' which are in contact with the two «extremes» of the row, then the two extremes must «encounter» [verb *laqiya*] the middle atom in the same place – this place coinciding with the middle atom itself, if the atom has to be the minimal conceivable part. Thus, only a «reciprocal interpenetration» [Arabic *tadāḥul*, Latin v. *penetrare*] of the two extremes could account for their encounter, in the middle, with the middle. For the rendition of *tadāḥul*, a verbal noun of the VI stem, as «interpenetration», cf. MCGINNIS 2009 (II): 282; since however the present participle of the III stem of the same root is also best rendered with the verb 'interpenetrate' (see *supra*), I have tentatively added here the adjective reciprocal (although I am aware that interpenetration already entails a character of reciprocity).

MOREOVER, IF A THIRD [...] IMPOSSIBILITY OF THIS. | The idea expressed in the final passage of the proof is that this kind of reciprocally interpenetrating atoms – needed to salvage their conceptual indivisibility, which would otherwise fall apart – is unable to account for the existence of continuous bodies. If the atoms in reciprocal contact must interpenetrate each other, indeed, they will not be able to produce any «bulk» [*ḥağm*] greater than that of a single atom, as many as they might be. The problem of the possibility of producing extended bodies from atoms is a theoretical concern also present in the corresponding proof in the *Physics* of Avicenna's *Šifā'*: «If they encounter one another completely, then they interpenetrate, and so their combination produces no quantitative increase [...]» (MCGINNIS 2009 (II): 283).

[§112] D148.4-14

The second fact used for arguing against atomism is presented and discussed [(a.2)]. The proof entails imagining a layer composed of five atoms in a row, on which two further atoms move toward each other, starting from the extremes, as in the following figure *b*.

FIG. *b*.



If the movement of *a* and *b* is supposed even and constant, it is clear that they will meet in correspondence of *c*, conceptually dividing it (and themselves) into two halves: the overlapping one and the non-overlapping one. For this proof cf. AVICENNA, *K. al-Šifā'*, *Physics* III.4, §16, transl. MCGINNIS 2009: 299-301 = ISB9 in DHANANI 2015: 85, where the 'basis' on which the two atoms move is however imagined as composed of only three parts (the crucial point being of course, in any case, that these parts are odd, so that a middle 'divided' atom obtains). For Ibn Mattawayh's (a Mu'tazilī theologian of the 11th century) discussion of the same difficulty see DHANANI 1994: 128. Moreover, DHANANI 2015: 85 reports the presence of a similar argument in Sextus Empiricus' *Against the Physicists*, referencing PYLE 1995: 33 for the information.

IT IS NOT IN THE POWER OF GOD MOST HIGH | While in the corresponding passage of the *Physics* of the *Šifā'* the hypothetical intention of moving appears to be attributed to the atoms themselves, with no mentioning of God (cf. for instance MCGINNIS 2009: 300: «[...] should both of them want to move at the same time, the intention of one of them to move does not in itself impede its counterpart from moving [...]»), the *MF* give a theological turn to the reasoning, arguing that under an atomistic assumption one would be forced to deny God's power to move the two atoms at will. A reference to God, although cursory, is already in the *DN* (ACHENA-MASSÉ: 101.1-3: «Alors il n'est pas du pouvoir de Dieu de les approcher l'une de l'autre afin que la partie ne se divise pas»), but al-Ġazālī dwells more on the issue, ironizing the notion that the atomistic hypothesis could entail a limitation whatsoever of God's power: see *infra*. The Latin translation omits the reference to God.

I WISH I KNEW! | Arabic *layta šī'rī* (omitted in Latin). The question mark added by Dunyā after *šī'rī* feels out of place, as this is an ironical exclamation, which casts doubts on the subsequent question concerning which one of the two atoms will have to stop its motion, in order to prevent their being

conceptually divided. The preceding exclamation makes it clear that it is idle to ask such a question, because it is the very idea of a stopping of the movement – or worst, of a halt of God's power to move – due to the sheer necessity of preserving the indivisibility of the atoms to be absurd, as it would be an explicitly *ad hoc* hypothesis, with no reason to stand. The sarcasm of the passage globally approaches it to the corresponding discussion of the *Šifā'*, while the *DN* appears to give a more measured and less ironical treatment to the same example.

[§113] D148.15-150

The third fact used for building the refutation of atomism is introduced in the present paragraph [(a.3)]. The proof entails in this case imagining two rows of six atoms each, on which two atoms move, one from left to right, and the other from right to left, as in the following figure *c*.

FIG. *c*.

A	→	E	F		B
C		G	H	←	D

In this case, each square is best understood as an atomic space, *i.e.* a portion of cellular space which can be occupied by exactly one atom. The two atomic parts moving on the two rows are initially located in A and in D (the border of their cells are highlighted in bold to mark their position). The atom in A moves toward B, and the atom in D moves toward C, with an even and constant movement. While in the previous proof (§112) an analogous hypothesis of movement led either to the conceptual division of the atoms, or else to their interpenetration (thus preventing their ability to form continuous bodies), in this case the mental experiment achieves the impossibility of the perfect opposition of the two moving parts, although their encounter in the exact middle of the row of the atoms seems conceptually inevitable. Under the atomistic assumption, however, every step of the motion is discrete, so that an encounter would seem impossible in the case of rows composed of an even number of atomic spaces. This is untenable, and atomism must therefore be discarded. For this proof cf. AVICENNA, *K. al-Šifā'*, *Physics* III.4, §15, transl. MCGINNIS 2009: 298-299 = ISB8 in DHANANI 2015: 84-85, where the two rows are however imagined as composed of only four atoms each, instead of six as in the *MF* and the *DN* (as *supra*, §112, the point was for the parts of the atomic row to be odd, in this case the requirement is conversely that they are even, but their actual number is of course unimportant). For the concept of «atomic motion» assumed by Avicenna in this proof, see MCGINNIS 2009: 299 fn. 31. The explanation of the proof provided by DHANANI 2015: 84-85 is somewhat different from McGinnis' reading of it (and from my reading of the corresponding one in the *MF/DN*), as he explains what happens in terms of the reciprocal shifting, in opposite directions, of the two rows of atoms considered.

The text of al-Ġazālī's proof is likely vitiated by an original (archetypal) error, because the number of steps envisaged for the various situations of atomic facing is not internally consistent. In particular, if we take for granted that each considered atom is originally occupying its extreme cell (square), and then moves discretely either to the right or to the left (depending from its starting point), a motion of two steps from its original cell would get the atom to the third cell (absolutely taken) from the starting extreme. At this point, however, the second atom, moving on the other row, should make a path of three discrete steps – and not four, as indicated by al-Ġazālī – in order to reach the facing position with respect to the first atom. Conversely, if one should instead take for granted the number

of four steps – thus considering as the point of departure of the atom the segment forming the border of its starting cell, rather than the cell itself –, the other atom could not make only two steps, but three, in order to face the other. Given the idea of the atom as a space-occupying, unitarian substance, the first of the two scenarios seems the most likely, and thus it is probably the number of four to need correction. However, it seems to me that the error is very unlikely to have been introduced by a copyist, and that it might rather pertain to al-Ġazālī himself. In my Translation, I have thus preserved the numeric indications as given by the text as edited by Dunyā, but in the following Commentary I have always specified what is, in my understanding, the right number of steps to be considered.

WE HAVE ALREADY PRESUPPOSED TWO PARTS. | Probably a reference to the previous proof [(a.2)]: cf. *supra*, §112.

WERE ESTABLISHED | Arabic *tubita*.

THE FIRST ONE OF THEM [...] THROUGH TWO PARTS. | [(a.3.1)] The first case considered is the hypothesis that the opposition of the two atoms (whose position is highlighted in bold) happens as depicted in the following figure *d.1*.

FIG. *d.1*.

A	→	E	F		B
C		G	H	←	D

In this case, as a matter of fact, the atom originally in D has travelled across three (four in the text) atomic cells in its path toward C, while the atom originally in A has only crossed two cells (or made two steps of its discrete motion) in its path toward B.

THE SECOND ONE OF THEM [...] THROUGH FOUR. | [(a.3.2)] The second case considered is the hypothesis that the opposition of the two atoms (whose position is highlighted in bold) happens as depicted in the following figure *d.2*.

FIG. *d.2*.

A	→	E	F		B
C		G	H	←	D

In this case, the situation is specular with respect to case [(a.3.1)] before, as the atom originally in A has crossed three (four in the text) cells this time, while the atom originally in D has crossed only two. Both cases are to be discarded, since the speed of the motion of the two atoms was assumed to be equal, and their movement even under every respect: there is no reason, then, why one should travel across more cells – or take more steps – than the other in the same time.

THE THIRD ONE [...] TWO PARTS. | [(a.3.3)] The third situation considered posits that the number of crossed cells, or steps taken, is the same in the case of both atoms – let us say three (four in the text). This situation can be depicted as follows, with the positions of the atoms highlighted in bold.

FIG. *d.3*.

A	→	E	F		B
C		G	H	←	D

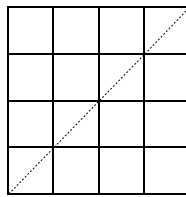
In this situation, however, the two atoms are no more opposed to each other, so that one must conclude to the impossibility of a proper opposition under the atomistic assumption.

OVERSTEPPING | Arabic *taġāwuz*.

[§114] D151-153.2

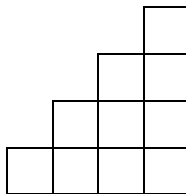
The fourth proof against the atoms [(a.4)] is of a geometrical nature. It entails a square composed of sixteen atoms, four-by-four, as in the following figure *e*.

FIG. *e*.



The problem arises because the diagonal of such an atomic square would be equal to its side, being composed of four atomic parts just as the side. Thus, the obvious fact that the diagonal of a square – or by extension the hypotenuse of any right-angled triangle – is longer than the side would be obscured and made unintelligible under the atomistic assumption. For this proof cf. AVICENNA, *K. al-Šifāʾ*, *Physics* III.4, §6 transl. MCGINNIS 2009: 286-287; the entire discussion of the «geometrical difficulties» (DHANANI 2015: 83) in the *Physics* of the *Šifāʾ* extends however from page 284 to 291. For the *kalām* treatment of the same difficulties, see DHANANI 1994: 172-176. DHANANI 2015: 83 does not summarise the specific proof reported in the *DN* – and consequently here in the *MF* –, which is however treated by Avicenna, in the major work, among the other difficulties that geometry poses to the atomistic account of magnitude. A tightly connected question is that, in the *Physics* of the *Šifāʾ*, the treatment of the absurd geometrical consequences of atoms begins by stating that, according to the atomists, figures like the circle and the right triangle are actually to be conceived as *aškāl muḍarrasa*, *i.e.* figures «made up of successively indented layers» (MCGINNIS 2009: 286) or «serrated» (DHANANI 2015: 83 and fn. 22; cf. LANE 1785^b). Figures like the following ‘atomistic triangle’ – whose hypotenuse is serrated – make it clear that atomists fail in general to account for diagonal (*i.e.* neither vertical nor horizontal) lines in geometry.

FIG. *f*.



ADJACENT TO ONE ANOTHER | Arabic *mutaġāwira*, Latin *continue iuncte*.

WE HAVE ALREADY PRESUPPOSED [THE CASE] THAT THEY ARE SEPARATE | The text appears here quite faulty, because it does not seem that the case to which the passage alludes has been treated in what

precedes. Cf. Latin: «Nos autem quamvis posuerimus eas disiunctas, tamen [...]» (MUCKLE 1933: 12.21). A possible way to ascertain the presence of a lacuna here will be to take into systematic account the presence of two different illustrations for this passage – a square formed by 16 contiguous atoms, and one composed by 16 disjoined or separate atoms – in ms. *Y*. From this situation, which might be considered to be original, it would seem that the tradition divided into two branches: an Arabic one, which arrives up to Dunyā's edition, with the separate atoms, and a Latin one, witnessed also by Muckle's text, with the contiguous squares. For the illustrations referring to this complex situation, which I could treat only superficially, cf. *infra*, Appendix 2. Further inquiry into the relationship between text and images will be needed in order to assess the original status of al-Ġazālī's text in this difficult passage.

THEY STICK TOGETHER | Arabic *mutalāṣiqa*, Latin *coniunctas*.

WITHOUT ANY GAP AMONG THEM | Arabic *lā farġat^a fi-hā*, Latin *ut nullum spacium sit inter eas*.

THEIR SIDES | Arabic *aḍlā^a-hā*, Latin *latera*. Given the indivisibility of the atoms, it might be preferable to read here a singular masculine suffix pronoun [-*hu*], which could then refer to the «square», instead of a plural one which must return to the atoms themselves.

DIAGONAL | Arabic *quṭr*, Latin *diametrus*.

IN TWO EQUIVALENT TRIANGLES | Reading *bi-muṭallatayni* instead of Dunyā's misprint *bi-maṭalayni*.

[§115] D153-3-154-5

The fifth fact adduced against the atoms [(a.5)] considers a rod that projects a shadow on the ground, moving with the movement of the Sun, like the gnomon of a sundial. If the Sun moves by an atom, the corresponding movement of the tip of the shadow on the ground must necessarily be lesser than an atom, thus providing a subdivision of what was supposed to be indivisible. Cf. AVICENNA, *K. al-Šifā*, *Physics* III.4, §10, transl. MCGINNIS 2009: 293-294 = ISB5 in DHANANI 2015: 84. The proof described in the *MF* and in the *DN* appears to correspond in particular to the last part of Avicenna's argument there (MCGINNIS 2009: 294.7-15), which considers the horizontal movement of the shadow projected by the gnomon on the ground, comparing it with the movement of the far greater-ranging motion of the Sun in the sky.

A [STICK OF] WOOD | Arabic *ḥasab^{an}*, Latin *baculum*.

SHADOW | Arabic *zill*, Latin *umbram*.

SUNBEAMS | Arabic *šu'ā'*, Latin *radium*.

SINCE THE SUN [...] MEASURE OF A HAIR | The Latin translation is here much more imaginative (and hyperbolic) than the Arabic original: «Sol enim pertransit milies milies milia miliariorum, cum umbra non moveatur quantum est tenuitas unius pili» (MUCKLE 1933: 13.13-15).

PARASANGS | Arabic *farāsīḥ*. The parasang [Arabic sg. *farsaḥ*] is a Persian length measure, whose name comes from the Persian فرسنگ [*farsang*], later mediated by the Greek παρασάγγελος. It appears frequently as a linear measure in the *DN* and in the *MF*: cf. *infra*, *Metaphysics* IV, §§257-258 (in the context of the discussion on time); *Physics* IV, §384. As a unit of walking distance, its measure varies depending on the quality of terrain and weather (cf. ROOD 2010). It could be taken, on average, to be around 5 kilometers.

FOR THE MEASURE OF A HAIR | Arabic *bi-miqdār' ša'ratⁱⁿ*.

[§116] D154.6-15

The sixth proof [(a.6)] used to reject atomism is based on a reasoning similar to that underlining the previous one [(a.5)], *i.e.* the consideration of two movements that necessarily entail one another, albeit being different in size. There, the two compared movements were the motion of the Sun and that of the shadow projected by a stick hit by the sunbeams; here, they are the motions of the external parts of a quern, or millstone, as opposed to the motion of the inner circles of that same quern. Here as well, then, positing a movement of the minimal extent of an atom at the bigger scale of the outer circles of the millstone entails either the atomistic absurdity of a movement long the fraction of an atom at the smaller scale of the inner circles, or the disjointment, or severing, of the parts of the millstone. Cf. AVICENNA, *K. al-Šifā'*, *Physics* III.4, §12 transl. MCGINNIS 2009: 295 = ISB6 in DHANANI 2015: 84. This argument strongly recalls the so-called Aristotle's wheel paradox (*rota Aristotelis*), for which cf. PS.-ARISTOTLE, *Mech.*, Problem 24, 855^a28-856^a40, an argument which – in its application to the theory of motion and the definition of an understanding of the spatial *continuum* – will have a lasting influence, up to the 17th century. Cf. the *Giornata prima* of GALILEO GALILEI's *Discorsi e dimostrazioni intorno a due nuove scienze attenenti alla meccanica e i movimenti locali* (in *Opere* VIII 68-71: «Perché mai il cerchio maggiore rotolando sviluppa una traiettoria uguale a quella del cerchio minore, quando siano solidamente concentrici. Quando invece rotolano separatamente, il rapporto reciproco tra le traiettorie da essi sviluppate viene ad essere proporzionale al rapporto tra la grandezza di uno rispetto alla grandezza dell'altro»; quoted in HELBING 2001: 220) and Leibniz's dialogue *Pacidius Philalethi*, explicitly defined by its author as a 'metaphysics of motion' (*prima de motu philosophia*). The pseudo-Aristotelian *Mechanical Problems* was however widely ignored in the Middle Ages, and only resurfaced with Aldo Manuzio's Venetian edition (1495-1498): cf. BOTTECCHIA DEHÒ 2000.

QUERN | Arabic *al-rahā*, Latin *rota*. Dunyā reads *al-rahā*, with *alif madda*, but the reading *al-rahā*, with the *alif maqṣūra* of the determined nouns in *-an* is presupposed by the only form attested by WEHR: 384^a. The Arabic word can also be translated as «millstone» (thus MCGINNIS 2009: 295), but among the materials listed just *infra* for the composition of such a wheel there is not only «stone» [*ḥaḡar*], but also «iron» [*ḥadīd*]. Coherently with the more generic translation as *rota* ('wheel'), the Latin translation has «lignea vel lapidea», as metal wheels were probably felt as incongruous. The corresponding text of the *DN* has «iron» and even «diamond» as materials: the underlying reasoning is probably that the 'disjointment' of the parts of the quern, which the hypothesis of the atoms would make inevitable, is even more absurd if the material is intuitively perceived as extremely solid.

GET DISJOINED | Arabic *yanfaṣilu*, Latin *separari*.

[§117] D154.16-155.11

After having refuted the first school of thought, that of the atomists (§§111-116), the text refutes the second *maḏhab* distinguished *supra* (§110), *i.e.* the thesis that body is not composed at all. The refutation, which extends to the next paragraph, is an anticipation of the positive proof of the third school of thought, namely the one considering the body as composed of matter and form. By proving that particular kind of composition, the thesis that denies any composition whatsoever in the body is of course *ipso facto* rejected.

CONTINUITY | Arabic *ittiṣāl*, Latin *continuacio*. For the concept of corporeality as «continuity» cf. *Ilāhiyyāt* II.2, §9, 64.6; see LAMMER 2018: 133 and fn. 85 for a discussion.

BEING DISJOINED | Arabic *infiṣāl*, Latin *discontinuacionis*. Alternative translations for the Arabic are ‘severing’, or ‘separation’; the Latin rendition emphasises the frequent coupling of *ittiṣāl* and *infiṣāl* as antonyms in the *MF*, by adding the negative prefix *dis-* to *continuacio*.

WITH A TECHNICAL TERM | Arabic *bi-l-iṣṭilāḥ*, Latin *secundum quod convenerant phylosophi*. The ample translation into Latin makes the conventional character of the terminological choice very clear. The underlying reasoning is that something is needed as a receptacle for both the continuity of the physical body – provided by the form of corporeality or bodily form – and the discontinuity or «disjoinment» of which the body is susceptible. Since «continuity» in itself cannot be severed, but the «continuous» [*muttaṣil*] body can, it is necessary to give a technical denomination to the subject of both properties – continuity and division –, and this has been called «matter».

«MATTER» | Here: *hayūlā*, the calque from the Greek; Latin *materia*. For the oscillation between *hayūlā* and *mādda* in the *MF* cf. *supra*, *Metaphysics* I.1, §104. For the technical character of the terms cf. also Introduction, §1.7.

RECEIVED CONTINUITY | Arabic *al-ittiṣāl al-maqbūl*, Latin *continuacio* [...] *recepta*.

«FORM» | Arabic *ṣūra*, Latin *forma*. A body without continuity is unconceivable: therefore, every body has a form. The argument thus effectively distinguished the body, endowed with form, from matter, still devoid of it. The continuity provided by the bodily form is however of a special kind, as it gives the resulting material body the property of being continuous but always potentially divisible. This will be important in the following §124, where the bodily form, which allows potential division, is explicitly contraposed to a hypothetical form that would on the contrary prevent any division whatsoever. The opposition there envisaged is thus not the one between continuity and division, but between a continuity that permits division (in short, divisibility) and a continuity that denies it (in short, indivisibility). Cf. also STONE 2001.

[§118] D155.12-156.1

The paragraph concludes the argument started in §117, by stating that whatever is susceptible of disjoinment cannot be the «continuity» (provided by the form); thus, the character of being continuous, and yet divisible, displayed by the body can only be explained by means of its composition of matter – which brings divisibility – and form – which brings continuity.

DIFFERENTIATION | Arabic *taḡāyur*, Latin *diversitatem*.

THE ESSENCE OF THE GOD, THE ESSENCE OF THE INTELLECT, AND THE ESSENCE OF THE ACCIDENT | The three examples are rightly translated into Latin: «essencia autem dei et essentiis intellegenciarum et essencia accidentis» (MUCKLE 1933: 14.20-21), with no mention of the variant reading of D-Alt, which added at the list *dāt al-naḥs*, «the essence of the soul». Since the entire argument deals with bodies and their composition, the opposite case of immaterial – and thus simple – beings seems to be correctly instantiated by the soul, together with God (or a god) and the intellect. For this very reason, however, *dāt al-naḥs* might be considered the *lectio facilior* with respect to *dāt al-‘araḍ*, which introduces for its part a different kind of immateriality.

IT DOES NOT FOLLOW [...] THEM | The position of the negation in the sentence may appear unnatural, as it might be more immediate to read: «it follows that there is not composition within them». However, the text can be defended, inasmuch as only the simultaneous presence of continuity and potential subdivision entails composition; their absence, on the contrary, merely prevents the necessary following of the establishment of composition, but strictly speaking does not exclude it.

[§119] D156.2-13

While stating, on the basis of the acquisitions of previous §§117-118, that the third school of thought, *i.e.* hylemorphism, is the correct one, the paragraph elaborates on the potential divisibility of body, reaffirming its actual continuity and its mere predisposition to the reception of parts when appropriately cut, severed, or disjoined.

SOME INTERVAL | Arabic *masāfat^{mn}*, untranslated into Latin: «non posset scindi, ab uno extremo usque ad aliud» (MUCKLE 1933: 14.27-28).

IT GETS A PART [...] WHEN IT IS DIVIDED. | The sentence is construed with the parallelism between the various denominations of the generic 'parts' or 'divisions', and the verbs of the same root, which designate the actions that have to be performed on the body, in order for those divisions – *per se* only potential – to pass into actuality. The involved 'couples' are: «part» [*ǧuz'*], which obtains only if the body «has been partitioned» [*ǧuzzi'a*]; «cut» [*qaṭ'*], which obtains when the body «has been cut» [*quṭi'a*]; and «division» [*qisma*], obtained when the body «has been divided» [*qusima*]. Cf. also *infra*, §120, for the occurrence of these same three roots, although in other patterns.

IT IS PREDISPOSED TO IT | Arabic *yakūnu musta'add^{mn} la-hu*, Latin *aptum est ad hec*.

[§120] D156.13-157

The paragraph concludes the reasoning on the only potential divisibility of the body, dwelling on the conceptual subdivision provided by the faculty of estimation. This tendency to subdivide bodies by means of the focus of the attention of the mind is also the cause, or one of the causes, of the false impression that bodies are actually divided into parts (which was also at the basis of the atomistic theory, refuted *supra* in §§111-116).

«SUBDIVISION» | Arabic *inqisām*, Latin *divisio*.

«CUT» | Arabic *inqiṭā'*, Latin *incisio*.

«PARTITION» | Arabic *taǧazzu'*, Latin *separacio*.

POLYONYMOUS EXPRESSIONS | Arabic *mutarādifa*, Latin *nomina [...] unius rei*. Cf. *supra*, *Logic* I, §9, for the description of polyonyms as what we would call, in modern terms, 'synonyms'.

EITHER A CUT, BY MEANS OF THE SEVERANCE OF THE PARTS | [(a)] The first of the reasons why the potential subdivisions of the body may pass into actuality is the obtainment of the «cut», through the actual separation, or «severance» [Arabic *tafrīq*, Latin *separacione*] of one physical part from another.

BECAUSE OF THE FACT THAT THE ACCIDENT VARIES WITHIN IT | [(b)] The second reason why parts may occur in actuality in the body is the fact that an accident «varies» [Arabic *yaḥtalifu*, Latin *diversitate*] within it. The example given by al-Ġazālī is the colour in «coloured wood» [*al-ḥaṣab al-mulawwan*], which can designate different parts of the same piece of wood: for instance, a black part and a white part (a stick painted in stripes can also be imagined). Cf. the Latin translation of the example: «sicut in ligno multorum colorum in quo pars alba alia est nigra» (MUCKLE 1933: 15.9-10).

THE FREE BEHAVIOUR [...] AVERTS ITSELF | [(c)] The third possible reason for the obtainment of parts in the continuous body is the action of the estimation, which can turn its attention to one aspect of the body as opposed to another, thus distinguishing, by means of its focus, one part from another. The same happens when a part is pointed at with a finger, or when some water is distinguished from some other water due to their relative positions within a recipient. The action of the estimation is so

strong, that it causes the false impression that body is actually divided into parts, while – as by now has been made totally clear – it is only predisposed to being divided.

YOUR ESTIMATIVE POWER | Arabic *tawahhum*, Latin *estimacione*. I use the locution «estimative power» to render the verbal noun of the V form of the root *whm*, which in the I stem gives the word *wahm*, commonly used in Avicenna's contexts for «estimation» proper. As it clearly emerges from the psychological discussion of *Physics* IV, however, *wahm* and *tawahhum* are largely used as synonyms in the text of the *MF*. The broad example of the accidental subdivision of a unitary body according to the estimation is a Ġazālian addition, absent not only from the *DN*, but also from other Avicennan writings. See JANSSENS 2019: 99 and fn. 69.

INDIVIDUATION | Arabic *ta'yīn*.

SPECIFICATION | Arabic *taḥṣīṣ*. The Latin translation of the passage appears somewhat *ad sensum*, as it reads: « eo quod semper occurrit estimacioni prius cogitare de una parte quam de alia, et de una sine alia, per posiciones » (MUCKLE 1933: 15.18-20). The final *positiones* as a rendering of *taqdirāt* («evaluations») might be intended as meaning 'suppositions', as allowed by the semantics of the Arabic term; however, given what follows, it also captures the idea of the different 'positions' as relevant for the estimation's action of conceptual separation of the parts of the bodies.

MUG | Arabic *kūz*, Latin *vas*.

EQUAL DISTANCE | Arabic *muwāzā*, untranslated into Latin: «ex diversitate accidendi esse a dextris. vel a sinistris» (MUCKLE 1933: 15.35). Later on in the text, the same term *muwāzā* will occur in the more specific geometrical sense of «parallelism», in the context of an argument against the infinity of distances: cf. *infra*, *Metaphysics* I.6, §164.

SUSCEPTIBLE OF PARTITIONING | Arabic *qābil^{mn} li-l-taǧzi'at*, Latin *receptibile divisionis*.

THE UNVEILING OF THE INTEGUMENT | Arabic *kašf al-ǧiṭā'*, Latin *deteccio eius quod erat occultum in hoc*.

[§121] D158-159.10

The section starting in the present paragraph deals more closely with hylemorphism (the third of the schools of thought on the composition of the body distinguished for the first time in §110 *supra*), under the label of «inseparability of matter and form». Two reasons for the inexistence of matter without form are given, (a) the first one here (with objections and answers in the following §§122-123), (b) the second one *infra* at §124 (with a symmetrical dialectic appendix in §125). (a) The first reason is an argument *per absurdum*, which shows the impossibility of absolute or pure matter (*i.e.* matter devoid of form) assuming that it exists, and arguing for the impossibility of both its sensible ostension and the denial of its sensible ostension. All branches of the argument lead to an impossibility, so that the assumption that pure matter exists must be discarded. For a parallel discussion on the inseparability of form and matter in the *K. al-Šifā'* cf. *Ilāhiyyāt* II.3: QANAWATĪ-ZĀYID 1960: esp. 72-79.

THE INSEPARABILITY | *Dunyā* reads *talāzum* (verbal noun of the VI stem) against the *mulāzama* of D-Alt, coinciding instead with *Kurdī*'s reading (cf. BİĞŪ 2000: 75). The Latin version translates the title as «Capitulum de comitancia hyle et forme» (MUCKLE 1933: 16.7), which does not give any specific hint as for the underlying Arabic word. *Infra*, §125, I have interpreted the *rasm* رُكْبَة as *tulāzimu* (feminine imperfect of the III stem) rather than as *talāzama* (masculine perfect of the VI stem), which could speak in favour of reading *mulāzama* here (*mašdar* of the III stem). On the other hand, however, the reciprocal meaning of the VI stem appears particularly appropriate in the context of the verbal noun specified by both matter and form. The English translation would in any case not change.

MATTER | Here: *hayūlā*.

INDUCTIVE PROOF OF THE FACT THAT MATTER | Reading *hayūlā* instead of the incongruous *ṣūra* printed by Dunyā (whose text, clearly erroneous, would mean that the form is not devoid of the form (!) for two reasons). Cf. Latin: «Unum est quod si *hyle* posset esse vacua a forma» (MUCKLE 1933: 16.11-12, emphasis added).

THEN ONE OF THE TWO | Arabic *fa-lā yaḥlū*, Latin *duo sunt. Unus...* On this characteristic Arabic expression, very typical of the prose style of the *MF*, cf. also GRIFFEL 2021: 513 ff., who underlines its importance as a catchphrase of al-Rāzī's method of investigation in philosophy. There, Griffel gives as possible translations of it «this is exhaustively divided into» and «this I not devoid of» (but cf. *ivi*: 542 n. 121 for a praise of Gimaret's French rendition of the phrase as «de deux choses, l'une» in GIMARET 1980: 134-153 *passim*, on which my translation is also modelled).

«BODILY FORM» | Dunyā has *al-ṣūra al-ḡismiyya*, which corresponds to the Latin *forma corporea*, instead of the indifferent variant of *A*: *ṣūra al-ḡismiyya* («form of corporeality», as in the previous occurrence of the same expression in the sentence).

INHERES IN IT | Arabic *ḥillat bi-hā*, Latin [*forma*] *sibi advenit*.

DETERMINED PLACE | Arabic *makān mu'ayyan*, Latin *loco proprio sibi designato*.

SPECIFIC JURISDICTION | Arabic *iḥtiṣāṣ*, Latin [*hunc locum*] *pocius requirit [quam alium]*. A body is in a specific place, as opposed to another, because of the concurrence of its form and its matter, which have encountered one another there, and not elsewhere.

[§122] D159.11-end of page

A first objection and answer to (a) are presented. The objection goes like this: what has been said *supra* (§121) about absolute matter should also be valid for absolute body, as body *qua* body does not have either a specific place. The answer, accordingly, clarifies that an absolute body, just like an absolute matter, does not exist. For instance, the absolute animal does not exist in actuality in the way in which the specific animals – whose genus is specified by a differentia – exist. The same applies to absolute bodies, which do not exist, while the specific bodies do exist in actuality. The place of the specific bodies depends on their different forms, which inevitably qualify their matter, conferring specific properties to it. A parallel passage on the natural place of a body as a consequence of its specific form is in *Ilāhiyyāt* II.3: 78-79 (§4.4 in BERTOLACCI 2007).

ABSOLUTE BODY | Arabic *ḡism muṭlaq*, Latin *corpus absolute*.

A SKY [...] A WATER | All the particular bodies considered are expressed with the indeterminate forms of the various names, all with *tanwīn*. Among the examples, three elements – air, water, and earth, with the exclusion of fire alone – are mentioned. However, in the examples of local properties conferred by the forms, fire is mentioned together with earth, which could lead one to think that a previous mention of fire is missing from this list.

CLAIM | Arabic *istiḥqāq*, Latin *appropriatur*.

[§123] D160.1-17

The second objection to reason (a) argues that a single part of a body composed of identical parts, like water – for instance in the sea – does not need to be in a specific place: a single part of water (one could say, in a modern terms, a molecule of water) can be in the middle of the sea or near the seashore, indifferently. The answer acknowledges this, but emphasises that it was a portion of matter already specified by a form – albeit possibly different from that of waterness: for instance, the form

of airness – to constitute that particular water. In any case, thus, matter always «wears» a specific form, although that form can vary.

MATTER, [HOWEVER,] WAS NOT THERE WITHOUT A FORM | Arabic *lam yakun al-hayūlā tamma min ḡayrī šūrat^m*, Latin *quamvis hyle non erat ibi sine forma*.

SLIPPED IT OFF | Arabic *ḡalaʿat-hā*, Latin *qua exuta*.

AND WORE [INSTEAD] THE FORM OF THE WATERNESS | Arabic *wa-labisat šūrat^a l-māʿiyyatⁱ*, Latin *induit formam aqueitatis*. Both verbs employed to indicate the losing of one form and the acquisition of another on the part of matter pertain to the field of clothing, with a metaphor widely employed in the *MF*: cf. also *Metaphysics* IV.b.2.3, §276, *Metaphysics* V, §299, and *Physics* II, §350.

OF THE KIND WE HAVE MENTIONED | Cf. *supra*, §122, the mention of differentiae specifying the genus as examples of things added to an absolute body to specify it (and thus allowing its actual existence).

JANSSENS 2019: 99 notes that he has not found any Avicennan source for this Ḡazālīan example.

[§124] D160.18-161.7

The second proof of the inseparability of form and matter is that if absolute matter existed, it could not subdivide itself, nor could it not subdivide itself. If it subdivided itself, indeed, it would already have the bodily form (against the hypothesis that posited it as matter devoid form). If rather it did not subdivide itself, this would be either for an essential property, so that matter would be essentially indivisible like the intellect is essentially immaterial (but this is counterfactual, since there are divisible material things); or else it would be for an accidental property, which would however be caused by a form (again against the hypothesis of an absolute matter).

THAT FORM [...] CONTRARIETY. | The final sentence of the paragraph is an addition to the preceding proof, since at this level it has already been shown that matter cannot be devoid of form. The addition clarifies however an important further point, and namely that this accidental form which would give to matter the property of being indivisible would be the contrary of the bodily form – which on its part gives precisely the property of being continuous but potentially divisible, as clarified *supra*, §117. However, «contrariety» [*taḡādd*] does not befall forms (since substances, *iuxta* Aristotle, do not have a contrary). For the treatment of contraries cf. *infra*, *Metaphysics* I.3, §153.

[§125] D161.8-23

An objection to (b) is advanced, to the effect that form might be considered to be indeed inseparable from matter, but accidental.

ON WHAT [BASIS], THEN, DO YOU DISAVOW | Arabic *fa-bi-mā tankarūna*, Latin *cur negatis*.

IS INSEPARABLE | Arabic *tulāzimu*, Latin *non separari*.

AN INSEPARABLE CONCOMITANT | Arabic *lāzim*, Latin *accidens [illi] inseparabile*. The objection plays with words, asking why the «inseparability» (always expressed with the root *lzm*) cannot occur due to the form's behaviour as a *lāzim*, i.e. an «inseparable concomitant» – but, crucially, accidental

rather than substantial.

THE INTELLECT HAS A WAY | MUCKLE 1933: 18.24 has the wrong translation: «Intellectus enim est via...», which presupposes an omission of one of the ascenders – either in writing, or else just in reading – in the Arabic *fa-li-l-‘aql*. Alternatively, a possible way of emending the text would be correcting to *intellectui* the nominative *intellectus*, thus restoring the dative of possession.

“CAN IT BE POINTED AT, OR NOT?” | The reference is to the first of the proofs for the inseparability (a), given *supra* at §121.

“IS IT DIVISIBLE, OR NOT?” | The reference is to the second of the proofs for the inseparability (b), given *supra* at §124.

[§126] D161.24-162

The conclusive paragraph of the hylemorphic section states once again the *demonstrandum*, *i.e.* that matter is never devoid of form, and reaffirms the necessity of a specification of the bodily form with a differentia, in order for specific bodies to exist in the world. Thus, the previous discussion reveals itself once more as a metaphysical foundation of the body *qua* body, whose concrete features will be dealt with elsewhere (and precisely in *Physics*). Form, matter, and their compound, body, are said conclusively to be substances (a fourth kind of substance, *i.e.* intellect, was mentioned *supra* in §105, and will be dealt with more closely in the cosmological discussion of *Metaphysics* IV).

IT APPEARS | Arabic *lāḥa*, Latin *manifestum est*.

QUICK | Arabic *sarī*, Latin *facile*. In a different context, referring to concomitants and not to forms, the expression *sarī al-mufāraqa* had been used to designate the concomitants whose separation is quick (as opposed to the *baṭī al-mufāraqa*, whose separation is slow): cf. *supra*, *Logic* II, §14. Here, the quickness or hardship is rather applied to the «disjoiment» [*infiṣāl*] of the parts of a body, due to its specific differentia (added to the form of corporeality that makes it a body).

HARD | Arabic *‘asir*, Latin *difficilime* [sic]. The two opposite cases of easiness and difficulty of disjoiment are expressed in Arabic with the quasi-anagrams *sarī* and *‘asir*.

INACCESSIBLE | Arabic *mumtani‘*, Latin *impossibile*.

[SOMETHING] ADDITIONAL [...] PERFECT ITSELF. | Cf. *supra*, §122, for the negation of the possible existence of an absolute body, or an absolute animal: in the Peripatetic ontology, actual existence is always concrete and specified by a differentia.

FABRICATION | Arabic *talfiq*, Latin *coniunctione*. As specified immediately after, the «composition» [*tarkīb*] of matter and form is «intellectual» [*‘aqlī*], thus very different from a material «fabrication» (or even «concoction»), as expressed by the Arabic *talfiq*.

[§127] D163.1-164.2

After the rich discussion on substance, with its long subsection on bodies, the first division of the first treatise of *Metaphysics* passes to the analysis of the second part of the distinction: after substantial being, the accidental being. This entails a discussion of the Aristotelian nine accidental categories, whose treatment pertains in the *DN* and the *MF* to *Metaphysics* rather than to *Logic*. The first division of accidentals is between (1) those that do not require the consideration of another thing and (2) those that need the consideration of another thing to be conceived. To case (1), articulated in the present paragraph, pertain the two categories of (1.1) quantity and (1.2) quality. A similar separation of quantity and quality within the treatment of accidental categories is already to

be found in al-Kindī's *Epistle on the Quantity of Aristotle's Books* [*Risāla fī kammiyya kutub Aristūṭālīs*] (vol. 1, 370.11-13); cf. ADAMSON-PORMANN 2012: 285: «The primary and separate predicates of substance are two, quantity and quality [...]» (see LAMMER 2018: 141 and fn. 109).

THAT FOR CONCEIVING [...] EXTERNAL TO IT | Arabic *mā lā yuḥtāḡu fī taṣawwurⁱ dātⁱ-hi ilā taṣawwurⁱ amrⁱⁿ ḥārīḡⁱⁿ min-hu*. (1) This first case of autonomously conceivable accidents is dealt with in the present paragraph, and it only comprises the two accidental categories of quantity and quality.

THAT [FOR CONCEIVING WHOSE ESSENCE] THERE IS [SUCH A] NEED | Arabic *mā yuḥtāḡu*. (2) The second case, namely that of the accidents which cannot be considered without reference to a further being, will be treated *infra* in §128. Probably due to the very elliptical formulation of this second option in the Arabic original, the Latin translators have opted for an inversion of the order of the two alternatives, as such: «quedam eorum sunt quorum essentia nullo modo per se potest intelligi, nisi aliquid aliud extrinsecus intelligatur (2); et quedam eorum sunt que per se intelligi possunt (1)» (MUCKLE 1933: 19.17-19, bracketed numbers added).

TWO SPECIES | Arabic *naw'āni*, Latin *species*. This use of «species» must be taken as non-technical, as otherwise it would entail the consideration of existence – which immediately divides into the ten categories – as a genus for them. This is however quite explicitly denied *infra*, §§134-138. A more proper use of the word «species» might however be preserved if one is to intend the primary subdivision of being as a mere bipartition into substance and accident, and accordingly the nine accidental categories as «species» of the genus 'accident' (and not of existence immediately).

QUANTITY | Arabic *kammiyya*, Latin *quantitas*. The Arabic technical term *kammiyya* is formed from the interrogative particle *kam* ('how much?') with the addition of the relative suffix of the *nisba*, commonly used to build abstract nouns, much like the Latin *quantum* has been linked to the abstract suffix *-itas* to get *quantitas*, on the basis of the corresponding Greek ποσότης. (On the formation of abstract nouns in Arabic, see MASSIGNON-KRAUS 1934). «Quantity» (1.1) is described as the accident that «attaches itself» [*yalḥaqu* or *yulḥiqu*] to the substance in terms of «measuring» [*taqdīr*], «increase» [*ziyāda*], «diminishing» [*nuqṣān*], and «equivalence» [*musāwā*]. The examples given are «length» [*tūl*], «breadth» [*'arḍ*], «depth» [*'amq*], and «time» [*zamān*]. For the first three spatial dimensions cf. the discussion on the tridimensionality of the body (*supra*, esp. §§106-108); for a discussion, although concise, of time, see *infra*, *Metaphysics* IV, §§256-259, while for a reaffirmation of its belonging to continuous quantities cf. *infra* §129. The following §§129-130 will be devoted to a more detailed analysis of quantity.

QUALITY | Arabic *kayfiyya*, Latin *qualitas*. The Arabic *kayfiyya* is formed from the interrogative particle *kayfa* ('how?') with the addition of the relative suffix of the *nisba*, commonly used to build abstract nouns, much like the Latin *quale* has been linked to the abstract suffix *-itas* to get *qualitas*, on the basis of the corresponding Greek ποιότης. «Quality» (1.2) can either be sensible (1.2.1) or non-sensible (1.2.2), and some examples of each class are given.

AMONG THE SENSIBLE [...] BY THE SENSE | Arabic *min al-maḥsūsāt, al-mudrakāt bi-l-ḥissⁱ*, Latin *sensibilem, que sensibus apprehenduntur*. (1.2.1) Among the example of sensible qualities, the text lists «colours» [*alwān*] (objects of sight), «flavours» [*tū'ūm*] (objects of taste), «smells» [*rawā'iḥ*] (objects of olfaction), and four examples of tactile qualities, leaving aside, of the five senses, only hearing and its objects. For the *proprium* of the various senses and a similar list of qualities perceived by the touch cf. *infra*, *Physics* IV, §§383-393.

AMONG THE NON-SENSIBLE THINGS | Arabic *min ḡayrⁱ l-maḥsūsāt*, Latin *que non sunt sensibilia*. (1.2.2) The non-sensible qualities can either be (1.2.2.1) «a predisposition to a perfection or its opposite» [*isti dād li-kamālⁱⁿ aw-naqīḍⁱ-hi*], or else (1.2.2.2) immediately «a perfection». (1.2.2.1) Examples of predispositions to perfection are «the power to fight» [*quwwa al-muṣāra'ā*] and «to maintain health» [*al-miṣḥāḥiyya*, in analogy with *mimrādīyya* below]; examples of predispositions to the

opposite of a perfection – directly opposed to the previous ones – are «weakness» [*duʿf*] and «sickliness» [*mimrāḍiyya*]. (1.2.2.2) The example of non-sensible qualities that are perfections is «knowledge» [*ilm*]. Dunyā's text adds *wa-l-'aql* («and the intellect»), which is however absent in *A*. The Latin version does not translate 'intellect' and has in its place «mansuetudo» (*sic pro* 'mansuetudo'; cf. MUCKLE 1933: 20.6), which might presuppose a misreading **'adl* (very similar in *rasm* to *'aql*) in the Arabic original. Crucially, however, «intellect» cannot be a quality – and thus belong to an accidental category –, since §105 *supra* had unambiguously listed it among the substances. Thus, Dunyā's *wa-l-'aql* should in any case be emended.

[§128] D164.3-165

The paragraph expounds the second division (2) of the accidental categories distinguished *supra* (§127), namely those which require the consideration of something external to them in order to be conceived. These are the seven remaining accidental categories after the exposition of quantity and quality, *i.e.* (2.1) relation, (2.2) where, (2.3) when, (2.4) position, (2.5) having, (2.6) acting, and (2.7) being acted upon.

THE RELATION | Arabic *al-idāfa*, Latin *relacio*. (2.1) «Relation» (cf. Greek πρὸς τι) is expressed in Arabic with the word for «annexation» (also used in grammar to designate the construct case used to express possession). It is described as the «condition» [*hāla*] of the substance occurring when something else is in «opposition» [*muqābala*] to it, and examples of it are «paternity» [*ubuwwa*], «filiality» [*bunuwwa*], «fraternity» [*uḥuwwa*], «friendship» [*ṣadāqa*], «contiguity» [*muḡāwara*], «equidistance» or 'parallelism' [*muwāzā*], and «being at the right and at the left» [*kawn^u-hu 'alā l-yamīnⁱ wa-l-šimālⁱ*]. Among these, the first two examples and the last one are of asymmetrical relationships, while the others can be considered to be instances of symmetrical relations. For an overview of the category of relation in Arabic thought, from the formative period up to the post-classical phase, cf. DAIBER 2018; for a quick glance at the understanding of relation in al-Ġazālī's *TF* cf. esp. DAIBER 2018: 99.

THE WHERE | Arabic *al-ayna*, Latin *ubi*. (2.2) The name of the category of «where» (cf. Greek ποῦ) is expressed in Arabic with a nominalization of the interrogative particle *ayna* ('where?'). The explanation is simply that the thing is considered in relation to a «place» [*makān*], being for instance «over» [*fawqa*] or «under» [*taḥta*].

THE WHEN | Arabic *matā*, Latin *quando*. (2.3) In this sole case, Dunyā does not print an article before the interrogative *matā* ('when?'), which might then be supplied (cf. Greek πότε). The accident is described as the «being of the thing in time» [*kawn^u l-šay^x fi l-zamānⁱ*], as opposed to the duration of time, which belongs to the category of quantity (see *supra*, §127). The examples are the being of the thing «yesterday» [*fi l-amsⁱ*], «last year» [*āmⁱⁿ awwalⁱⁿ*] and «today» [*al-yawm^a*].

THE POSITION | Arabic *al-waḍ'*, Latin *situs*. (2.4) The accidental category of «position» refers to being in a certain position or posture, probably originally understood by Aristotle as a state of rest (cf. Greek κείσθαι, 'to lie'). Despite maintaining *verbatim* Aristotle's examples – «being sitting» [*ka-kawnⁱ-hi ḡālis^{an}*], «lying» [*muḍṭaġi^{an}*] and «standing» [*qā'im^{an}*] –, the accident of κείσθαι is at this point of the Peripatetic tradition normally understood as referring to the reciprocal position of the parts of the considered body. For instance, sitting and standing differ for man as for the different «relation» [*nisba*, as generic relation, and not *idāfa*, which is the name of the category (2.1)] of the «shanks» [*sāqayni*] with respect to the «thighs» [*fahḍayni*] in the two 'positions'.

THE HAVING | Arabic *ġida*, Latin *habere*. (2.5) In the absence of a proper verb 'to have' in Arabic, the name of the category of «having» (cf. Greek ἔχειν) here used is a verbal noun taken from the sense of

wağada as ‘become possessed’, ‘gain’, ‘acquire’, for which cf. LANE 2895^c. An alternative name for the category is also given, *i.e.* «possession» [*mulk* or *milk*; cf. WEHR 1081^b-1082^a]; the Latin reading «habere autem quod etiam vocatur habitus» (MUCKLE 1933: 20.18-19) might however lead one to presuppose a reading like **malaka* in the Arabic antigraph (for which cf. *infra*, *Physics* IV, §411 the occurrence of ‘*aql bi-l-malaka*, whose standard Latin translation is precisely *intellectus in habitu*). The two conditions given by al-Ġazālī as relevant to the category of having are (i) that the accidents falling in it must «comprise», ‘encompass’ or ‘surround’ [*yuḥītu*] the substantial thing to which they refer, and (ii) that they must be «transferred with its transferral» [*yantaqilu bi-ntiqāl-hi*]. Things which do not satisfy condition (i) (for instance a shirt not surrounding the body of its wearer), or conversely items that do not satisfy condition (ii) (for instance a house or a «vessel» [*ināʾ*], whose contents can be transferred without them), do not belong to this category. JANSSENS 2019: 99 and fn. 72 remarks that in the *DN* the category of having is said to be not well-known by the author (ACHENA-MASSÉ 1955: 109: «et ce chapitre ne m’est pas encore bien connu»), and claims that this is «puzzling», since it would seem to entail an early drafting for the *DN*, as opposed to the commonly assumed mature dating of the work. Janssens also notices that the wide elaboration offered by al-Ġazālī reminds in some respects the *Maqūlāt* of the *Šifāʾ*: ed. Cairo 235.7 and 12-14.

WRAPPED IN A *ṬAYLASĀN* | Arabic *mutaṭallis^{am}*, Latin *capatum* (presumably with the sense of ‘wearing a cloak or cape’, *cap(p)a*). For the meaning of the rare active participle of the V stem *mutaṭallis* cf. LANE: 1918^{b-c}. On the *ṭaylasān*, piece of clothing similar to a shawl used to cover one’s head, probably Persian rather than Arabic in origin, see ARAZI 1983 and KINDINGER 2016, who retraces the lines of a *querelle* of the Mamluk period on the legitimacy of the *ṭaylasān* for the Muslim believer. For the *ṭaylasān* as being characteristic of the scholar of *fiqh* cf. GUTAS 1987: 326. On clothing in the Arabic and Muslim world, with useful information also on the turban and the other garments here implicitly mentioned by al-Ġazālī, cf. STILLMAN 2003, and – from a lexicographical point of view – the ancient but still valuable DOZY 1845.

IN A TURBAN | Arabic *mutaʿammim^{am}* (from ‘*imma*, ‘turban’). The Latin version has here, much Romanly and not very Arabically, *togatum* (and cf. also *infra*).

DRESSED IN A SHIRT | Arabic *mutaqammiṣ^{am}*, Latin *tunicatum*.

SHOD | Arabic *mutanaʿil^{am}*, Latin *calciatum* (sic). Or ‘provided with sandals’, ‘wearing sandals’. *Episcopus calceatus* is famously the epithet given to Albert the Great in his functions of bishop engaged in frequent travels.

THE ACTING | Arabic *an yafʿala*, Latin *agere*. (2.6) The name of the category of «acting» (cf. Greek ποιῆν) is expressed in Arabic with a subjunctive construction of the verb *faʿila*, ‘to do’, in the I stem. The meaning is the agency of the thing (its being «agent» [*fāʿil*]), also glossed by means of the active participle *muʿattir* («influencing», ‘having an influence on’). JANSSENS 2019: 99 and fn 74 references for this discussion Avicenna’s *al-Muḥtaṣar al-awsaṭ fi-l-manṭiq*, ṬANĪ 1976: 35.1-12, even though the wording is admittedly «not identical» with that of the *MF*.

THE BEING ACTED UPON | Arabic *an yanfaʿila*, Latin *pati*. (2.7) The name of the category of «being acted upon» (or ‘being affected’, cf. Greek πάσχειν) is expressed in Arabic with a subjunctive construction of the verb *infaʿila*, the VII stem of the root *fl*, which conveys the passive meaning of the I stem. Here again, the notion of the category is glossed with a voice of the root *ʿtr*, in this case the verbal noun of the V form with the meaning of the «reception of an influence» or the ‘being influenced’ [*taʿattur*]. This category is distinguished from quality (cf. *supra*, §127) because it refers to the continuous process of being influenced, before the state of rest and thus of permanent possession of a certain quality. When a thing becomes hot, it has assumed the quality [*mutakayyaf*] of the «heat» [*suhūna*]: thus it is a quality, and not a patient or ‘acted upon’ anymore.

[§129] D166-167.19

After the preliminary exposition of all nine accidental categories, the text provides a new examination of them, articulating them in their divisions – when these are relevant – and contextually showing their accidentality. In this paragraph, a subdivision of (1.1) quantity into (1.1.1) continuous and (1.1.2) discrete is presented, and four further articulations of continuous quantity are discussed (1.1.1.1-4).

SETTING UP | Arabic *iqāma*. The title is not highlighted as such in the Latin version, which reads: «In hoc capitulo dividitur unumquodque istorum accidencium, et probantur ipsa esse accidentia» (MUCKLE 1933: 21.4-6).

CONTINUOUS | Arabic *muttaṣila*, Latin *continuum*.

DISCRETE | Arabic *munfaṣila*, Latin *discretam*.

LINE | Arabic *ḥaṭṭ*, Latin *lineam*. (1.1.1.1) Coherently with the discussion on the three-dimensionality of the body at §§106 ff. *supra*, the ‘cuttings’ of continuous quantity in terms of length, breadth and depth are said to be potential. The one-dimensional line (with two directions) and bi-dimensional surface or plane thus result in actuality only when a cut has been performed on the tri-dimensional body (cf. *infra*).

SURFACE | Arabic *saṭḥ*, Latin *superficiem*. *Supra*, §106, I translated *saṭḥ* with «plane» in the context of the geometrical determination of the three-dimensionality of the body. (1.1.1.2) The surface is described as «the product of a cut performed upon» the body, literally «its [*scil.* of the body] cut» [Arabic *munqaṭi^a-hu*, Latin *incisio eius*].

BODY | Arabic *ḡism*, Latin *corpus*. (1.1.1.3) Of «body», the text does not demonstrate the character of being accidental, as opposed to what it does for surface, line, and «point» [Arabic *nuqṭa*, Latin *punctum*], consistently with the body’s characterization as a substance at §§105-106 *supra*.

SINCE THE SURFACE IS AN ACCIDENT [...] ACCIDENTALITY | The «accidentality» [*‘araḍiyya*] of line and point is deduced from the accidentality of the surface, which derives in turn from its occurring in the body not essentially, but only because of a cut or section.

TIME | Arabic *zamān*, Latin *tempus*. (1.1.1.4) «Time» is preliminary defined here as «the measure of the movement» [*miqdār^a l-ḥarākat^t*] (cf. the Persian text of the *DN*, MO⁵IN 1952: 32.15: *zamān andāze-ye ḡonbaš ast*), and its explanation is said to be postponed to physics. Indeed, Aristotle’s definition of time is famously to be found in his *Physics* (Δ [IV] 11, 219^b1-2), although the discussion on time in the *MF* – and in the *DN* – surprisingly does not belong to the section on natural philosophy, but rather appears in metaphysics: cf. *infra*, *Metaphysics* IV, §§256-259 and esp. §258 for further elaboration on the Aristotelian definition. In keeping with this peculiar textual situation, the Latin text translates generically the prospective reference, without mentioning natural philosophy: «de quo postea loquemur» (MUCKLE 1933: 22.6). The circumstance that the *Physics* of the *DN* does not present any treatment of time is noticed by LAMMER 2018: 434-435 and fn. 19, who mentions, however, the passage of the *DN* corresponding to this one of the *MF* as the only one dealing with time in Avicenna’s Persian *summa*, ignoring the further parallel passage of *DN* (corresponding to *MF*, *Metaphysics* IV, §§256-259). For this cross-reference cf. also the Introduction, §1.4.3.

IT IS POSSIBLE TO CONCEIVE [...] THE ESTIMATION OF THE MOVEMENT. | Through the «estimation of the movement» [*tawahhum al-ḥarāka*] of the point, *i.e.* by imagining its shifting in space, it is possible to conceive the line; likewise, a movement of the line generates the plane or surface, and a movement of the surface generates the body. This, however, is a mere geometric and estimative determination of the various dimensions, which does not hold in reality, because it is the three-dimensional body to be prior in actual existence, and the fewer-dimensional magnitudes (2-D surface, 1-D line, and 0-D point) only derive from appropriate cuttings of the 3-D body.

VERIFICATION | Arabic *taḥqīq*, Latin *hec omnia forsitan putantur vera*. The Latin translation is slightly misleading, as the point of the argument is not that the estimative deduction of the magnitudes is not true, but rather that this method cannot achieve a proper ascertainment or verification of their existence, which depends on the three-dimensional body and cannot be properly construed with such a geometrical method (indeed, continuous quantity is the subject-matter of geometry, and thus it cannot be proven within it).

[§130] D167.20-168.12

The paragraph deals with discrete quantity, *i.e.* number (which is the subject-matter of arithmetics), underlining the difference with respect to continuous quantity (see *supra*, §129). The core of the attention lies in particular in the concepts of one, unit and unity, which are at the basis of the formation of all numbers. Their accidentality, from which the accidentality of number derives, is shown with various examples.

NUMBER | Arabic *ʿadad*, Latin *numerus*.

UNITS | Arabic *āḥād*, Latin *unitatum*.

THE ONE AND THE UNITY | Arabic *al-wāḥid wa-l-waḥda*, Latin *unum et unitas*. If «one» and «unity» are already accidents, the numbers deriving from their «repetition» [*takarrur*] will be *a fortiori* accidental.

BETWEEN THE PARTS [...] CAN BE FOUND | The difference between the discrete and the continuous quantity is that the «parts» [*ağzāʿ*] of the former are not linked with one another by means of a «common part» [*ǧuzʿ muštariḳ*], which is rather what happens between the parts of the continuous quantity (cf. *infra* the examples).

THE ESTIMATED LINE | Reading *al-ḥaṭṭ al-mawḥūm* instead of *al-ḥaṭṭ* as in Dunyā, for symmetry with the other listed cases. Cf. indeed the Latin translation: «sicut linea maginata (*sic*)» (MUCKLE 1933: 22.17-18).

THE NOW CONJOINS THE TWO EXTREMES OF THE PAST AND FUTURE TIME | Following the three spatial dimensions, also the temporal dimension of continuous quantity is shown to have a «common part» conjoining the two extremes of the «past» [*māḍī*] and the «future» [*mustaqbal*]: this joint is the present moment, or «now» [*al-ān^a*].

SIGN | Arabic *āya*, Latin *sic ostenditur*.

UNITY AND DUALITY [BOTH] COME UPON IT | Arabic *fa-yaṭraʿu ʿalay-hi al-waḥda wa-l-iṭnayniyya*, Latin *vicissitudinantur dualitas et unitas in ea*. One «water» can become two because of the «division» [*qisma*], and again one because of the reunion or «gathering» [*ǧam*]. Unity and duality can alternate in it, proving thus to be «accidental» [*ʿarīḍ*] with respect to the subject which is water.

THE ONE MAN DOES NOT BECOME TWO | Arabic *al-insān al-wāḥid lā yašīru iṭnayni*, Latin *unus homo non potest fieri duo*. The potential counterexample to the accidentality of unity, shown in the case of water, might be the unity of man, which cannot become two. This happens however because unity is an inseparable concomitant [*lāzim*] for man, but still an accident [*ʿaraḍ*], and thus in any case not substantial.

THEREFORE, UNITY IS A NOTION EXISTING IN A SUBJECT | Arabic *fa-īdan al-waḥda maʿnan mawǧūd^{mn} fī mawḍū^{ān}*. A reads *fa-īdan al-wāḥid maʿnan maʿqūl^{mn} fī mawḍū^{ān}*, mirrored *in toto* by the Latin translation: «[i]gitur quod intelligitur de uno hoc est» (MUCKLE 1933: 22.30).

[§131] D168.13-169.4

The paragraph introduces the articulation of the category of quality, mentioning within it, as two relevant examples, the colours and the shapes (for which cf. *infra*, §132). The present paragraph deals with the case of colour, proving the accidentality of blackness. The proof starts by assuming that blackness is not an accident. Thus, it could either be pointed at, or not. If not, it could not be perceived by the sight, which is a kind of pointing. If yes, it could either be the divisible itself (and thus a body), or something that is in the divisible thing; but it cannot be the divisible itself, because otherwise it would be body and not blackness; therefore, it must be in a body, thus in a substance, and thus it must be an accident.

COLOURS | Arabic *alwān*, Latin *colores*.

SHAPES | Arabic *aškāl*, Latin *figuras*. For the same two items listed as the objects of perception of sight cf. *infra*, *Physics* IV.2.1, §387. Not by chance, there follows here as well an example having to do with vision. Qualities, in other words, are first and foremost treated and exemplified as objects of sight.

AN APPEARANCE WHICH FOLLOWS FROM THE VIEWER | Arabic *hay'a min al-rā'i*. In a theory of vision which is not purely extromissive, the fact that «blackness» comes from the viewer (instead of from the thing seen) appears weird. Dunyā's reading is in any case confirmed by the Latin translation: «veniens disposicio a vidente» (MUCKLE 1933: 23.5).

THE TRUE NATURE | Reading *ḥaqīqa* instead of *ḥaqīq^u-hu* as in Dunyā. More commonly in Avicennan contexts, corporeality is identified with «continuity» [*ittiṣāl*] (cf. for instance *supra*, §117), but with the *caveat* that the bodily continuity is always predisposition to a potential subdivision (*i.e.* the aspect which is underlined here).

[§132] D169.5-170.5

The paragraph dealing with the second kind of qualities considered, *i.e.* figures, largely consists in a demonstration of the existence of the circle – which is in turn the foundation of the existence of the other figures – based on the natural shape assumed by a simple body (*i.e.* one of the four elements), when left free to expand. This shape must be a sphere, as it is the sole solid to be compatible with the homogeneity of the simple body, and its section is a circle, whose existence is thus demonstrated.

THE SHAPES PASS OVER THE WAX SUCCESSIVELY | Arabic *al-šam'a taḥtalifu 'alay-hā al-aškāl*, Latin *in cera enim variantur figure*. For the 'wax argument', here just hinted at, cf. *supra*, §108.

IT CONTINUES EXISTING | Arabic *mustamarraṭ^u l-wuġūd*, Latin. The structure is analogous to the more famous *wāġib al-wuġūd*, the Necessary Existent. The expression could thus be rendered also as «the stable existent», referring, in this context, to the 'body' of the wax as opposed to the accidental figures coming and going in it.

THE EXISTENCE OF THE CIRCLE | Arabic *wuġūd al-dā'ira*. It must be remarked that an almost opposite variant is witnessed by the Latin translation: «de essencia circuli» (MUCKLE 1933: 23.21-22). However, the notion that what is disputed is the existence of the circle, and not its essence, is maintained by the Latin version, as well, in the following sentence: «dicentes circulum non esse eo quod...» (MUCKLE, *ibidem*), which has no direct counterpart in the Arabic text.

IS CHALLENGED | Arabic *yunāzi'u fi*. I translate the text according to the particular construction of *nāza'a* (III stem), with the *fi* of the challenged object; one could also choose instead the basis meaning

of the III stem, and interpret the phrase introduced by *fi* as a complement of argument: «It is disputed, sometimes, about the existence of the circle». The Latin version translates as if the verb were in the perfect: «[i]am autem dissenserunt quidam» (MUCKLE 1933: 23.21). The global meaning of the passage in any case does not change.

COMPOSED | Arabic *murakkab*, Latin *compositum*.

SIMPLE | Arabic *mufrad* [or: *mufarrad*], Latin *simplex*.

HOMOGENEOUS | Arabic *mutašābih*, Latin *consimilis*.

WHEN FROM THIS A MEASURE IN ITSELF HAS BEEN REMOVED | Arabic *fa-hādā idā ḥulliya min-hu miqdār^m bi-nafsⁱ-hi* [Dunyā *wa-nafsⁿ-hu*]. I choose *bi-nafsⁱ-hi* over Dunyā's text on the basis of the reading of *A* and the Latin translation [*per se necessario*]. The Latin text, however, seems to be based on a misreading of *ḥulliya* as *ḥuyyila* («has been imagined»), since it reads: «Si igitur maginaverimus (*sic*) aliquam mensuram corporis» (MUCKLE 1933: 23.30-31). A textual difficulty with the same verb arose also *supra*, *Logic* III, §31; cf. also *infra*, *Metaphysics* IV.b.1.4, §261.

[§133] D170.6-end of page

After the separate exposition of quantity (§§129-130) and quality (§§131-132), the seven remaining categories are shown to be accidental. The first and foremost of them is the relation [*idāfa*], while all the others are explained in terms of a relation [*nisba*] with other things (which immediately shows their accidentality). The paragraph is concluded by a concise summary of the ontology of the categories.

ACTING | Here *fi'l* (cf. *supra*, §128, *an yaf'ala*).

BEING ACTED UPON | Here *infi'āl* (cf. *supra*, §128, *an yanfa'ila*). As already in §128, the explanation of (2.6) acting and (2.7) being acted upon comes respectively in terms of *ta'tīr* and *ta'attur*, which presuppose another thing as object or subject of the influence.

RELATIONS | Arabic *nasab*. The Latin translation omits by *saut du même au même* the lines corresponding to Dunyā 170-11-13, comprised between the first and the second occurrences of *ḥattā yanfa'ila*.

TO A TIME | Arabic *ilā zamānⁱⁿ* (Latin *in tempore*, in the second list). This is clearly a reference to the category of «when» (2.3) (see *supra*, §128).

TO A PLACE | Arabic *aw makānⁱⁿ* (Latin *in loco*, in the second list). This is clearly a reference to the category of «where» (2.2) (see *supra*, §128).

TO A COMPRISING [THING] | Arabic *ilā muḥīⁱⁿ* (untranslated in Latin as it does not appear in the second list, the only one translated). *Juxta* the preceding discussion (see *supra*, §128) this is a reference to the category of «having» (2.5), understood as having to do with the containing of something into something else.

TO A PART | Arabic *aw ḡuzⁱⁿ*. The (2.4) «position» was described *supra* (§128) as having to do with the mutual position of the parts of the body.

SO THAT IT MAY BE ACTED UPON | This is the second *ḥattā yanfa'ila*, from which the Latin translation restarts. However, as the category of (2.7) being acted upon had already had some space *supra*, one would expect at its place something linked to the category of (2.5) having (summarised just *supra* as that having to do with «a comprising [thing]»). The text may thus need to be emended, although a hypothesis of correction should wait for further evidence from manuscripts.

THE HIGHEST GENERA | Arabic *al-aḡnās al-āliya*, Latin *prima genera rerum*. The substance and the nine accidents are explicitly qualified as genera of being. For an anticipation of this same notion cf. *supra*, *Logic* II, §16. The Latin reading *prima genera* might be the consequence of a reading like **awwalīyya*

instead of *‘āliya* in the Arabic antigraph of the translation.

IT IS NOT POSSIBLE [...] NO GENUS COMMON TO THEM | The passage explicitly states that the ten categories have no common genus (and they are thus undefinable), so that existence is clearly not a genus: cf. *infra* for a further discussion on the so-called «modulation» of existence.

unite | Arabic *yaġtami‘u*, Latin *coniunguntur*.

UNLIKE THE EXISTENCE | JANSSENS 2019: 100 remarks that this passage (corresponding to Dunyā: 170.17-25) is absent in the *DN*, despite being «highly Avicennian in tone». In the *MF*, the impossibility of defining and describing existence had already been stated *supra*, §101.

CATEGORIES | Arabic *maqūlāt*, Latin *predicamenta*. Only at the end of the rich discussion concerning them do the categories receive their technical name (literally in Arabic ‘the [things] which are said’), which gives the title to Avicenna’s major treatment of Aristotle’s *Categories* in the *K. al-Šifā’*.

[§134] D171.1-15

The paragraph introduces the capital problem of the nature of the predication of existence for the ten categories. Two broad options, *i.e.* that of an (a) ambiguous – *stricto sensu* homonymous/aequivocal – and that of a (b) synonymous/univocal predication are considered. In the present paragraph option (a) is expounded, and a first reason (a.1) for its falsity is advanced. (a.1) The argument goes that if existence were predicated ambiguously/aequivocally, the existence of the categories would immediately coincide with the categories themselves; but under this assumption, saying for instance that «The substance is existent» would be tautological (tantamount to saying: «The substance is substance»). This however is not the case, as the conditions that verify the first statement are different from the conditions that verify the second. Therefore, existence is not predicated ambiguously.

THE NAME OF «EXISTENCE» | Arabic *ismⁿ l-wuġūd*, Latin *an esse dicatur*.

BY AMBIGUITY | Arabic *bi-l-ištirāk*, Latin *aequivoce*. It is clear from the rest of the analysis that «ambiguity» [*ištirāk*] designates here homonymity (or aequivocity) in its more restricted sense, *i.e.* the application of the same name to things which have nothing in common: cf. also the example of *muštarika* given *supra*, *Logic* I, §9. However, in accordance to the *usus* of the Arabic translation of Aristotle’s *Categories* (cf. §9), I have reserved the translation «homonymous» to the Arabic *muttafiq* (Latin *conveniens*), which designates a broader sense of homonymity/aequivocity, *i.e.* the one applicable to things which share the same name and also some part of their notion. TREIGER 2012: 347 translates the *muttafiq* occurring in a passage of al-Fārābī’s *K. al-Ḥurūf* as «equivocal», while in the *MF* *muttafiq* is said to be a synonym of *mušakkik* and applied to the case of existence (cf. *supra*, *Logic* I, §9).

BY SYNONYMY | Arabic *bi-l-tawātu’*, Latin *univoce* (the order of the two options is however reversed in the Latin translation with respect to Dunyā’s text; cf. MUCKLE 1933: 24.29-30). Cf. *supra*, *Logic* I, §9, for the translation of *mutawāṭi’* as «synonymous», *i.e.* univocal.

THE ACCIDENT DID NOT PARTICIPATE [...] QUANTITY ITSELF | If existence were predicated of substance and accidents ambiguously, *i.e.* strictly aequivocally, this would mean that the existence of the substance and the existence of the accidents would not have anything in common. Thus, the individual categories as highest genera would be existing inasmuch as they are themselves – substance *qua* substance, or among the accidents, for instance, quantity *qua* quantity – without any further notion. INCLUDING | Arabic *yatanāwīlu*, Latin *conveniens* (also used to translate *muttafiq*).

LIKE THE EXPRESSION ‘AYN | Arabic *ka-lafzⁱ l-‘aynⁱ*. Cf. *supra*, *Logic* I.5, §9, ‘ayn as example of «ambiguous» expression [*muštarika*]. As in that occurrence, here as well the Latin translation

operates a cultural acclimation, translating: «ut hoc nomen canis convenit diversis sensibus appellativis» (MUCKLE 1933: 25.1-2); cf. the commentary to §9 *supra* for the philosophical referents of this substitution of *ʿayn* with *canis*.

IT NAMES | Arabic *musammīyāt^m-hu* [musammīyāt^m-hā A]. Dunyā's choice of the masculine suffix over the feminine makes the logical subject of the clause the masculine *lafz*, «expression», as the word *ʿayn* is feminine in Arabic. For the Latin rendition of *musammīyāt* as *sensus appellativi* cf. also *infra*, §136.

PROFITABLE | Arabic *mufīd*. I take the term to mean 'not sterile', 'not unfruitful', in the specific sense of 'not tautological', as will be shown immediately afterwards. The Latin translation has a term corresponding to the following «understood» [*mafhūm*], but not to the first participle, as it reads: «sermo intelligibilis» (MUCKLE 1933: 25.4).

[§135] D171.16-172.5

The (a.2) second reason given against ambiguous/aequivocal predication of existence is that, should it apply, the immediate intellectual division would not be twofold – in existent and non-existent – but rather tenfold – in all ten categories. The argument is corroborated by the introduction of the fundamental Avicennan distinction between concrete existence [*annīyya*] and quiddity [*māhiyya*], which would collapse should existence be reduced to the essence of each category.

THE INTELLECT DEMOLISHES [AMBIGUOUS PREDICATION] | Arabic *anna l-ʿaql^a qāḍ^m*, Latin *quia intellectus iudicat* (which seems to presuppose a different text in the antigraph).

THE DIVISION DOES NOT EXCEED THE TWO [ALTERNATIVES] IN ANYTHING | Arabic *al-qisma lā tazīdu fī kullⁱ šay^m ʿalā itnayni*.

«THE THING IS EITHER EXISTENT, OR NONEXISTENT» | Arabic *al-šay^m immā an yakūna mawǧūd^m aw maʿdūm^m*. The Latin translation of this passage is compressed: «de omni re vera est hec divisio, vel est, vel non est» (MUCKLE 1933: 25.12-13).

«THE THING IS EITHER SUBSTANCE, OR QUALITY, OR QUANTITY» | Arabic *al-šay^m immā ǧawhar^m wa-immā kayfiyyat^m wa-immā kammiyyat^m*, Latin *res vel est substantia, vel quantitas* (with omission of a translation for 'quality').

THE CONCRETE EXISTENCE | Arabic *annīyya*. «Concrete existence» is glossed as «an expression referring to the existent other than the quiddity», cf. *infra*.

THE QUIDDITY | Arabic *māhiyya*. The Latin translation, which resolves the synthetic Arabic expressions with a periphrasis reminiscent of the logical discussion on the scientific questions, makes more explicit than the Arabic (that only has «what we have previously mentioned») the backward reference to *Logic* V, §§77-78: cf. MUCKLE 1933: 25.18-20: «ex hoc quod diximus scilicet quod questio an est, qua queritur de esse, alia est ab ea qua queritur quid est».

«IS THAT WHICH PRODUCES THE HEAT EXISTENT?» | MUCKLE 1933: 25.20 reads «que res fecit colorem esse», in which *colorem* is surely to emend in *calorem* on the basis of the Arabic text [*harāra*].

THE INK | Reading *ḥibr* instead of Dunyā's (and Kurdi's) *ḥayyiz*, as proposed by ALONSO 1963: 106 fn. 13, on the basis of Ms. London, British Museum, Or. 6.498) and of the Latin translation: «que res fecit esse nigredinem incausti» (MUCKLE 1933: 25.21).

THE DISTINCTION BETWEEN CONCRETE EXISTENCE AND QUIDDITY | Arabic *tagāyur al-annīyyatⁱ wa-l-māhiyyatⁱ*, Latin *Diversitas autem inter hanitatem, et quidditatem*. On the Latin translation of *annīyya* as (*h*)*anitas*, closer to a calque of **haliyya*, from the question-word Ar. *hal* = Lat. *an* (see *supra*, §77), cf. D'ALVERNY 1959, esp. 69-70; for the word *annīyya* in Gundissalinus' translations cf. also ALONSO 1957. The term *annīyya* rather comes, in Avicennan contexts, from the expression *burhān anna*, the

demonstration of the that (Aristotelian $\delta\tau\iota$): cf. *supra*, §78, and BERTOLACCI 2012^a: 291-292 and fn. 4 (to be seen also for further bibliography on the issue). For further, comprehensive appraisals of the terminology linked to *annīyya* in Arabic philosophical contexts cf. FRANK 1956, HASNAWI 1990^a and D'ANCONA 2011.

[§136] D172.6-21

The reading of the predication of existence as synonymous/univocal (b) (see *supra*, §134) is presented in the first place as the sole remaining alternative after the exclusion of the ambiguous/homonymous/aequivocal explanation, refuted in the preceding §§134-135. However, also synonymous/univocal predication is excluded here, by advancing two reasons against it (b.1-2). This opens the field to the presentation of a third, middle way to understand the categorical predication of existence, which will be further explained in the following §137. The Aristotelian background for the theory here expounded lies in the so-called «focal meaning» of existence – firstly and foremost applied to substance, and only secondly to the other categories –, most clearly expressed in *Metaphysics* Γ (IV); cf. OWEN 1960.

SYNONYMOUS | Arabic *mutawāṭiʿ*, Latin *univocum*.

THAT WHICH INCLUDES THE THINGS THAT IT NAMES WITH ONE [SINGLE] INCLUSION | Arabic *mā yatanāwīlu musammīyāt-hi tanāwul^{mn} wāḥid^{mn}*, Latin *quod convenit multis sensibus appellativis eodem modo*.

WITHOUT VARIATION | Arabic *min ḡayr^r tafāwutⁱⁿ*, Latin *sine differentia potencie et debilitatis*. The Latin text presupposes a longer text than Dunyā's in the Arabic antigraph used for the translation.

WITHOUT ANTERIORITY AND POSTERIORITY | Arabic *min ḡayr^r taqaddumⁱⁿ wa-ta'aḥḥurⁱⁿ*, Latin *sine prius et posterius*. As will be made clear in what follows, these two conditions of proper synonymy/univocity are not met by existence, which cannot thus be taken as predicated synonymously of the ten categories.

HUMANITY FOR ZAYD AND 'AMR | The Latin acclimation of Arabic names continues: «et sicut homo Petro, et vel Iohanni» (MUCKLE 1933: 25,31). *Iuxta* Aristotle in the *Categories*, substances do not admit a graduated predication. Secondary substances – genera, like 'animal' («animality» in the text), for the species they subsume, and species, like 'man' («humanity» in the text), for the individuals they subsume – are accordingly prevented to receive a predication according to more and less (*magis minusque*, in a common Latin wording).

NEITHER THAT ONE OF THE TWO IS WORTHIER THAN THE OTHER | Arabic *laysa aḥad^d-humā awlā min al-aḥar*. A reads *laysa li-aḥad^d-himā awlā min al-aḥar*, with a formulation that mirrors the one used for condition (b.2) just *infra*, and would translate to «neither that it is worthier in one of the two with respect to the other». This reformulates condition (b.1), *supra*, which required absence of variation (in degree or value) among the different things of which something is synonymously predicated.

NOR THAT IT IS ANTERIOR IN ONE OF THE TWO WITH RESPECT TO THE OTHER | Arabic *lā huwa aqdam li-aḥad^d-himā min al-aḥar*. This reformulates condition (b.2), *supra*, which required absence of graduation according to prior and posterior among the different things of which something is synonymously predicated. The Latin text appears to have a different formulation of these requirements, as it reads: «non enim est uni eorum sine alio, nec in uno forcius, ve1 plenius quam in alio» (MUCKLE 1933: 25,31-33).

EXISTENCE [...] OF THE ACCIDENTS | As opposed to condition of synonymy (b.2), existence is predicated (or «established» [*yatbutu*]) «primarily» [*awwal^{mn}*] of something within it – substance –, and then of the accidents. The predication of the accident is also according to different degrees, as quantity and quality have a priority over the other accidental categories. This is mirrored by the

actual treatment of the nine accidental categories *supra*, §§127-133, where the discussion on quantity and quality is always separate and preliminary with respect to the analysis of the seven remaining categories.

MAY THEN BEFALL | Arabic *qad taṭruqu*, Latin *accidit*.

AS FOR THE VARIATION | Here again, Dunyā's text has simply *tafāwut*, whereas the Latin translation reads: «Diversitas autem potencie et debilitatis» (MUCKLE 1933: 26.1-2), with the same specification already present *supra*. This reinforces the possibility that Dunyā's text is to be emended.

PERMANENT APPEARANCE | Arabic *hay'a qārra*, Latin *disposicio permanens*. For the definition of the quality of blackness as an «appearance» cf. also *supra*, §131.

THE EXISTENCE OF MOTION, TIME AND MATTER IS WEAKER THAN THE EXISTENCE OF THE OTHER THINGS | The example that goes against condition of synonymy (b.1) does not involve substance, although on the basis of Aristotelian texts like *Metaphysics* Γ it is reasonable to suppose that substance is not only prior, but also worthier, than the other categories. In the first list, things enjoying a «weaker» [*ad'af*] kind of existence with respect to that of a «permanent appearance» like blackness are «motion» [*ḥaraka*], «change» [*taǧayyur*] and «time» [*zamān*]; in the second list, «change» is substituted by «matter» [*hayūlā*]. The Latin translation reads for the first two elements of the second list the genitival construction *motus temporis*, which would presuppose the Arabic **ḥaraka l-zamān* instead of the regular list *al-ḥaraka wa-l-zamān*, and which is certainly to be discarded. The fact that a quality like blackness is used here as an example of a worthier, unchanging kind of existence can be seen as consistent with the peculiar hierarchy of categories at work in the *MF/DN*, in which three tiers or ranks – firstly and foremost (1) substance, then (2) quantity and quality, and finally (3) the remaining seven accidents – are distinguished. In this model, indeed, a quality can be thought of as enjoying a stronger sense of existence with respect to lower-tier accidentals, which would not apply in the case of a mere bipartition between substance and accidents.

[§137] D172.22-173.6

The paragraph expresses in a nutshell the Avicennan theory of the modulation of existence [Arabic *taškik al-wuǧūd*, Latin (commonly, but not in the translation of the *MF*) *analogia entis*], in a variant which explicitly considers existence to be accidental with respect to the quiddity. The notion of the Necessary Existent as pure existence without quiddity is introduced.

THESE TEN [CATEGORIES] [...] AMBIGUOUS | The way in which existence is predicated of the ten categories is neither synonymous (§136), nor ambiguous – *i.e.* homonymous in the stricter sense – (§§134-135), as the categories «agree» [Arabic *ittafaqat*, Latin *conveniunt*] in the existence «in one sense» [*min waǧh^m*], but «differ» [Arabic *ihtalafat*, Latin *differunt*] in another. It is remarkable that the verb which expresses the 'concordance' in existence is the VIII stem *ittafaqa*, from which the active participle *muttafiq* – which translates the Aristotelian 'homonymous' in broader sense, as opposed to *muštariq* – also derives.

THIS KIND OF NAME | Arabic *hādā l-ǧins^u min^a l-ismⁱ*, Latin *nomen huius modi*.

«MODULATED NAME» | Arabic *ism mušakkik*, Latin *nomen ambiguum*. On the notion of *taškik al-wuǧūd* – often translated in Latin contexts as *analogia entis*, and here represented with the use of the active participle of the verb *šakkaka* –, cf. TREIGER 2010 (for the background of Avicenna's doctrine and a fine analysis of its theoretical implications) and ZAMBONI 2020 (for a perspective on its post-Avicennan reception). For the history of the concept from al-Fārabi onwards cf. now the comprehensive PhD dissertation by ANSARI 2020. In the immediate aftermath of Avicenna's scholarship, the notion was employed by Bahmanyār ibn al-Marzūbān (*K. al-Taḥṣil*, ed. MUTAHHARĪ

1996: 281.10-20; cf. EICHNER 2009: 39) and ‘Umar al-Ḥayyām (Ġawāb ‘an *ṭalāt masā’il su’ila ‘an-hā*, ed. in IŞFAHĀNĪ 2000: 165.3-5); cf. GRIFFEL 2021: esp. 398 ff. for references, although he does not discuss the occurrence of the notion in the *MF*.

«HOMONYMOUS» | Arabic *muttafiq*, Latin *eo quod aptatur omnibus*. The Latin translators choose here a periphrasis, while *supra*, *Logic* I, §9, they had rendered *muttafiqa* as *convenientia*. In that passage of *Logic*, the text of the *MF* had already anticipated the case of existence as an example of *muttafiq* predication. It is clear, thus, that the sense of homonymity here at stake is a weak one, as opposed to the case of ambiguity [*ištirāk*], already excluded *supra* (§§134-135). In Ibn al-Ṭayyib (*Commentary to the Isagoge*) and al-Fārābī (*Kitāb al-Ḥurūf*, §158, 160.7-161.9), *muttafiq* seems to be used to indicate the frankly unequivocal terms, rather than the ‘modulated univocal’ ones: see TREIGER 2012: 341; 347. In *K. al-Šifā’, Maqūlāt*, I 2 Avicenna says that the notion captured by *mušakkik* can also be expressed with another term – maybe precisely *muttafiq*? Already WOLFSON 1973: 473, as quoted by TREIGER 2012: 354 n. 85, remarked on the usage of *muttafiq* in the *MF* as synonymous with *mušakkik*.

THE EXISTENCE IS ACCIDENTAL FOR ALL THINGS | Arabic *annā l-wuġūd^m ‘aradīyy^m li-l-ašyā’ kull^l-hā*, Latin *ens accidentale est*. The notion of the accidentality of existence is stated again with the use, immediately afterwards, of the verb *ya’riḍu* («accidentally inheres»), which is used to describe the occurring of existence to the «quiddities» [*māhiyyāt*] due to a cause external to the quiddity itself. Cf. also the Latin translation: «Igitur esse accidens est omnibus quidditatibus aliunde, eo quod esse non est eis ex ipsis» (MUCKLE 1933: 26.11-12). The claim that existence is accidental is already to be found in the corresponding passage of the *DN*: «Dans ces catégories, l’existence se distingue de l’essence parce que l’existence est accidentelle, non essentielle» (Achena-Massé: 116.14-16). BERTOLACCI 2013^a: 256-259 remarks that in the *Ilāhiyyāt* of the *Šifā’* Avicenna is on the contrary quite careful in avoiding blunt affirmations of the accidentality of existence (see *Ilāhiyyāt* 8.4, MÜSÄ-DUNYĀ-ZĀYID 1960: 346.13 for an exception), and that the greatest part of the occurrences of the accidental terminology in the Latin translation of Avicenna’s *Metaphysics* (the *Philosophia prima*) are due to the Latin translator; see the summary tables provided in BERTOLACCI 2013^a: 257-258. As already noticed in SIGNORI 2019: 500-501 and fnn. 121-122, the *MF* and its Latin translation constitute on the contrary a vast repository of claims in the direction of the accidentality of existence, both in logical (cf. *supra*, *Logic* II, §11 and §16) and in metaphysical context (cf. *infra*, *Metaphysics* V, §295). Apart from al-Ġazālī, an ‘accidental’ interpretation of the distinction between existence and quiddity is also adopted by Averroes, who interprets existence as a «supervening attribute» (Arabic *šifa zā’ida*, Latin *dispositio addita*) of the quiddity (cf. BERTOLACCI 2013^a: 256).

BY THEIR [OWN] ESSENCE | Arabic *min dāt^l-hā*. The more common Arabic term for «essence» [*dāt*] continues to be used in heavily Avicennan contexts alongside the more technical «quiddity» [*māhiyya*], just like the plainer *wuġūd* is employed in parallel with the *terminus technicus* «concrete existence» [*anniyya*].

THE FIRST CAUSE IS AN EXISTENCE WITH NO ADDED QUIDDITY, AS WILL BE [EXPLAINED] | Arabic *kānat al-‘illat^m l-ūlā wuġūd^m bi-lā māhiyyat^m zā’idat^m, ka-mā sa-ya’tī*, Latin *prima causa est ens, sine quidditate insuper addita, sicut ostendemus*. This central tenet of Avicenna’s philosophical theology will have several formulations in what follows: cf. *Metaphysics* II.4, §179; *Metaphysics* III, §203, §§240-243, §295. JANSSENS 2019: 100 has an unclear observation on this point, to the effect that the formulation of the *MF*, as opposed to that of the *DN*, is however in the same spirit of the doctrines of the *Ilāhiyyāt* of the *K. al-Šifā’*. This conclusive statement makes it clear that, in the framework traced by ZAMBONI 2020, the al-Ġazālī author of the *MF* and reader of the *DN* would belong to those thinkers who found plausible Avicenna’s thesis of God’s being pure existence without any quiddity, but who defended this doctrine by arguing for the accidentality, and not the essentiality, of existence (thus going against another major Avicennan concern, at least in the *Šifā’*). This group of ‘defenders’ of Avicenna includes, in Zamboni’s analysis, prominent figures like Avicenna’s direct disciple Bahmanyār ibn Marzūbān (d. 1066) and his great interpreter Naṣīr al-Dīn al-Ṭūsī (d. 1274). It is historically relevant that such a position was actually instantiated, although cursorily, in one of Avicenna’s own works,

and that al-Ġazālī’s *MF*, built on the textual basis of the *DN*, represents an early example of its philosophical and theological reception.

[§138] D173.7-174.4

The final paragraph of the first division of *Metaphysics* I (started back at §101 *supra*) extends the reasoning just concluded with regard to existence to the notions of «accident» – as predicated of the nine accidental categories – and «one» – as predicated, like existence, of all beings. These notions as well, indeed, do not depend from the quiddity of the thing of which they are predicated, thus being accidental. This is proven by the fact that it is possible to doubt about them once having conceived the quiddity of the thing to which they refer, while the possibility of the doubt is blocked in the case of essential notions (like the genus for the species).

IN RELATION | Arabic *bi-l-iḍāfat*ⁱ. Despite the use of the more technical *iḍāfa*, the sense of ‘relation’ seems here closer to the generic meaning of *nisba* (which appears *infra* in the clause explaining the reason of the accidentality: «by virtue of the relation [*nisba*] to its receptacle»).

IN THE FACE OF | Arabic *bi-izā*^x.

WE [...] DOUBT | Arabic *natašakkaku*.

WE [...] RAISE DOUBTS | Arabic *nušakkiku*.

MAN CANNOT CONCEIVE THE BLACKNESS | The reading of *A* is seemingly repetitive, but perhaps actually *difficilior*: «one cannot conceive that man conceives the blackness [and raises doubts...]». The Latin translation adds an existential nuance absent in the Arabic text: «non potest homo imaginari esse nigredinem» (MUCKLE 1933: 25.24-25).

AND RAISE DOUBTS ABOUT ITS BEING A BODY, OR AN ANIMAL | The Latin text does not mention any equivalent for ‘body’: «et dubitare ipsum esse animal» (MUCKLE 1933: 25.26).

THE SUBSTANCE IN FOUR PARTS | Arabic *al-ḡawhar ilā arbaʿat^m aqsāmⁱⁿ*, Latin *substanciam in quatuor*. These are matter, form, body and intellect. Cf. *supra*, §105.

THE ACCIDENT IN NINE PARTS | Arabic *al-ʿaraḍ ilā tisʿat^m aqsāmⁱⁿ*, Latin *accidens in novem*. These are the nine accidental categories, listed *supra* for the first time at §127.

TABLE 29. *Table of the categories*

				Examples
BEING	SUBSTANCE		Matter Form Body Intellect	
	ACCIDENT	1. Not in need of any other thing	1.1. Quantity	1.1.1. Continuous 1.1.2. Discrete
			1.2. Quality	1.2.1. Sensible 1.2.2. Non-sensible
		2. In need of another	2.1. Relation 2.2. Where 2.3. When	

thing	2.4. Position
	2.5. Having
	2.6. Acting
	2.7. Being acted upon

[§139] D174-5-176.18

The Second division of the first treatise of *Metaphysics* presents the subdivision of the existent into universal and particular. Since their nature has already been explained in *Logic*, the metaphysical treatment will only consider their states, which are said to be four. The first one, *i.e.* the mental nature of the universals, which do not exist *in re*, is expounded in the present paragraph. By the same token, a strong criticism to the theory of Platonic ideas is performed.

UNIVERSAL | Arabic *kullī*, Latin *universale*.

PARTICULAR | Arabic *ǧuzʿī*, Latin *particulare*.

AS FOR THE TRUE NATURE OF BOTH [...] *LOGIC* | The backward reference to the logical discussion is in this case very precise, as it also indicates that the treatment of universal and particular occurred in the first treatise of that section: cf. *supra*, *Logic* I.3, §7. Cf. Latin: «in principio logice» (MUCKLE 1933: 27.3). STATES | Arabic *aḥkām*, Latin *iudicia*.

APPENDAGES | Arabic *lawāḥiq*, Latin *que accidunt eis*.

IN THE MINDS, NOT IN THE INDIVIDUAL INSTANCES | Arabic *fi l-adhānī*, *lā fi l-aʿyānī*, Latin *in intellectibus non in singularibus*. To designate the mental existence of the universal, the Arabic text has here the plural of *dīhn*, ‘mind’, while the Latin translation uses the more technical *intellectus* (which would rather correspond to the Arabic *ʿaql*). The real individuals, in which universals do *not* exist, are indicated with *aʿyān*, one of the possible plurals of the polysemous *ʿayn* (on which see *supra*, *Logic* I.5, §9).

A GROUP | Arabic *qawm*, Latin *quidam*. The reference to a particular group of thinkers supporting in some form the thesis of the realism of the universals – as opposed to their purely mental existence – is already in the *DN*; cf. ACHENA-MASSÉ: 116: «Pour certaines gens [...], beaucoup de gens [...]». The position of these generic people would be that of affirming the actual existence of the universals as one in number.

LIKE THE ONE FATHER [...] SITES [ON EARTH] | The two similes – already present *verbatim* in the *DN* – aim to illustrate how something one in number can be for, or in, manifold things. They entail respectively the relation of fatherhood of «the one father» [*al-ab al-wāḥid*] for his many «children» [*banūna*], and that of illumination that «the one sun» [*al-šams al-wāḥida*] entertains with many «sites» [*biqāʿ*] on earth. The Arabic *buqʿa* can also mean ‘spot or patch (of the earth)’ (WEHR 84^a), which justifies the Latin translation as ‘fields’: «sicut unus sol pluribus campis» (MUCKLE 1933: 27.13).

SHEER ERROR | Arabic *ḥaṭaʿ maḥḍ*, Latin *purus error*. The doctrinal error involved in the realism of the universals is clarified by means of an absurd (violation of the principle of non-contradiction) arising from the supposition, for instance, of the universal soul as one in number. This, indeed, would entail the presence of the same soul in both Zayd and ‘Amr (Latin, as usual, *Petrus* and *Iohannes*), but Zayd might be knowledgeable and ‘Amr ignorant over the very same subject, leading to the attribution of contradictory properties to the same soul, under the same respect. While in the *Ilāhiyyāt* of the *K. al-Šifāʿ* the names of Zayd and ‘Amr («common in all Arabic theoretical discourse», see GUTAS 2014^a: 324) are also used, it is remarkable that Avicenna’s corresponding passage in the *DN* mentions instead the name of Plato [Persian *Aflaṭūn*] as the example of knowledgeable soul, leaving by contrast unnamed the ignorant counterpart of the philosopher: see ACHENA-MASSÉ 117.28-34, ed.

MO'IN 1952: 41.5 (for the name of Plato). This is the sole occurrence of Plato's name in the *DN*. In the *Ilāhiyyāt* of the *K. al-Šifā'*, Plato is likewise mentioned only two times at short distance from one another (*Ilāhiyyāt* VII.2, ed. Cairo 311.6 and 311.14), in the context of a similar critique to the Platonic theory of ideas, and specifically to the possibility that a universal notion like «humanity» might be one in number and actually existent (cf. the Italian translation in BERTOLACCI 2007: 589-590; the English translation by MARMURA 2005^a, which has the weaker reading: «saying that *there belongs to humanity one existing idea*», is vitiated by the error *li-l-insāniyyat*^t, emended by BERTOLACCI 2007: 122 in *al-insāniyyat*^a). The mention of Plato in the *DN*, then, is certainly to be seen more as a hint to this kind of criticism, than as an affirmation of paradigmatic knowledge attributed to Plato as opposed to the «First Teacher» Aristotle. Remarking on the same passage of the *DN*, GUTAS 2014^a: 324 and fn. 7 qualifies *expressis verbis* Avicenna's mention of Plato as «a mocking reference to his theory of ideas» (Gutas also quotes a note by Achena and Massé to the same effect, which I was however unable to locate).

WALKING OR FLYING, AND BIPEDAL OR QUADRUPEDAL | Arabic *māšīyy^{an} wa-ṭā'ir^{an}*, *aw māšīyy^{an} bi-riġlayni wa-bi-arba^{an}*, Latin *aquatile gessibile duobus pedibus vel quatuor, et volatile*. The Latin text appears to presuppose an Arabic text like **mā'īyy^{an}* ('watery', 'aquatic') – instead of *māšīyy^{an}* – in the first occurrence, and a displacement of *wa-ṭā'ir^{an}* at the end of the series. If one intends, as seems reasonable, «bipedal» and «quadrupedal» as further differentiae of «walking» as primary differentia – at the same level of «flying» – of the genus 'animal', Dunyā's text might be seen as the correct one, although the intermission of «flying» breaks the series of successive specifications. Moreover, the Persian text of the *DN* reads makes no mention of «aquatic» (or equivalent) as a differentia (ACHENA-MASSÉ: 118: «marcheur, volant, non marcheur, non volant, bipède et quadrupède»). On the other hand, the passage *mā'īyy^{an} > māšīyy^{an}* is graphically very easy, and it might also be argued that it is more likely than the reverse transition *māšīyy^{an} > mā'īyy^{an}*, although in this case we would not have the primary differentia «walking», but only the secondary ones «bipedal» and «quadrupedal».

SENSIBLE DIRECT TESTIMONY | Arabic *mušāhada*, untranslated in Latin.

PRESENTS ITSELF AS FIRST | Arabic *yashīqu*, Latin *proponitur*. The first «individual» [*šaḥṣ*] of each species (and genus) which presents itself at the mind through the sensible experience is the one which forms the 'universal' notion of that species or genus; every further instance of the same universal does not form a new «impression» [*aṭar*] in the mind. By contrast, the sensible experience of an individual pertaining to a different universal – for instance a «predatory animal» [*sab^{an}*] – would form a different «picture» [*naqṣ*], and thus a different universal notion, in the mind.

IN THE WORLD OF GOD MOST HIGH | The reference to God is omitted in the Latin translation; cf. MUCKLE 1933: 27.28-29.

[§140] D176.19-177

The paragraph provides a concrete example of the theory of knowledge sketched *supra* in §139, *i.e.* that of different signet rings (individuals) engraved with the same incision (belonging to the same universal, *i.e.* to the same genus or species), which form the same picture (the same universal notion as instantiated in the mind) when impressed in the wax (the human mind). JANSSENS 2019: 100 correctly remarks that the example of the ring and the seal is particularly developed in the *MF* with respect to the *DN*, where the example only appears very briefly within the main line of reasoning (cf. ACHENA-MASSÉ: 117.23-27: «Ainsi, s'il y a une certaine quantité de bagues [dont le chaton porte] une seule et même gravure, lorsque l'une marque son empreinte, celle-ci serait la même que l'empreinte de toute autre bague» and see the Table of correspondences provided in *Appendix 1*).

WHEN [VARIOUS] SIGNET RINGS HAVE BEEN NOTCHED | Arabic *idā furriḍat ḥawātim*, Latin *sicut si sint multa sigilla*. Given the nature of the example, which involves the carving or engraving of a picture (or a calligraphic piece of writing, as seems to be the case with most extant pieces of Arabic signet rings: cf. the later example – 15th-16th century – described in EKTHIAR-CANBY-HAIDAR-SOUCEK 2011: n. 134, pp. 196-197, illustration in colour at p. 197), I interpret the verbal voice as the passive of the II stem, with the meaning of ‘to notch, to make incisions’ (WEHR 826^b), which is also certainly *difficilior*. Comprehensibly, the Latin translators have apparently taken the *rasm* as a far more common voice of the I stem, with the meaning of ‘posit’, ‘presuppose’, and rendered it, even more generically, with the verb ‘to be’ (*si sint*). The Arabic word for «signet rings» [*ḥawātim*] is the same one famously used, in the singular, to designate Muḥammad as «Seal of the Prophets» [*ḥatam al-nabiyyīna*] (cf. *Qurʾān* 33:40).

A PICTURE OF ALL THE SIGNET RINGS | Arabic *naqṣ kull al-ḥawātim*, Latin *depicchio omnium sigillorum*. The figure impressed in the wax is «universal» [*kullī*] because it is the same for every [*kull*] signet ring sharing the same engraving with the first one. The truth of this kind of explanation is deemed to be known intellectually, without the help of the senses.

ONE PRESUPPOSES | It seems far more natural to interpret here the verb as the I stem, reading *yafriḍu* instead of *yufarriḍu* («one notches» or ‘carves’), which is however a potential translation.

IN THE GOLDEN SIGNET RING, IN THE SILVER SIGNET RING, AND IN THE IRON SIGNET RING | Bearing in mind that the single, different signet rings are meant here to represent the different individuals of a single species or genus (as they share the same picture), the various metals are meant to designate even more clearly the difference of the various individuals sharing in the same universal, making it more apparent that it is impossible to assume that the picture notched in each one of them – *i.e.*, metaphors aside, the universal notion – is one in number. D-Alt has the metals in the order ‘gold, iron, silver’, while the Latin text witnesses a third indifferent variant reading, *i.e.* silver, gold, iron.

ONE BY SPECIES | Arabic *wāḥid bi-l-nawʿ*, Latin *unam specie* (thus emending Muckle’s *speciem*). The universal notion can be one by species, but not one by number. For a thorough analysis of the different senses of unity, cf. *infra*, *Metaphysics* I.3, §§148-150.

YES, THEIR IMPRESSIONS [...] ONLY ONE | The sentence appears suspended, as one would expect it to be concluded by an adversative clause stating again the impossibility of a unity by number of the universal notion.

IMPRESSIONS | Arabic *taʿīrāt*, Latin *impressio*.

THE RECEIVED IMPRESSION | Arabic *inṭibāʿ*, Latin *sigillationem*.

THERE IS NO UNIVERSAL MAN, THEN, IN THE EXTERNAL EXISTENCE | Arabic *fa-laysa fī l-wuḡūd l-ḥāriḡ insān^{mn} kullīyy^{mn}*, Latin *in exteriore esse, scilicet, esse actuali, non est homo universalis*. The gloss *esse actuali* seems to be added by the Latin translators, as it does not have a counterpart in the Arabic text.

[§141] D178.1-17

The second «state» [*ḥukm*], expounded in the present paragraph, affirms that multiplicity can occur within a universal notion only by means of a differentiation of the particulars, either through a differentia or through an accident. Without that, numeric distinction is unconceivable.

BY VIRTUE OF A DIFFERENTIA OR AN ACCIDENT | Arabic *bi-faṣl^{mn} aw ʿaraḍ^{mn}*, Latin *differencia, vel accidente*. The individuation of the particulars within the universal can be either essential – through the differentia –, or accidental. Cf. *supra*, *Logic* II, §17.

MULTIPLICITY | Arabic *taʿaddud*, Latin *numeracio*.

INDIVIDUALIZATION | Arabic *taḥaṣṣuṣ*, Latin *singularitas*.

DIFFERENTIATION | Arabic *taḡyūr*, Latin *diversitas*.

LIKEWISE, TWO MEN [...] ABSTRACTED FROM PLACE, OR ATTRIBUTE, OR ELSE | The example of the differentiation of the two human beings – relative thus to substances and not to qualities, like in the case of the two «blacknesses» – is additional with respect to the *DN*; cf. JANSSENS 2019: 100. The mere universal notion of humanity, when considered as «abstracted» [*muḡarrad*] with respect to any additional accident, cannot be manifold; multiplicity only occurs when an individualizing accident obtains. For the example of the two blacknesses occurring in the similar context of presentation of a *principium individuationis* cf. already *supra*, *Logic* II, §17.

DISSIMILARITY | Arabic *muḡyāra*, Latin *diversitas*. Without some sort of «dissimilarity», numerical distinction becomes impossible to conceive, because the concept of unity itself would collapse: every thing that is one could just as well be two, or five, or a thousand.

[§142] D178.18-179

The paragraph presents a demonstration of the thesis expounded in §141. The demonstration shows that the universal notion and its particular instantiations cannot coincide, because otherwise every particular would be the universal itself, and vice versa. Thus, an additional notion with respect to the sheer universal is needed in order for the particulars to be determined into actual existence.

[WERE EQUIVALENT TO OUR SAYING: «IT IS BLACKNESS»] | The long integration seems necessary to understand the reasoning, as the extant Arabic sentence appears suspended. A possible lacuna in Dunyā's Arabic might be confirmed by the Latin reading: «Si autem fuerit unum et idem ita ut idem si team esse nigredinem et eam esse illam nigredinem...» (MUCKLE 1933: 29.15-16).

THERE WOULD NOT BE [ANY] MULTIPLICITY | Arabic *fa-laysa tamma ta'addud*, Latin *non erit igitur ibi numeracio*.

A DUALITY IS NOT CONCEIVABLE IN IT AT ALL | As noticed by Dunyā as well *ad locum*, this seems to be a sort of argument for the oneness of God [*tawḥīd*], however presented as a sort of marginal note, an afterthought with respect to the main course of the argumentation. The corresponding passage in the *DN* reads: «Par conséquent, tout être dont l'essence est l'existence (c'est-à-dire que son essence est sa propre existence: ainsi Dieu qui est existence par excellence), la différence et l'accident ne le différencient pas» (ACHENA-MASSÉ: 119.31-35), without a specific emphasis on the unity of the First Cause as negation of any duality. Although being of course inferable from Avicenna's statement, the emphasis on the specific Islamic concept of *tawḥīd* appears thus to be a Ḡazālīan addition. This passage has a strong parallel in the discussion on the oneness of the Necessary Existent in *Metaphysics* II.7, §182.

[§143] D180

[(3)] The third state [*hukm*] concerns the status of differentiae and accidents with respect to the universals to which they are attached. While higher-level universals belong to the definition of lower-level ones (like 'body' for 'animal', or 'animal' for 'man': cf. *supra*, *Logic* V, §86), the differentiae do not belong to the quiddities of their universals, but only to their concrete existence. In other words, particulars cannot exist without the differentiae and the accidents which specify and individuate them, and conversely the quiddity of the universals is entirely independent from those differentiae and those accidents that serve to instantiate them in actual existence.

HUMANITY HAS NO ACCESS | Arabic *al-insāniyyat^a lā madḥal^a la-hā*, Latin *humanitas enim non recipitur in its perfection* | Arabic *bi-kamāl-hā*, Latin *plena et integra*.

PERFECT | Arabic *kāmila*, Latin *tota et plena*.

IN MAKING THE UNIVERSAL CONCEPT AN ACTUAL EXISTENT | Arabic *fi šayrūratiⁱ l-maʿnā al-kullī mawǧūd^{mn} ḥāšil^{mn}*, Latin *ad faciendum ipsa universalia esse* (with a plural *pro* an Arabic singular), and no counterpart for *ḥāšil*.

OTHER IS THE EXISTENCE, AND OTHER THE QUIDDITY, AS IT WAS SAID BEFORE | Arabic *wa-l-wuǧūd ḡayr^{mn} wa-l-māhiyya ḡayr^{mn} ka-mā sabaqa*, Latin *Esse ergo est aliud et quidditas aliud similiter, sicut prediximus*. Cf. *supra*, §135, for a previous introduction of the famous Avicennan distinction (in that case with the more technical *annīyya* replacing *wuǧūd*).

LENGTH AND WHITENESS | JANSSENS 2019: 100 attributes the addition of the concrete example of the two accidents – a quantity and a quality – to al-Ġazālī. The entire reasoning focuses on the demonstration of the fact that differentiae do not pertain to the quiddities of their universals; having shown that, the same holds *a fortiori* for the accidents, which are not essential in the first place.

[§144] D181.1-12

[(4)] The fourth state declares that all accident is caused. Accidents can either be caused by the essence of the subject in which they inhere, or by something external to that, but they never coincide with that essence. The accident, indeed, always needs its subject in order to exist; therefore it does not exist by virtue of itself. However, only that which exists by virtue of itself is not caused; therefore, the accident is caused.

CAUSED | Arabic *muʿallal*, Latin *causatum*.

THE ESSENCE OF THE SUBJECT | Arabic *dāt al-mawǧūdⁱ*, Latin *essencia ipsius subiecti*. (a) The examples of accidents caused by an essential property of the subject in which they inhere are «the downward movement» [Arabic *al-ḥaraka ilā aṣfal*, Latin *moveri deorsum*] of the «stone» [*ḥaǧar*] and the «cooling» [Arabic *tabrīd*, Latin *infrigidare*] of the «water» [*mā*]. For these properties of the elements earth and water cf. respectively *infra*, *Physics* I, §309 (on the natural movement of the stone) and *Physics* II, §§335-336. For the accidentality of these behaviours, albeit caused by the essence, see also *Physics* II, §338 (explicitly considering the case of the cooling down of water, but also taking into account the upward/downward movement of different materials).

EXTERNAL TO ITS ESSENCE | Arabic *ḥāriǧ min dātⁱ-hi*, Latin *aliud ab essencia*. (b) The examples of accidents caused by something other than the essence of the subject in which they inhere are «warmth» [Arabic *suḥūna*, Latin *calefieri*] for the water, and the «upward» [Arabic *ilā fawqa*, Latin *sursum*] movement for the stone. For the heating of water, in the context of the discussion on the possible transformations of the elements, cf. *infra*, *Physics* II, §339. In the *DN*, only the examples of the downward movement of the stone for case (a), and of the warming up of water for case (b) are mentioned.

[§145] D181.13-182.4

While reflecting on the cause of the accident, the present paragraph achieves an important result in terms of the relationship between the quiddity and the existence. The existence of the cause must

obtain before its being cause; then, the quiddity cannot be cause for the existence of itself, but rather needs an additional cause external to it that accounts for its existence. If then something is assumed to be existent and yet uncaused, its existence will coincide with its quiddity. If its quiddity were not immediately its existence, indeed, it would need an external cause for its existence, but then it would not be uncaused (which goes against the assumption). The theological import of this is apparent, although this kind of only ‘material’ demonstration (the terminology is in DE HAAN 2016) cannot be considered as a proper formal demonstration of God’s existence. For the relevant texts to the issue in Avicenna’s *Ilāhiyyāt* cf. also BERTOLACCI 2007. On cause and caused in the *MF* cf. also *infra*, *Metaphysics* I.5, §§156-161.

AN EXHAUSTIVE SUBDIVISION | Arabic *taq̄sīm ḥāṣir*, Latin *divisio perfecta*.

IF THERE IS SOMETHING [...] ITS QUIDDITY | Without mentioning God, this anticipates the Avicennan theory that existence and quiddity coincide as God as the First Cause and Necessary Existent; cf. *supra*, §137, and *infra*, *Metaphysics* II.4, §179; *Metaphysics* III, §203, §§240-243, §295.

ITS CONCRETE EXISTENCE | Arabic *anniyyat^u-hu*, Latin *id quod queritur de eo per an est*.

ITS QUIDDITY | Arabic *māhiyyat^u-hu*, Latin *id quod queretur [sic] de eo per quid est*. For an explanation of the technical terms cf. *supra*, §135; the wording of the Latin translation entails a backward reference to the scientific questions dealt with in *Logic* V, §§77-78.

[§146] D182.5-15

The paragraph presents the answer to the question of a fictitious interlocutor, who asks for the criteria of distinction between the generic application of the universals to the particulars – *i.e.* the genera, which can be determined by an essential differentia –, and the specific one – *i.e.* the species, which can only be determined by an accident.

SPECIFIC [UNIVERSAL] | Arabic *al-nawʿ*, Latin *speciale*. This kind of universal, the species, is glossed as only being divisible «through the accidents» [*bi-l-aʿrāq̄*].

GENERIC [UNIVERSAL] | Reading *al-ḡinsī* instead of Dunyā’s *al-ḡins*; Latin *generale*. This kind of universal, the genus, is glossed as being divisible «through the essential differentiae» [*bi-l-fuṣūl al-dātiyya*].

IS SUSCEPTIBLE | Reading *yaq̄balu*, as *supra* in the case of the species, instead of Dunyā’s *yaḡfilu*.

LAYS BEFORE YOU | Arabic *ʿaraḍa ʿalay-ka*, Latin *occurrerit tibi*.

A SPECIFIED EXISTING BEING | Arabic *mawḡūd^{an} ḥāṣil^{an} muʿayyan^{an}*, Latin *aliquid singulare*.

DISCRIMINATION | Arabic *tafriqa*, Latin *distincionis* (and later *differendi*).

AS IT WAS SAID BEFORE | In this same paragraph, as for the specific argument concerning the distinction on the basis of the reception of the differentia (essential), and the accident; but cf. *supra*, *Logic* II, §17 and *Metaphysics* I.2, §141, as for the accident as principle of determination of the individuals within the species.

[§147] D182.16-183.8

The paragraph provides an example of what is expressed in §146, thus concluding the Second division of being (started *supra*, at §139).

UNLESS IF | Cf. Latin: «ad restringendum quatuor non egeamus eis adiungere, nisi nuces vel homines vel alia...» (MUCKLE 1933: 31.24-25). In contrast with the Latin plurals, the examples are given in the singular in the original Arabic («nut», «horse», «man»). What is meant is that the essence of the number is independent from the things counted, which are accidental with respect to it.

DO NOT [APPEAR] IN THEM | Reading *fi-hā* as in D-Alt – intending the reference to the «numbers» [*a'dād*] just mentioned, although it could also refer to the feminine singular «four» [*arba'a*] –, instead of the *fi-hi* printed by Dunyā, which would not have a masculine referent.

IT IS NOT POSSIBLE FOR YOU TO PRESUPPOSE | Or rather, «it is possible for you to not presuppose» (in the sense that the existence does not follow necessarily from the quiddity of the number; cf. also *supra*, §145). What is meant, in connection to §146 *supra*, is also that the number is a genus because it needs something essential – a differentia – in order for being conceivable in the actual existence.

THE NUMBER | Reading *al-'adad^a* as *A*, instead of Dunyā's *li-l-'adad^f*, which would do better if it were followed by 'actual existence' [**wuġūd^{an} ḥāṣil^{an}*] instead of *mawġūd^{an} ḥāṣil^{an}* («as an actual existent») printed by Dunyā.

BUT RATHER | Reading *bal* instead of Dunyā's misprint بل.

NUMBERNESS | Arabic *'adadiyya*, Latin *numeracionem*.

AN INTRICACY | Arabic *ta'qīd*, Latin *intrinsecacio* (perhaps **intricatio?*).

THESE CONCEPTS [...] VERBAL EXPRESSION. | By means of the common opposition between «verbal expression» [*laḥẓ*] and «concept» [*ma'nā*], al-Ġazālī takes the opportunity to insert here one of his frequent linguistical reflections, which aims in this case to advise against the intricacies of the lexical wordings, and to focus instead one's attention on the concept lying behind the obscurity of the language.

[§148] D183.9-184.12

The Third division of the first treatise of *Metaphysics* entails a subdivision of being into one and manifold. The divisions or senses of the one, and conversely of the manifold, are analysed in this subsection, together with the appendages of unity and multiplicity. In the present paragraph, a distinction between (a.1) one in proper sense and (a.2) one in figurative sense is drawn, and the three degrees of the one in proper sense (a.1.1-3) are presented and analysed in detail. JANSSENS 2019: 100-101 and fn. 76 remarks that al-Ġazālī's elaboration of the concepts of oneness and plurality, based on the notions of potency and actuality (for which cf. *infra*, §§166-168), is an addition with respect to Avicenna's *DN*, although it «has striking common elements with the *Ilāhiyyāt*» of the *K. al-Šifā'* (QANAWATĪ-ZĀYID 1960: 98.12-99.18). Al-Ġazālī's treatment of the various senses of «one» in the *MF* (§§148-150) was particularly appreciated by Albert the Great: see ALBERT, *Summa theologiae*, Pars I, 6.24.1, ed. SIEDLER 1978: 144.59-67: «Unde omnibus his rationabilius distinguit unum Algazel dicens, quod est unum simpliciter et unum secundum quid. Simpliciter unum dicitur tribus modis, scilicet in quo non est multitudo nec actu nec potentia, ut unitas una et punctus unus et deus unus; secundo, in quo est multitudo potentia, non actu, ut aqua una, aër unus, caro una, continuum unum; tertio, in quo est multitudo et actu et potentia, ut homo unus et manus una, caput unum» (see SIGNORI 2019: 486 and fn. 65; *Appendix* n. 307, pp. 614-615).

IN PROPER SENSE | Arabic *ḥaqīqat^{an}*, Latin *vere et proprie*.

FIGURATIVELY | Arabic *maġāz^{an}*, Latin *improprie*. The opposition between the two concepts of *ḥaqīqa*

as ‘proper’ or ‘literal’ sense, and *mağāz* as ‘figurative’, ‘allegoric’ or ‘metaphorical’ sense is typical of the Qur’ānic exegesis, and more generally of the works devoted to the principles of Islamic jurisprudence [*uṣūl al-fiqh*]. For an examination of the use of these key-hermeneutical concepts in the work of such a relevant theologian as Abū al-Ḥusayn al-Baṣrī (d. 728), with further information (and discussion) also on the significance of the theories of language involved in the application of this distinction, cf. GEISLER 2017. The corresponding passage of the *DN* does not make use of this opposition, which is then to be considered as one of al-Ġazālī’s linguistical (and in this case also subtly ‘theological’) additions.

THE SPECIFIED PARTICULAR | Arabic *al-ğuz̄ī al-mu‘ayyan*, Latin *singulare signatum*.

DEGREES | Arabic *marātib*, Latin *modis*.

THE TRUEST NATURE | Arabic *al-ḥaqīqa al-ḥaqqa*, Latin *verissime*. (a.1.1) The first degree of the one in proper sense is called literally the ‘true truth’ (or the ‘true proper sense’, maintaining the translation of *ḥaqīqa* as opposed to *mağāz*). This highest kind of unity has no multiplicity whatsoever, neither actual nor potential. The examples given are the unity of «the essence of the Creator» [*dāt al-bārī*] and that of the «point» [*nuqṭa*].

IT IS NOT SUSCEPTIBLE OF IT | *scil.* of subdivision.

HE IS THEN THE TRUE ONE | Arabic *al-wāḥid al-ḥaqq*, Latin *vere unus*. Al-Ġazālī’s text is much expanded with respect to Avicenna’s one, which only says: «Ou bien, sous aucun aspect, il n’y a multiplicité dans sa nature: ainsi le point, ou Dieu» (cf. ACHENA-MASSÉ 121.19-20). The passage, with its clear focus on the Islamic central tenet of the unity of God [*tawḥīd*] is then another case in which, although the Avicennan basis is not overturned nor betrayed, the expansion of the *MF* in the religious sense is apparent.

ONE BY CONJUNCTION | Arabic *al-wāḥid bi-l-ittiṣāl*, Latin *unum continuacione*. (a.1.2) The second degree of unity does not entail any actual multiplicity, but it has a potential multiplicity. On the complex problem of the composition and the divisibility of bodies, here alluded through the terminology of the «conjunction» and the «cut» [*inqitā’*], cf. the long discussion at §§110-126 *supra*, and in particular §120 for the conclusion of the reasoning on the potential divisibility. The conclusions there reached are in perfect agreement with the potential multiplicity recognised here to what is one «by conjunction» [*bi-l-ittiṣāl*]. Probably, the kinds of beings here considered are only geometrical magnitudes and homogeneous or ‘homeomeric’ bodies (like a mass of water), as this ensures the distinction of cases of unity (a.1.2) and (a.1.3) (cf. *infra*).

HOMOGENEITY | Arabic *taṣābuh*, Latin [*continuacione*] *consimili*.

SINCE THE POTENCY PROXIMATE TO THE ACTUALITY IS BELIEVED TO BE IN ACTUALITY | The «potency proximate to the actuality» [*al-quwwa al-qarība min al-fi‘l*] is the potency to subdivision, *i.e.* the divisibility of that which enjoys the unity by conjunction. Since such a potency is sometimes believed to be immediately «in actuality» [*bi-l-fi‘l*], the one by conjunction can erroneously be thought of as actually divided, thus losing its supposed character of unity. This is not however the case, since the multiplicity is in truth only potential, and the title of «one» fully deserved. For a discussion of the concepts of proximate and remote potency cf. *infra*, *Metaphysics* I.7, §167.

ONE BY A SORT OF COHESION | Arabic *al-wāḥid bi-naw‘^a l-irtibāt^t*, Latin. (a.1.3) This third degree of unity is similar to the «one by conjunction» (a.1.2) analysed *supra*, but differs from it in that the beings enjoying the unity by cohesion are composed of functionally differentiated parts. The examples given are «bed» (or: ‘throne’) [*sarīr*] and «man» [*insān*]. The separation of this kind of unity from the preceding one appears to echo in part the Aristotelian distinction between $\pi\acute{\alpha}\nu$ – that in which the ‘position’ [$\theta\acute{\epsilon}\sigma\iota\varsigma$] of the parts does not produce a ‘difference’ [$\delta\iota\alpha\phi\omicron\rho\acute{\alpha}$] for the all – and $\delta\lambda\omicron\nu$ – as that in which the position of the parts does produce a difference for the whole (cf. *Metaphysics* Δ [v] 26, 1024^a1-10). Sense of unity (a.1.2) is exemplified by cases of the Aristotelian $\pi\acute{\alpha}\nu$ (water is a relevant example both here and in the quoted passage of *Metaphysics* Δ), while sense (a.1.3) is indeed exemplified by cases of the Aristotelian $\delta\lambda\omicron\nu$. As a matter of fact, the reciprocal ordering of parts like «flesh» [*lahm*], «bone» [*‘azm*], and «veins» [*urūq*] is fundamental to the constitution of a proper

human being, whose unity is thus somewhat inferior to that of a «homogeneous» [*mutašābih*] body like water, or the geometrical line.

LIKE THE COMPOSITION | Reading *ka-tarakkub* as in D-Alt instead of *tarkabu* printed by Dunyā.

[§149] D184.13-23

The analysis of the many senses of «one» continues by articulating five different figurative meanings: oneness in genus, in species, in accident, in relation (or proportion, or analogy) and in subject-matter.

ONENESS IN GENUS | Arabic *al-ittihād bi-l-ġins^f*, Latin *unum genere*. (a.2.1) The first of the figurative senses of unity is the one enjoyed by things belonging to the same genus, which can be said to be «one» with respect to this common belonging, *i.e.* to the common essential property – for instance, «animality» [*ḥayawāniyya*] – that sharing the genus provides them with.

ONENESS OF THE SPECIES | Arabic *ittihād al-naw^g*, although a reading like **al-ittihād bi-l-naw^g* («oneness by species») or *fi l-naw^g* («in species») would be more coherent with the preceding and the following formulations. The Latin reading *unum in specie* would conform in particular to the latter hypothesis.

(a.2.2) The second of the figurative senses of unity is the one enjoyed by things belonging to the same species, which can be said to be «one» with respect to this common belonging, *i.e.* to the common property – for instance, «humanity» [*insāniyya*] – that sharing the species provides them with.

ONENESS IN THE ACCIDENT | Arabic *al-ittihād bi-l-‘araḍ^f*, Latin *unum in communi accidente* (for the notion of «common accident», which seems to be presupposed by the Latin translation, cf. *supra*, *Logic* II, §15). (a.2.3) The third figurative sense of unity is the one enjoyed by things that share the same accident. The example is that of a quality, namely «whiteness», shared by «camphor» and «snow».

[ONENESS] IN THE RELATION | Arabic *fi l-nisbat^f*, Latin *unum proporcione*. A reads *al-ittihād*, deleted by Dunyā perhaps by analogy with the following case. The simple remaining *fi* could also be rendered generically as «regards the relation» (or *infra* «the subject-matter»), but the comparison with the Latin rendition – which always repeats *unum* – leads one to prefer the insertion of the noun «oneness», for reasons of symmetry with all the preceding cases. (a.2.4) This fourth figurative sense of unity replicates what would be called $\kappa\alpha\tau' \alpha\nu\alpha\lambda\omicron\gamma\iota\alpha$ in Greek, *i.e.* the identity of relations in two different fields or phenomena. This sort of unity is exemplified here by the analogical identity of the relation entertained by the king with the city and by the soul with the body, which could be schematized as follows: *king : city = soul : body*. The Latin rendition *proportio* is commonly used to render the Greek $\alpha\nu\alpha\lambda\omicron\gamma\iota\alpha$, while the Arabic *nisba* – despite being usually a rather general term with the sense of ‘relation’ – also admits of this proportional meaning.

[ONENESS] IN THE SUBJECT-MATTER | Arabic *fi l-mawḍū‘^g*, Latin *unum subiecto*. (a.2.5) The fifth figurative sense of unity is the kind enjoyed by different predicates of the same subject: for instance sweetness and whiteness in the sugar.

«ONE», THEN, IS APPLIED ACCORDING TO EIGHT MEANINGS. | Arabic *fa-šāra al-wāḥid muṭlaq^{an} ‘alā ṭamāniyat^f ma‘ānⁱⁿ*, Latin *Unum igitur dicitur ex octo sensibus*. For this specific meaning of *aṭlaqa ‘alā* cf. WEHR 662^a. Of these eight meanings three are degrees of the proper sense of unity (a.1.1-3) (cf. *supra*, §148) and five are figurative (a.2.1-5).

[§150] D184.24-185.6

The paragraph further explores the concept of oneness in the accident (case [(a.2.3)] *supra*, §149),

stating that in line of principle it articulates according to the nine accidental categories expounded *supra* (§§127-133 and the summarising table at §138). The examples given regard the categories of quantity, quality, and position, to which the generic concept of oneness in a «property» is added. The paragraph concludes by stating that the divisions of the manifold mirror the eight already distinguished for the one, which are globally summarised in the following Table.

TABLE 30. *Proper and figurative meanings of «one» [wāḥid]*

(A) EIGHT MEANINGS OF «ONE» [WĀḤID]	
(A.1) IN PROPER SENSE [HAQĪQAT ^{AN}]	(A.2) IN FIGURATIVE SENSE [MAĠĀZ ^{AN}]
[1] = (a.1.1) truest nature (neither actual nor potential multiplicity)	[4] = (a.2.1) one in genus
[2] = (a.1.2) one by conjunction (not actual, but potential multiplicity)	[5] = (a.2.2) one in species
[3] = (a.1.3) one by cohesion (actual and potential multiplicity)	[6] = (a.2.3) one in accident (applicable in line of principle to all nine accidental categories)
	[6.1] = (a.2.3.1) in quantity = equivalence [6.2] = (a.2.3.2) in quality = similarity [6.3] = (a.2.3.3) in position = equidistance [6.4] = (a.2.3.4) in property = correspondence Cf. <i>infra</i> (cb.4).
	[7] = (a.2.4) one in relation (proportion)
	[8] = (a.2.5) one in subject

EQUIVALENCE | Arabic *musāwā*, Latin *equalitas*. (a.2.3.1) «Equivalence» is the name taken by oneness in the accident of quantity.

SIMILARITY | Arabic *mušābaha*, Latin *similitudo*. (a.2.3.2) «Similarity» is the name taken by oneness in the accident of quality.

EQUIDISTANCE | Arabic *muwāzā*, Latin *equidistancia*. (a.2.3.3) «Equidistance» is the name taken by oneness in the accident of position.

CORRESPONDENCE | Arabic *mumātala*, Latin *talitas*. The Arabic *mumātala* is also a term of Islamic law, used to express the 'exact equivalence': cf. WEHR 1048^a. (a.2.3.4) «Correspondence» is the name taken by the oneness obtained by sharing a «property» [Arabic *ḥāṣṣiyya*, Latin *proprietas*]. Cf. also *infra*, *Metaphysics* II.10, §187.

[§151] 185-7-12

The paragraph briefly presents the appendages of both unity (ca) – the sole notion of identity – and multiplicity (cb) – the concepts of alterity, difference, opposition, and the plurality implied in being equivalent, similar, equidistant and correspondent (cf. *supra*, §150), when the manifold things which are in such a relation are considered (as opposed to the accidental property shared by them, which rather generates a form of unity, as explained in the preceding paragraph).

THE IDENTITY | Arabic *al-huwa huwa*, Latin *identitas*. (ca) The discussion of the concept is absent in the *DN*. JANSSENS 2019: 101 remarks that the idea of «identity» as one of the «appendages» [*lawāḥiq*] is however also in the *Ilāhīyyāt* of the *Šifā'*, I.4, ed. QANAWATĪ-ZĀYID 1960: 27.4-6. A stronger parallel is however provided by *Ilāhīyyāt* VII.1, ed. QANAWATĪ-ZĀYID 1960: 303.2-16, to be seen in connection with its source text in Aristotle's *Metaphysics* Γ (IV) 2, 1003^b33-36; cf. BERTOLACCI 2003: 37-44, esp. section [10] at 40-41 (and see the discussion thereof at 44). BERTOLACCI 2003: 41 and 44 shows that Uṣṭāṭ's Arabic translation of Aristotle's *Metaphysics* renders the Greek ταὐτό ('same') with *huwa huwa* in at least one occasion (I (X) 3, 1054^a29-32). Avicenna in the *Ilāhīyyāt* uses the term *huwa huwa* both in I.4 (ed. QANAWATĪ-ZĀYID 1960: 27.6) and in VII.1 (ed. QANAWATĪ-ZĀYID 1960: 303.15-16; 304.1-6); see BERTOLACCI 2003: 42 fn. 76 for these occurrences. For a further occurrence of the term in the *MF*, in the theological context of a discussion on the identity of known, knowledge and knower in the case of God, cf. *infra*, *Metaphysics* III.b.2, §202.

«IT IS IT» | Arabic *huwa huwa*, Latin [*dicetur*] *idem*. Just like, in the Arabic original, the expression for «identity» is made derive from the most generic statement of an identity (*i.e.* a copulative sentence composed of two generic masculine pronouns), in the same way the Latin translation renders here with the pronoun *idem* ('same'), from which the abstract *identitas* was created, as a calque from the analogously formed Greek noun ταὐτότης. Analogously formed is the difficult Arabic noun *huwahuwīyya*, whose occurrences in the *Ilāhīyyāt* of the *Šifā'* are discussed by BERTOLACCI 2003 (see *supra* in the commentary).

ONE SAYS | Reading *yūqālu* instead of the misprint *قال* in Dunyā's edition.

«THE LION IS *PANTHERA LEO*» | In Arabic the two employed terms are *layt* and *asad*, two perfect synonyms for 'lion' (cf. the same words used as examples of polyonymous expressions *supra*, *Logic* I, §9). On the vast diffraction of designations for «lion» in Arabic see DIRBAS 2017. My English rendition plays on the common and the scientific name of the animal called 'lion' in order to express a pure identity, while the Latin translation – as already *supra* at §9 – gives an equivalent example based on the synonymy of two words for 'sword': «ut cum dicitur ensis, idem est quod gladius» (MUCKLE 1933: 33.30-31).

«ZAYD IS THE SON OF 'AMR» | The Arabic text leaves implicit that Zayd is indeed the name of 'Amr's son; the Latin translation, with its customary substitution of the Arabic names with Latin ones, is even subtler: «et Petrus Iohannis idem est quod filius Iohannis» (MUCKLE 1933: 33.31-32).

ALTERITY | Arabic *ġayriyya*, Latin *alietas*.

DIFFERENCE | Arabic *ḥilāf*, Latin *diversitas*.

OPPOSITION | Arabic *taqābul*, Latin *oppositio*. (cb.1-3) These three words are given already in the Persian text of the *DN*, as Arabic counterparts of the two Persian terms for 'difference' there employed, namely *ġudā'ī* and *ġuzu'ī*. The Arabic lexicon of the differentiation is indeed extremely rich, and Avicenna himself felt probably the necessity to further nuance his Persian jargon by means of the more accurate Arabic words. In this and similar cases, thus, al-Ġazālī's translation job was eased by Avicenna's own stylistical choices.

BEING RECIPROCALLY SIMILAR, EQUIDISTANT, EQUIVALENT, AND CORRESPONDENT | Arabic *al-tašābuh wa-l-tawāzā wa-l-tasāwā wa-l-tamāṭul*, Latin *equalitas, et similitudo, et equidistancia, et talitas*. (cb.4) The

Arabic terms share their roots with those employed *supra* (§150) to define the various kinds of unity in the accident; but while al-Ġazālī had systematically employed there verbal nouns of the III stem, in this second series he only chooses the corresponding verbal nouns of the VI stem. The variation in the translation, and in particular the addition of the adverb «reciprocally», tries to account for this variation in the Arabic original (not captured in the Latin translation). Marking a lexical change between the two series is however mandatory, since the second list regards a consequence of multiplicity – inasmuch as the two (or more) different things which are respectively similar, equidistant, equivalent, and correspondent are considered –, while the first list defined various types of oneness. In this sense, the plurality implied in the reciprocity expressed by the VI stem is probably the crucial aspect that needs to be underlined.

[§152] D185.13-186.8

The paragraph articulates a further subdivision of one of the appendages of multiplicity listed *supra* (§151), namely the opposition (cb.3). Oppositions of (cb.3.1) denial and affirmation; (cb.3.2) relation; (cb.3.3) privation and disposition; and (cb.3.4) contrariety are presented and analysed.

THE OPPOSITION OF THE DENIAL AND THE AFFIRMATION | Arabic *taqābul al-naḥy wa-l-ittibāt*, Latin *oppositio affirmacionis, et negacionis*. (cb.3.1) The opposition of affirmative and negative propositions outlined *supra* in *Logic* III, §26 was rather expressed by the couple of participles *mūġiba* / *sāliba*. The term *ittibāt* was rendered *supra* (cf. *e.g. Logic* III, §46) as «establishing», in agreement with Avicenna's specific notion of the word as designating the act of establishing the existence of something; here however the meaning seems to be less ontological and rather more linguistical.

THE OPPOSITION OF THE RELATION | Arabic *taqābul al-iḍāfa*, Latin *oppositio relacionis*. (cb.3.2) The Arabic term is the more technical *iḍāfa*, which is used as the name of the category of relation: cf. *supra*, §128 and §133.

THE FRIEND AND THE FRIEND | Emending Dunyā's misprint صدیق in *ṣadiq*, as obvious from the first occurrence of the term. The Latin translation has here a different example, which is however of an asymmetrical relation (like the preceding one of father and son), and not symmetrical as in the case of the Arabic example of the two friends: «dominus, et servus» (MUCKLE 1933: 34.4-5). For examples of symmetrical and asymmetrical relations cf. the treatment of the category of *iḍāfa* given *supra* at §128.

THE OPPOSITION OF THE PRIVATION AND OF THE DISPOSITION | Arabic *taqābul al-'adam wa-l-malaka*, Latin *oppositio privacionis, et habitus*. (cb.3.3) The Arabic 'adam will be also rendered *infra*, in different contexts, as «non-existence». The example given – that of the physical opposition of «motion» [*ḥaraka*] and «rest» [*sukūn*], for which cf. also *infra*, *Physics* I – and the Latin rendition lead however to a more precise translation of it as «privation», as opposed to the «disposition» (or *habitus*) expressed by the word *malaka* (for further occurrences of the concept cf. *infra*, *Metaphysics* III, §205, and *Physics* IV, §411).

THE OPPOSITION OF THE TWO CONTRARIES | Arabic *taqābul al-ḍiddayni*, Latin *oppositio contrariorum*. (cb.3.4) The example of contrariety here given is the opposition between «heat» [*ḥarāra*] and «coldness» [*burūda*] (translated into Latin in the plural: «calores et frigiditates», see MUCKLE 1933: 34.7-8). *Supra*, *Logic* II, §21, the two qualities of whiteness and blackness were used as examples of contraries; and the consideration of colours returns here as well, in the explanation of the «distinction» [*farq*] of oppositions (cb.3.3) and (cb.3.4) that immediately follows.

ABSENCE | Arabic *intifā'*, Latin *remocio* (which is however used also to render 'adam, in this same paragraph). The «privation» is thus described as the loss of a property not replaced by another

property.

THE CONTRARY IS AN EXISTENT OCCURRING TOGETHER WITH THE ABSENCE OF THE THING | While «privation» equals the «absence» itself [*intifā'*], the «contrary» [*didd*] is an «existent» [*mawǧūd*] added to the absence of its contrary. The example given is of chromatic nature: the substitution of blackness with whiteness is the substitution of a contrary with a contrary, while the loss of blackness, if it were possible to leave it unreplaced with any other colour, would be a privation (like the loss or 'privation' of motion is immediately rest, without the addition of a supervening existing thing).

[§153] D186.9-187.12

The paragraph, which concludes the Third division started back at §148, presents a further inquiry on the opposition of the relation (cb.3.2), of the negation and the affirmation (cb.3.1), and of the contraries (cb.3.4).

WITH REFERENCE TO THE OTHER | Arabic *bi-qiyās ilā al-āḥar*, Latin *cognito altero*. (cb.3.2) The proper characteristic of the opposition of the «related» [*muḏāf*] is identified in the necessity of knowing one of the two terms involved in order to know the other. This is unlike the opposition of the contraries (cb.3.4) – hinted at through the example of heat and coldness (cf. *supra*, §152) – and unlike the opposition of privation and disposition (cb.3.3) – hinted at through the example of motion and rest (cf. *supra*, §152).

IT IS ONLY IN THE SPEECH | Arabic *innamā yakūnu fī l-qawl*, Latin *in dispositione tantum* (presupposing a clear mistake in the Arabic antigraph – perhaps **fī l-malaka*). (cb.3.1) The *proprium* of the opposition of affirmation and denial (or «negation» [*salb*]) consists in its linguistical nature (and in the consequent comprehensiveness of its potential application, expressed by the formula «it includes everything»).

AS FOR THE NAME OF «CONTRARY» [...] FROM [ONE OF] THEM | (cb.3.4) Three criteria for the obtainment of contrariety proper are listed. The first one is that the two contraries must share the same «subject» [*mawḏū'*] (the contraries have this feature in common with privation and disposition (cb.3.3), but not with affirmation and negation (cb.3.1); see *infra*). The second one is that they must «succeed consecutively to one another» [*yata'āqabāni*], without being ever conjoined in the same subject. The third one is that «the utmost [degree] of the difference» [*ǧāya al-ḥilāf*] must separate them, although it is admitted that between them there are either multiple «intermediaries» [*wasā'it*] – like in the case of the colours (between the two contraries of blackness and whiteness) –, or no intermediary at all.

THIS IS NOT NECESSARY IN [THE CASE OF] THE NEGATION AND THE AFFIRMATION | Being linguistical and including everything, the opposition of «negation» [*salb*] and «affirmation» [*āǧāb*] does not necessarily entail a commonality of subject-matter between the two things involved, as opposed to the contraries (cb.3.4) and the privation/disposition (cb.3.3). In the Latin translation an equivalent of «affirmation» is missing: «quod non est necesse in negacione» (MUCKLE 1933: 35.8).

PARTICIPATION IN THE GENUS | Arabic *mušāraka fī l-ǧins*, Latin *communicant in genere*. The Latin translation also adds the specification, absent in the Arabic, «non in subiecto» (MUCKLE 1933: 35.9). The example given is that of the opposition of «maleness» [*dukūra*] and «femaleness» [*unūta*] (presumably in the genus 'animal'). The participation of the two contraries in the genus however might not be a proper exception to the requirement of the shared subject (see *supra*), as the genus might work here *ad modum subiecti*; I am thus inclined to consider the gloss as a Latin addition, rather than as a clause present in the original Arabic but missing in Dunyā's text. Cf. DN, ACHENA-MASSÉ: 124.13-15: «Il se peut que leur communauté de sujet réside dans le genre: ainsi le fait d'être

mâle ou femelle».

«THE NUMBER SUBDIVIDES ITSELF IN EVEN AND ODD» | Since this is an example of pseudo-contrariety, *i.e.* a case of opposition of affirmation and denial (cb.3.1) disguised due to merely lexical reasons, it is crucial that the two terms for «even» [*zawġ*] and «odd» [*fard*] are not already – at the level of verbal expression – the negation of one another. The English words are in this case conformable to the Arabic ones, and thus convenient for the Arabic example, while the corresponding Italian (*pari/dispari*), French (*pair/impair*), German (*gerade/ungerade*), and Latin (*paris/imparis*) terms are all linguistically counterposed, thus dissolving the ambiguity of the kind of opposition involved. This difficulty of translation (due to the fact that the conceptual difficulty arising from the Arabic, and highlighted in the text, is already dissolved in other languages) is perfectly understood by the Latin translators, who add an interesting explanatory note for the sake of their readers: «Pro impari quod apud latinos est nomen privativum, apud arabos est nomen affirmativum, fard, quod interpretatur compar» (cf. MUCKLE 1933: 35-15-17).

ACCORDING TO THIS TECHNICAL USAGE OF THE TERM | Arabic '*alà hādā l-iṣṭilāhī*', Latin. For al-Ġazālī's insistence on the conventional nature of much of the philosophers' terminology cf. also *supra*, *Prologue*, §1; *Metaphysics* I.1., §§104-105 and §117; and *infra*, *Metaphysics* I.1., §169; *Metaphysics* II.11, §188; *Metaphysics* IV.a.1, §246; *Physics* I.1, §316.

TABLE 31. *Appendages of unity and multiplicity*

	(CA) OF THE ONE	(CB) OF THE MANIFOLD
(C) APPENDAGES	(ca) identity [<i>al-huwa huwa</i>]	(cb.1) alterity [<i>ġayriyya</i>]
		(cb.2) difference [<i>hilāf</i>]
		(cb.3) opposition [<i>taqābul</i>]
		(cb.3.1) of the denial and the affirmation (cb.3.2) of the relation (cb.3.3) of the privation and the disposition (cb.3.4) of the contraries
		(cb.4) being reciprocally similar, equidistant, equivalent, and correspondent (cf. <i>supra</i> (a.2.3.1-4 = [6.1-4])

[§154] D187.13-188.9

The Fourth division of being is into anterior and posterior. Anteriority is said to be further articulated into five subdivisions, the first two of which – (a.1) anteriority in time, and (a.2) anteriority in degree – are treated in the present paragraph.

ANTERIOR | Arabic *mutaqaddim*, Latin *prius* (cf. Greek πρότερον).

POSTERIOR | Arabic *muta'ahhir*, Latin *posterius* (cf. Greek ὕστερον).

CONCERNING THE ANTERIOR ONE SAYS: «IT IS BEFORE», AND CONCERNING THE POSTERIOR: «IT IS AFTER» | This sentence is omitted in the Latin translation, presumably due to a *saut du même au même* in the Arabic antigraph (or directly, although less likely, in the act of translating), from the first to the second occurrence of *yuqālu*.

ONE SAYS THAT GOD MOST HIGH IS BEFORE THE WORLD | The clause represents a particularly significant case of al-Ġazālī subtle reaffirmation, within the *MF*, of an anti-eternalist position, contrary to Avicenna's one. Once again, as a matter of fact, the idea of the non-coeternity of God and the world is expressed very clearly, although briefly, and as an addition with respect to the corresponding passage of the *DN*, which distinguishes indeed between various kinds of anteriority and posteriority, but does not give the example of the anteriority of God with respect to the world, in particular omitting any formulation in terms of «before» and «after» – whose face-value, in the daily use of the language, is primarily chronological. Although in line of principle the anteriority which is here at stake might be seen as logical rather than temporal, the fact that the prior and «most manifest» [*aẓhar*] meaning of anteriority (a.1) here listed is chronological (see *infra*), together with the basic use of ordinary language and the fact that this sentence is a Ġazālīan addition, all concur to the interpretation of the example as an anti-eternalist, and thus anti-Avicennan, addition. Even though aiming to list, in principle, all the variations of the text of the *MF* with respect to the *DN*, JANSSENS 2019: 101 omits the treatment of this rather conspicuous, and theoretically remarkable alteration. On this insertion cf. SIGNORI 2020^b: 171-172 and *Appendix*, 200 n. 21 (see also Introduction, §1.8.2). Cf. also the Latin translation of the passage in MUCKLE 1933: 36.4: «et dicitur deus esse ante mundum».

ANTERIORITY IN TIME | Arabic *al-taqaddum bi-l-zamān*¹, Latin *prius tempore*. (a.1) The first kind of anteriority, the temporal or chronological one, is corroborated by a sort of appeal to ordinary language: «it is like the term “before” [*qabl*“] is truly [employed] in the language [*luġa*]», which is another of al-Ġazālī's relevant linguistical additions (cf. Introduction §1.7, esp. §1.7.1). See the Latin rendition: «et hoc prius est magis in usu loquendi apud homines» (MUCKLE 1933: 36.6-7).

ANTERIORITY IN THE DEGREE | Arabic *al-taqaddum bi-l-martaba*, Latin *prius ordine, vel prius situ*. (a.2) The anteriority in «degree», rank, or order is exemplified, among others, by a geographical example (see *infra*), which explains the Latin addition of the gloss «or anterior in place» [*vel prius situ*], which is however not necessary. As is made apparent by the other examples, the meaning of this kind of anteriority is indeed the property of being before in a series, or list, of items. In this sense, the geographical places mentioned are to be seen as points of a map, which is read – or crossed – in a given, orderly direction.

«BAĠDĀD IS BEFORE KŪFA [...] FROM THE ĤURĀSĀN» | The geographical example, which involves the mention of four places in the original Arabic, is acclimated and slightly simplified by the Latin translators: «roma est ante ierosolimam quantum ad euntem de gallia ierosolimam» (MUCKLE 1933: 36.8-9). Baġdād is equalled to Rome (probably as a capital city), France (*Gallia*) corresponds to the Ĥurāsān (indeed a region, rather than a city), while Kūfa and Mecca are reunited in only one example of holy city, *i.e.* Jerusalem.

«THIS ROW [OF PEOPLE PRAYING] IS BEFORE THIS ROW» | The example probably requires picturing a mosque, where various rows or tiers (presumably of people praying, as mosques usually have no seating) may be closer or farther away from a given point, here represented by the *qibla*. The Arabic word might indicate both the Muslim direction of praying – *i.e.* toward the Ka'ba –, or specifically the prayer niche, an architectural element which shows that direction in mosques. If my interpretation of the example is correct, the latter meaning appears to be the best one. The Latin translation is generic, and does not seem to capture the architectural reference: «hec linea est prior illa quantum ad finem propositum» (MUCKLE 1933: 36.9-10). For a partially parallel passage in Avicenna with the *qibla* used as an example of anteriority cf. *K. al-Hidāya, Metaphysics I*, ed. 'ABDUH 1974: 239, Italian transl. in LIZZINI 1995: 395.

«CORPOREALITY IS BEFORE ANIMALITY» | This last example shifts the focus of the anteriority in degree (a.2) from the physical ordering of the previous two examples to the conceptual one. If one conceives

the relationship of genera and species in terms of a series – a kind of reading already presupposed before (cf. for instance *supra*, *Logic* V, §86) –, it is indeed possible to describe a higher-level genus – for instance «corporeality» [*ǧismīyya*] – as coming «before» a lower-level one – for instance «animality» [*ḥayawānīyya*] –, once having determined the order of consideration as starting from the «side» or «direction» [*ǧiha*] of what is «more common» [*a‘amm*].

THE PROPER CHARACTERISTIC [...] FROM THE OTHER SIDE | What is common to the geographical, the architectural, and the conceptual examples advanced *supra*, thus justifying their common belonging to the second kind of anteriority, is that the consideration of their order can be reversed, starting from the opposite endpoint of the series. Thus, animality is before corporeality if one starts from what is «more specific» [*aḥaṣṣ*], and likewise «Kūfa will be before Baǧdād» if one starts their journey from Mecca. The geographical acclimation provided by the Latin translation is in this case only partial, as it evokes in this case the even more remote India: «iherusalem [*sic*] prior est roma venienti romam de india» (MUCKLE 1933: 36.13-14).

[§155] D188.10-189.2

The three remaining kinds of anteriority – (a.3) in dignity, (a.4) in nature, and (a.5) in essence – are presented and discussed in the present paragraph, which concludes the Fourth division started at §154. As remarked by JANSSENS 2019: 101, in the *DN* the treatment of the two kinds of anteriority by nature and by dignity (which Janssens translates respectively as «priority by nature» and «by excellence») is reversed with respect to the *MF*.

ANTERIORITY IN DIGNITY | Arabic *al-taqaddum bi-l-šaraf*, Latin *prius dignitate*. (a.3) The example of anteriority in dignity, or nobility, involves the first two Muslim caliphs, Abū Bakr – the name with which ‘Abd Allāh ibn Abī Quḥāfa, nicknamed al-Šiddīq (d. 634), was known –, and his successor ‘Umar ibn al-Ḥaṭṭāb (d. 644). Both are among the closest, and most notable, of the «Companions of the Prophet» [*al-ṣaḥāba al-nabī*], and both are recorded among the ten companions who were promised paradise by the Prophet, according to the so-called *ḥadīṭ* of the «Ten promised (or: granted) paradise» [*al-‘ašara al-mubaššarūna bi-l-ǧanna*], reported by both AL-TIRMIDĪ 1992 (*ǧāmi‘*, book 49, *ḥadīṭ* 4112) and ABŪ DĀ‘ŪD (al-Siǧīstānī) 1998 (*Sunan*, book 42, *ḥadīṭ* 54). In the presentation of the *ḥadīṭ*, as well as in history, the first caliph Abū Bakr comes before the second one, ‘Umar; but it is clear that it is not historical anteriority to be here at stake, but rather the priority in rank, «dignity» and «virtue» [*fadl*] of Abū Bakr on all the other companions. The example, which is paradigmatically Islamic in spirit and absent from the *DN*, is added by al-Ġazālī, although JANSSENS 2019: 101 fn. 78 notices the presence of a very similar example in the *Maqūlāt* of the *K. al-Šifā’* (QANAWATĪ et al. 1959: 268.11-12). Even though a similar religious illustration is already to be found in another Avicennan work, the value of this Ġazālīan addition is in any case not to be downgraded, as it represents a conscious integration with respect to the *DN*. The strong religious value of the example is confirmed by the similarly strong cultural acclimation provided in the Latin translation, which evokes the eminent apostles Peter and Paul: «Petrus prior est Paulo, et ceteris apostolis» (MUCKLE 1933: 36.15). The acclimation is particularly remarkable in terms of interreligious dialogue, as it posits an implicit parallelism between the *ṣaḥāba* of Muḥammad and the Christian apostles.

ANTERIORITY IN NATURE | Arabic *al-taqaddum bi-l-ṭab‘*, Latin *prius natura*. (a.4) The example of anteriority in nature, drawn from arithmetics, is the anteriority of «one» with respect to «two». This kind of priority is defined as that which obtains when the anterior can exist without the posterior, but not vice versa.

ANTERIORITY IN ESSENCE | Arabic *al-taqaddum bi-l-dāt*, Latin *prius essentia*. (a.5) Essential anteriority

obtains when the anterior is together with the posterior (*i.e.* it cannot be without the other, as opposed to kind (a.4) *supra*), but is nonetheless ontologically prior with respect to it. The examples given are the anteriority of the cause with respect to the caused (which anticipates the treatment of the topic in the following fifth division, §§156-161), and the movement of the hand with respect to the movement of the ring worn by the person who moves her hand. This is explained once more with reference to ordinary language, inasmuch as a sentence like «The hand moves, then [*fa-*] the signet ring moves» is appropriate, while the reverse («The signet ring moves, then [*fa-*] the hand moves») is not perceived as correct. The focus is on the particle «‘then’» [*fā’*], which in this kind of propositions is taken precisely as expressing this kind of essential – and not chronological (cf. (a.1) *supra*) – posteriority.

[§156] D189.3-18

The Fifth division of being is in cause and caused. The paragraph starts by providing a relational definition of «cause», which can be understood only with reference to a thing already known (the «caused» or effect) that only exists through the cause itself. On its part, the cause exists by itself, also without its effect. In every thing composed of parts, the parts are cause of the compound.

THAT WHICH IS REASON [...] CAUSED | Al-Ġazālī employs here two couples of terms that are almost perfectly synonymous in philosophical Arabic, namely *sabab* and *musabbab*, on the one hand, and *‘illa* and *ma‘lūl* on the other hand. Both couples can be properly rendered with the English expressions «cause and caused», or «cause and effect» – accordingly, the Latin translation only has «causam et causatum» (MUCKLE 1933: 37.2), probably understood as a sufficient rendition for both. Nonetheless, I have tried to distinguish them in my translation, at least in this first occurrence in which they appear together. In all other occurrences of the terms, however, I have limited myself to employ the well-established expressions «cause» and «caused», without forcing into English a probably undiscernible nuance of meaning. LAMMER 2018: 162-163 and fn. 172 remarks on Avicenna’s more technical usage of *‘illa* for the four Aristotelian causes, while *sabab* is more often employed in a generic sense. Moreover, at fn. 172 *ibidem* Lammer notices that «*sabab* is almost never used for the internal material and formal cause but often for the external efficient and final cause, whereas *‘illa* is more common for the internal material and formal cause». In the *MF*, by contrast, the usage of *‘illa* for the four Aristotelian causes seems to me fairly consistent throughout the treatise.

GATHERING | Arabic *īġtimā’*, Latin *coniunctio*. The main reasoning of the paragraph, confirmed by the following example of the oxymel, is to the effect that the parts are cause of the compound in everything that is composed of parts.

OXYMEL | Arabic *sakanġabīn*, Latin *oximel*. The Latin translation, adopted in English as well, recurs to the calque of a Greek word (ὄξιμέλι), while the term employed in Arabic is of Persian origin. The oxymel is a syrup prepared with vinegar and honey (hence the Greek name of ‘sour honey’), already employed in ancient pharmacopoeia as expectorant. On the medical uses of *sakanġabīn* cf. for instance Avicenna’s *Canon of Medicine*, kitāb 3, fann 13, maqāla 2, faṣl 7, on bulimy (AL-ḌANNĀWĪ 1999: 447 ff., quoted in CARUSI 2015: 2954) and IBN ḤALṢUN, *Kitāb al-Aġdīya*, II.13 and fn. 31 (see GIGANDET 1996, consulted online). For a usage of oxymel as an example of a compound, coming to be due to the existence of its ingredients, cf. IBN BĀĠĠĀ’s *Commentary* on Aristotle’s *Physics* (FAKHRY 1973: 19, English translation in MCGINNIS-REISMAN 2007: 268); for its usage in the context of Averroes’ metaphysical discussion on unity in his *Epitome on Metaphysics* (ARNZEN 2010: ch. 1, 38, ch. 2, 78), cf. MENN 2011: 77-78. For a further occurrence of the same example in al-Ġazālī’s own non-philosophical (in the sense of not explicitly *falsafī*) works cf. *Ayyūhā al-walad* (Italian transl. in VECCIA VAGLIERI-

RUBINACCI 1970: 52).

IS NOT CAUSE OF THE SUGAR [...] THE OXYMEL RESULTS | The corresponding Latin text appears more precise, because it lists both the two principal ingredients of the oxymel: «sicut oximel non est causa mellis, et aceti, sed mel et acetum sunt causa eius, eo quod ipsum constat ex eis» (MUCKLE 1933: 37.6-8). It is possible, however, that the Latin translators have reconstructed the text once having recognised the drug (which in Latin and Greek reveals its constituents from its very name), while the Arabic original might have been more concise in the first place.

[§157] D189.19-190.4

The paragraph presents a further subdivision of the concept of cause, distinguishing between the cause (a.1) internal to the essence of the caused, and the one (a.2) external to it, *i.e.* between intrinsic (or ‘immanent’) and extrinsic (or ‘transcendent’) causes. For a discussion of this Avicennan distinction and its history in the Neoplatonic commentators cf. WISNOVSKY 2003^b. (a.1) The internal or intrinsic cause further subdivides into (a.1.1) that which does not necessarily entail the existence of the caused (*i.e.* the material cause), and (a.1.2) that whose existence necessarily entails the existence of the caused (*i.e.* the formal cause). Intrinsic or immanent causes in Arabic philosophy are less studied than their extrinsic or transcendent counterparts (RICHARDSON 2020; see *infra*, §158); on Avicenna’s conception of the material and formal causes in the *Ilāhiyyāt* of the *K. al-Šifā’* cf. however BERTOLACCI 2002^a. For an overview of Avicenna’s theory of causality cf. also DRUART 2005: 338-342.

MATERIAL CAUSE | Arabic *‘illa ‘unṣuriyya*, Latin *causa materialis*. The atypical Arabic name here given to the material cause literally means «elementary» or «elemental cause», from *‘unṣur*, «element». This comes from the corresponding Persian passage of the *DN* (cf. the English translation in WISNOVSKY 2003^b: 65 (point [6])). In Avicennan contexts, it is however far more common to find the term *māddiyya*, which literally translates to «material» (from *mādda*, ‘matter’). The material cause (a.1.1) is described as the cause internal to the essence of the caused, but not necessarily entailing its existence, like the «wood» [Arabic *ḥaṣab*, Latin *lignum*] for the «chair» [Arabic *kursī*, Latin *lectus* (but cf. also *infra* for an alternative Latin translation)].

FORMAL CAUSE | Arabic *‘illa ṣūriyya*, Latin *causa formalis*. The formal cause (a.1.2) is described as the cause internal to the essence of the caused, and also necessarily entailing its existence. The chair is a whole deriving from the «gathering» [*ḡtimā*] – the *σύνολον* – of matter (wood) and form (the form of the chair).

[§158] D190.5-21

(a.2) The paragraph analyses the second case distinguished *supra* (§157), *i.e.* the external, extrinsic or transcendent kind of cause. This further articulates into (a.2.1) that from which the thing is (*i.e.* the efficient cause) and (a.2.2) that for the sake of which the thing is (*i.e.* the final cause). A priority of the final cause, described as the «cause of the causes», on the other three kinds is highlighted. Moreover, a further subdivision of the efficient cause into (a.2.1.1) that which acts by nature and (a.2.2.2) that which acts by will is introduced. On final and efficient causes in Avicenna cf. WISNOVSKY 2002; on efficient causes in particular see MARMURA 1984 and, more recently, RICHARDSON 2013.

EFFICIENT CAUSE | Arabic *'illa fā'iliyya*, Latin *causa efficiens*. The efficient cause (a.2.1) is described as that extrinsic cause «from which» [Arabic *min-hu*, Latin *a quo*] the effect is.

PERFECTIVE AND FINAL CAUSE | Arabic *'illa tamāmiyya wa-ġā'iyya*, Latin *causa perfectiva et finalis*. The double expression used to describe the fourth kind of causality mirrors the Arabic oscillation between *tamām* and *ġāya* as the best philosophical rendition of the Aristotelian Greek τέλος (cf. WISNOVSKY 2003^a: 106 and fn. 20). The final cause (a.2.2) is described as that extrinsic cause «for the sake of which» [Arabic *li-aġl-hi*, Latin *propter quod*] the effect is.

BEING SUITABLE FOR SITTING FOR THE CHAIR | This identification of the final cause of the *kursī* with «being suitable for sitting» [*al-ṣulūḥ li-l-ġulūs*] forces the Latin translators to change to *scamnum* ('stool', 'throne') their usual (wrong) rendition of *kursī* with *lectus* ('bed'): «sicut causa finalis scamni est apte sedere» (MUCKLE 1933: 37.27). The first example of final cause, that of «seeking shelter» [*istiknān*] for the house, is untranslated into Latin. Another Arabic word often used in similar examples, *sarīr*, bears indeed the double meaning of 'bed' and 'elevated seat' or 'throne' (and in Latin the version *lectus* prevails in those cases as well): cf. *supra*, §104, §148.

THE CAUSE OF THE CAUSES | Arabic *'illa al-'ilal*, Latin *causa causarum*. The final cause enjoys since Aristotle a pre-eminent position among the four causes. This priority is explained here as the property of making causes the other causes. Indeed, the final cause resides in a way in all the others, since it is the reason for their existence (without the need and the goal of sitting, the carpenter would not build the chair, so that the formal, material, and efficient cause would not exist either). After the translation of the Arabic passage ending here, the Latin version has a further pericope, absent in Dunyā's Arabic but probably too long to be a gloss: «Esse igitur scamni pendet ex lignis, et ex fabro, et forma, et necessitate sedendi. Si enim remota fuerit una istarum causarum, sequitur remocio scamni. Causa vero finalis est ultima in esse, et est prima et precedens in intencione» (MUCKLE 1933: 38.3-6).

BY NATURE | Arabic *bi-l-tab'*, Latin *per naturam*.

BY VIRTUE OF THE WILL | Arabic *bi-l-irāda*, Latin *per voluntatem*. For a further reappraisal of these notions cf. also *infra*, *Metaphysics* III, §214, within the treatment of the will of the First Principle.

THE EXISTENCE OF THE ACTION BY MEANS OF THE AGENT WORTHIER THAN ITS NON-EXISTENCE | It might be better to read *bi-l-fā'il awlā*, as in D-Alt, instead of *awlā bi-l-fā'il*, as in the variant printed by Dunyā. The phrase 'the existence of the action by means of the agent', as a matter of fact, must be taken together, and juxtaposed to its «non-existence» [*adam*]. The concept of «goal» [Arabic *ġaraḍ*, Latin *intencio*] is precisely that which makes the acting of an agent prevailing over her inactivity.

[§159] D190.22-191

The paragraph delves into the concept of goal, clarifying that everything which has a goal is defective, since the obtainment of the goal is a perfection for it (and consequently not obtaining it is a defect). Every action performed on the basis of a goal, thus, presupposes the defectiveness of the agent. The conclusion of the paragraph declares, by way of hypothesis, that if an agent could act without a goal – *i.e.* if it were a cause essentially causing the essence of the caused –, such an action would not be defective. This has a clear theological echo, which is however left here unspoken: for a thorough discussion of the topic cf. however *infra* the treatment of the will of the First Principle at *Metaphysics* III.b.7, §§214-218.

WHY THE EXISTENCE WAS CHOSEN OVER THE NON-EXISTENCE | Arabic *li-mā iḥtāra l-wuġūd 'alā l-'adamī*, Latin *quare eligitur esse potius quam non esse*. Although the *li-mā* is written in the defective form,

the following perfect tense excludes that it might be a negative *lam* (and cf. also the Latin interpretation of the sentence).

DEFECTIVE | Arabic *nāqīṣ*, Latin *imperfectus*.

IT BECOMES COMPLETE | Reading *yakmalu* (or *yakmulu*) instead of *yakmalu-hu* printed by Dunyā.

COMPLETE | Arabic *kāmil*, Latin *perfectus*.

UTILITY | Arabic *fā'ida*, Latin *utilitas*. The concept of *fā'ida*, here employed in a very broad sense as the trigger of every standard kind of action, has a relevant usage in epistemological context: cf. *supra*, *Logic*, Preface, §3; *Logic* IV, §69, §§71-72; *Metaphysics*, First Premise, §93.

BENEFIT | Arabic *ifāda*, Latin *advenire utilitatem*.

DEFECTIVENESS | Arabic *nuqṣ^{an}*, Latin *diminucionem*.

COMPLETENESS | Arabic *kamāl*, Latin *que eum perficit*.

CHOICE | Arabic *iḥtiyār*, Latin *eleccionem*.

[§160] D192.1-10

Every agent becomes such for the occurrence of a new state with respect to its previous condition. Indeed, if at a certain stage the complex of the conditions of the thing that later became an agent were not sufficient to cause the existence of the action (or act, or product), there would be no reason for the action to supervene at any later stage. The occurrence of the action thus necessarily entails the onset of a new state in the agent.

FOR THE SUDDEN ONSET AND THE NOVELTY OF A THING | Arabic *li-tarayānⁱ amrⁱⁿ wa-tağaddudⁱ-hi*, Latin *propter novitatem alicuius rei*. The «thing» [Arabic *amr*, Latin *res*] occurring *ex novo* in the agent, and thus explaining its action, is exemplified as possibly being a «condition» [Arabic *ṣart*, Latin *condicionis*], a «nature» [Arabic *ṭab'*, Latin *nature*], a «will» [Arabic *irāda*, Latin *voluntatis*], a «goal» [Arabic *ğaraḍ*, Latin *intencionis*], a «power» [Arabic *qudra*, Latin *potencie*], or more generically a «state» [Arabic *ḥāl*, Latin *disposicionis*]. The long list represents a due extension with respect to the focus on the goal of the previous §159, which was in turn introduced under the label of the action «by virtue of the will» [*bi-l-irāda*] in §158.

SELECTIVELY DETERMINING FACTOR | Arabic *murağğih*, Latin *elector*. For the English translation of *murağğih* – a present participle of the II stem from the verb *rağğaha*, ‘to make outweigh’, ‘to give preponderance’ (WEHR 377^b) – cf. the rendition adopted in MCGINNIS-REISMAN 2007: 242, in the context of a translation of an excerpt from al-Ġazālī’s *TF*, First discussion, in which the term is used several times (cf. the rendition «giver of preponderance» adopted in the same passage by MARMURA 2000: 13). The notion of a preponderating factor who tips the scale in each and every instance of existence is akin to the «explicability argument» (DELLA ROCCA 2010: 2), which bears in turn strong conceptual similarities to the so-called (in Gottfried Wilhelm Leibniz’s famous formulation) «principle of sufficient reason»: see most recently the analysis in GRIFFEL 2021: esp. 526 ff. (more focused on al-Rāzī), and cf. GRIFFEL 2009^a: 137-141 and RICHARDSON 2014 for more specific treatments on Avicenna’s position. For a thorough discussion of the Avicennan doctrine of the *murağğih* (in philosophical theology, and thus with reference to God), its possible basis in *kalāmī* ‘particularization arguments’, and its influence, in turn, on theologians such as al-Ġuwaynī, cf. ALPER 2004. Alper’s translation of the term as «preponderator» is also adopted by BENEVICH 2017: 234. For an overview of passages of both the *K. al-Šifā'* and the *Ta'liqāt* in which Avicenna prominently employs the lexicon of preponderation cf. also GRIFFEL 2021: 542 n. 163. Finally, for the notion of *murağğih* as being historically at the basis of the later distinction between ‘complete’ [*tāmma*] and ‘incomplete’ [*nāqīṣa*] cause in Arabic philosophy, cf. KILIÇ 2017.

AN INCREASED EXPLANATION WILL FOLLOW | The Latin translation interprets the prospective cross-reference as referring to what immediately follows in the text: «Adhuc eciam inducemus aliqua ad manifestacionem huius» (MUCKLE 1933: 39.20-21), but the reference could also be to *Metaphysics* III.b.7, §218.

[§161] D192.11-end of page

The paragraph, which concludes the treatment of the Fifth division of being that had started back at §156, distinguishes between the concepts of (i) essential and (ii) accidental causality, stating that the second sense is merely figurative. Typically, the cause by accident is that which removes the obstacle preventing the causal action of an essential cause.

INTO CAUSE BY ESSENCE AND CAUSE BY ACCIDENT | Arabic *ilā 'illatⁱⁿ bi-l-dātⁱ wa ilā 'illatⁱⁿ bi-l-'araḍⁱ*, Latin *in causam essencialem, et causam accidentalem*.

THE NECESSITATING OF THE CAUSED [...] [THE CAUSE BY ACCIDENT] | Arabic *dālika l-ġayr lam yatahayya' la-hu iğāb al-ma'lūl illā 'inda-hu*. The Latin translation, although correct, shortens the Arabic text, by connecting the translation of this statement to the preceding one: «eo quod causatum non provenit ex ea, sed ex alio quod non sit causa debiti essendi causatum, nisi cum illa» (MUCKLE 1933: 39.24-26). «SCAMMONY REFRIGERATES [...] OF [THE BILE]» | The second example of accidental causality, after the one concerning the «demolisher» [Arabic *hāmid*, Latin *remotor*] of the «roof» [Arabic *saqf*, Latin *tectum*], is interesting for its medical nature, and for its complementarity with respect to the 'essential' causality of scammony – purging the yellow bile –, which had already been touched upon *supra*, *Logic* IV, §62. Here, another medical effect of scammony is considered, *i.e.* the refrigeration, which is however essentially caused by the «nature» [*ṭabī'a*] of the body. The causality of scammony, therefore, is merely accidental, inasmuch as it only removes the obstacle (*i.e.* the «yellow bile» [Arabic *al-ṣafrā'*, Latin *colera*]), which prevented the coldness to take place. Just as the roof naturally collapse by essence once the support preventing its falling has been removed by an essential cause (the «demolisher»), likewise the nature of the body cools down once the humour preventing its cooling has been removed by an essential cause (the «scammony»). A demolisher and scammony, however, only accidentally cause the secondary effect of their action, although that effect cannot take place but in their presence, since otherwise the obstacle preventing its occurrence could not be removed.

DISAPPEARANCE | Arabic *zawāl*, Latin *cum remotum fuerit*.

REMOVAL | Arabic *izāla*, Latin *remocionis / remocionem*.

[§162] D193.1.194.1

The Sixth division of being is into finite and infinite. Four kinds of infinite are listed: (b.1) that of the motion of the celestial sphere, (b.2) that of the number of the human souls detached from the body, (b.3) that of bodies or distances, and (b.4) that of causes. While (b.1) and (b.2) are possible, (b.3) and (b.4) are deemed to be impossible. A criterion to discern among possibility and impossibility in the case of the infinite is advanced. The two examples of possible infinities given here ([b.1] motion of the sphere, and [b.2] infinity of the souls) are not present as such in the *DN*. While remarking on the circumstance, JANSSENS 2019: 101 and fnn. 79-80 notices however that Avicenna's *K. al-Nağāt* «can be considered as a serious source of inspiration» for these Ġazālian ideas. For a general analysis on Avicenna's concept of the infinite, also useful in part for assessing the theoretical framework of this

section, cf. MCGINNIS 2010^b.

FINITE | Arabic *mutanāh*, Latin *finitum*.

INFINITE | Arabic *ġayr mutanāh*, Latin *infinitum*.

«THE MOVEMENT OF THE SPHERE IS INFINITE, NAMELY IT HAS NO FIRST [MOMENT]» | Arabic *ḥarakat^a l-falakⁱ lā nihāyat^a la-hā, ayy lā awwal^a la-hā*, Latin *motus celi non habet finem scilicet non habet principium*.

(b.1) The first kind of infinity considered is the infinite movement of the celestial «sphere» [*falak*]; for the cosmology of the spheres cf. in particular *infra*, *Metaphysics* V, §297. For the admissibility of this and the following kind of infinity (b.2), cf. *infra* §163.

THE SECOND ONE OF THEM | Here and *supra* («One of them...») the numbering is restored by Dunyā, while it is absent in *A*, as well as in the Latin translation.

«THE HUMAN SOULS SEPARATED FROM THE BODIES ARE ALSO INFINITE» | Arabic *al-nufūs al-insāniyya al-mufāraqa li-l-abdānⁱ ayd^{an} lā nihāyat^a la-hā*, Latin *anime humane que separantur a corporibus sunt infinite* (the Latin version presupposes a reading of the participle as active – *mufāraqa* – rather than passive as in my interpretation). (b.2) The second kind of infinity, concerning human souls detached from the bodies after death, is, like the first one, a Ġazālīan addition with respect to the *DN*. JANSSENS 2019: 102 notices the Avicenna «seems not to have explicitly formulated it, but it follows logically from what he states on transmigration in his *Aḍḥawīyya*, and his conception of the human soul as a fundamentally immaterial substance» (JANSSENS 2019: *ivi* fn. 82 references in this regard LUCCHETTA 1969: 99.8-101.2). Cf. *infra*, §163, for the different hypothesis of a possibly autonomous philosophical development on this point on the part of al-Ġazālī. In support of a keener interest by al-Ġazālī on the issue, one might add that Avicenna disregards even in the *Aḍḥawīyya* the objection concerning the infinite number of souls, preferring to refute the pre-existence of the souls with respect to their bodies: cf., for a clear discussion in this regard, JAFFER 2003: 164 and 173. It is also worth noticing that no mention of this problem is either to be found in the treatment of metempsychosis provided in the *MF* (cf. *infra* *Physics* IV, §424), although that treatment is – according to Janssens himself – likely influenced precisely by Avicenna’s *Aḍḥawīyya* (cf. *ad locum* for further commentary). On the question of the infinite number of souls cf. the still important study by MARMURA 1960 (misreferenced by Janssens, *ibidem*, as published in 1966).

THE NEGATION OF THE[IR] HAVING A BEGINNING | Arabic *nafy al-awwalyyya*, Latin *remocio incepcionis*. What is meant is that the infinity of the souls necessarily follows from the assumption of the eternity *a parte ante* (*i.e.* absence of a beginning) of the celestial motion, which is the measure of time (cf. in particular *infra*, *Metaphysics* IV, §259), and thus of the infinity of time itself.

«THE BODIES HAVE NO END» | Arabic *al-aġsām lā nihāyat^a la-hā* (cf. *infra* for the Latin version).

«THE DISTANCES HAVE NO END UPWARDS OR DOWNWARDS» | Arabic *al-ab‘ād lā nihāyat^a la-hā min fawqa wa-min tahta*, Latin *corpus, et spacia infinita, a superius usque inferius*. (b.3) The third kind of infinity, deemed to be impossible, is the physical infinity of bodies and distances: a demonstration of its impossibility will be provided *infra*, §164.

«THE CAUSES HAVE NO END» | Arabic *al-‘ilal lā nihāyat^a la-hā*, Latin *cause sunt infinite*. (b.4) The fourth kind of infinity, also deemed to be impossible, is the infinity of the causal chains: a demonstration of its impossibility is contained in §165 *infra*.

CORRECTEDNESS | Arabic *ḍabt*, Latin *sensus*.

HIERARCHICAL ORDER | Arabic *tarattub*, Latin *ordo*. The criterion for the admissibility of the infinity requires that the infinite things are not hierarchically ordered according to priority and posteriority (on which cf. *supra*, *Metaphysics* I.4, §§154-155). This cannot be the case with causes and bodies, hence the impossibility of conceiving an actual infinite concerning them.

AS IT WAS SAID BEFORE [...] THE POSTERIORITY | For the distinction between anteriority by position and anteriority by nature cf. the two kinds of anteriority «by degree» (a.2) distinguished *supra*,

Metaphysics I.4, §154. In the subsequent §155, anteriority by nature was listed again as a separate entry (a.4).

[§163] D194.2-15

The paragraph shows (b.1) the possibility of the infinity of the movement of the celestial sphere, inasmuch as it has no beginning and is composed of a series of finite movements, each of which has an end but which form together a globally endless motion; and (b.2) the possibility of an infinite number of human souls, inasmuch as they are not hierarchically ordered, and can therefore exist simultaneously.

PASSING AWAY AND NON-EXISTENT | Arabic *fāniyya ma'dūma*. The Latin translation seems to presuppose a different Arabic text: «sed ab omnibus simul qui sunt, et fuerunt, et futuri sunt» (MUCKLE 1933: 40.29-30).

HUMAN | Here: *bašariyya* (while *supra*, §162, the Arabic term employed was *insāniyya*).

SIMULTANEOUSLY EXISTING | Arabic *mawjūda ma^{am}*, Latin *esse simul*.

SINCE IN THEM THERE IS NO HIERARCHICAL ORDER BY NATURE | Arabic *id laysa fi-hā tarattub bi-l-ṭab'*, Latin *quoniam non est inter eas ordinatio naturalis*. The requirement of the absence of a hierarchical ordering is repeated in the *TF*, Fourth Discussion, ed. BOUYGES 1927: 81.13-16, as already remarked by JANSSENS 2019: 102 fn. 83. According to Janssens, in that passage of the *TF* al-Ġazālī «indicates that, according to the philosophers, an infinity of souls is in principle possible insofar as souls have no order by position or by nature. This argumentation is clearly defended by Ibn Sīnā, even in his *Daneshname*, but one wonders whether al-Ghazālī has himself formulated the very affirmation of the actual infinity of human souls (based on a logical deduction from Ibn Sīnā's statements on infinity, on the one hand, and the human soul, on the other) or he has found it in a (lost?) work of the latter». This last hypothesis seems to me unjustifiably onerous, as Janssens maintains that the theory is already present in Avicenna's texts, although implicitly, and postulates however the possibility of a lost direct Avicennan source, as if it were impossible for al-Ġazālī to draw autonomously such a conclusion. It seems to me, however, that the very passage of the *TF* witnesses a specific interest of al-Ġazālī's in the topic of the infinity of the souls. I do not see any reason, therefore, to deny the author of the *MF* an autonomy of thought, and consequently a meaningful development, on this philosophical issue (although at a deeper level of analysis al-Ġazālī still rejects, in the *MF* as well as in the *TF*, its eternalist implications: see the argument made in SIGNORI 2020^b and the introduction). It is all the more remarkable, in this regard, that this is precisely one of the doctrines that the Latin tradition more often associates with the name of Algazel, recognising it more or less explicitly as an original piece of thought of the author of the *STP*: cf. BIANCHI 1984: 143, 148 (where the Latin al-Ġazālī's purported eternalist answer to the argument of the actual infinity of the souls is emphasised), 154 (with reference to Aquinas' treatment of the same topic); DALES 1990: 44, 80, 93; DAVIDSON 1987: 123-124 and fn. 69 (with reference to the *TF* and not to the *MF*), 126-127 and fn. 97 (for arguments against infinity, also with reference to the *MF*); WOLFSON 1943^b: 229-230; SIGNORI 2020^b: 176-177 fn. 82. A somewhat similar argument on the impertransibility of the actual infinite is linked to al-Ġazālī's *TF* in HANSEN 1952: 173-174.

AT THE TIME OF THEIR ORIGIN | Arabic *fi zamān' ḥudūt' hā*, Latin *secundum tempus sue creacionis*.

WHAT WAS MENTIONED ABOUT THEIR SIGNS WILL COME [LATER] | For the signs proving the possibility of an infinity of souls, as well as for those proving the possibility of a movement without beginning, cf. *infra*, *Metaphysics* I.6, §§162-163.

[§164] D194.16-199.7

The paragraph introduces the refutation of (b.3) spatial infinity (of bodies, distances, eccetera), by presenting in particular two arguments against the infinity of the distances (b.3.1). (b.1.3.1) The first of the proofs, not present in the *DN*, is described in MCGINNIS 2007 and ZAREPOUR 2020: 388-392 (see *ivi*: 389: «known as *The Collimation Argument* (*burhān al-musāmīta* [sic pro *musāmata*]) or *The Parallelism Argument* (*burhān al-muwāzāt*)»). Despite the absence of this kind of proof in the *DN* – both in the section of *Metaphysics* corresponding to this passage in the *MF*, and in the section of *Physics* I which deals explicitly with the proofs against the void (cf. *infra*, *Physics* I, §§329-330) – parallel passages reporting the argument are to be found in the *Physics* of at least three other *summae* of Avicenna's: the *K. al-Šifā'* (*al-Sama' al-Ṭabī'i*, II 8 (*The inconsistency of those who defend the void* [8], cf. MCGINNIS 2009: 184-186), the *K. al-Nağāt* (IV 2, ed. DĀNIŠPAŽŪH 1985: 241-243), and the *Uyūn al-Ḥikma* (ed. BADAŪI 1985: 20). The passage from the *Nağāt* is also referenced by JANSSENS 2019: 102, who remarks that al-Ġazālī's argument «shows similarities with Ibn Sīnā's proof in the *Nağāt* that is intended to demonstrate that an infinite void cannot exist on the basis of the impossibility of a circular motion inside it» (the reference is given as 141.12-142.8). While in the *Nağāt* and in the *Šifā'* the collimation argument is used as a premise for a demonstration against the existence of the void, in the *Uyūn* – just as in the *MF* – it is treated as an independent proof against the infinity of distances. The latter text, rather than the former two, is thus to be considered as the most likely source of al-Ġazālī's addition. Dunyā's Arabic text does not have a graphical illustration for the first argument (b.3.1.1), while it has one for the (simpler) second argument (b.3.1.2), which would be in its own more intuitive, even in the lack of a representation. The Latin text has however a diagram also for the first argument (cf. MUCKLE 1933: 41), suggesting that a figure for it was probably present also in the original Arabic (ALONSO 1963: 124, following the Latin edition, adds a figure as well). Cf. on all this Appendix 2, and the illustration provided *infra* in the commentary (Figs. *g.1* and *g.2*).

AS FOR THE IMPOSSIBILITY OF THE NEGATION OF THE END | Dunyā illogically treats this *incipit* as the title of a subsection, typographically placing it in the middle of the line. I restore the correct paging of the text, considering it just as the beginning of the treatment of the 'impossible' infinities (b.3-4), and in particular of case (b.3) on spatial infinity.

IN THE PARALLELISM [WITH] IT | Arabic *fī muwāzāt^t-hi*, Latin *equidistans ei* (later also: *equidistancia* for *muwāzā*).

INTERSECTS [CD] | Arabic *tusāmītu*, Latin *supponitur*. The Latin letter C substitutes the Arabic letter Ḥ (ح), not only for conformity to common geometrical usage, but also in the persuasion that Ḥ is probably in the first place an error, occurred in Dunyā's text, for the almost identical Ğ (ج), which would respect the *abjadī* alphabetical order in designating the various points involved in the proof. Cf. also the Latin *g*.

INTERSECTION | Arabic *musāmata*, Latin *supposicione*. The Arabic technical term *musāmata* has in astronomy the meaning of «being in the zenith, being perpendicular (n.), perpendicularity; facing (n.)» (cf. Arabic-Latin Glossary, *sub voce* «in directo esse», consulted online). ALONSO 1963: 124-125 translates *musāmata* with «superposición», while ZAREPOUR 2020: 389 gives, as mentioned, the translation of «collimation». The geometrical meaning of «intersection», although not perfect, seems however to me the best and most intuitive rendition of the term (both as verb and verbal noun) in the context of this argument.

ENDING UP TO THE PARALLELISM FROM THE OTHER SIDE | Arabic *bi-l-inhā^x ilā muwāzāt^t min al-ġānibⁱ al-āḥar*, Latin *quousque ponitur equidistans ex altera parte*.

A DECISIVE GEOMETRICAL DEMONSTRATION [...] INFINITE DISTANCES | Arabic *burhān qāṭi' handasī fī istihālat^t itbāt^t ab'ād^t bi-lā nihāyatⁱⁿ*, Latin *hec probacio est geometrica necessaria ad convincendum*

longitudines non esse infinitas. There is a slight contrast between the strong definition of the argument as a *burhān* (a demonstrative proof properly speaking), and the weaker one used while presenting it as a *dalīl* (a sign, or inductive proof). This small difficulty can however be resolved by assuming that *dalīl* is employed here in a generic sense, which can also encompass the more specific, and stronger, sense of ‘demonstration’. For a better understanding of this argument, cf. the useful summary provided by ZAREPOUR 2020: 389: «Consider the line L which is infinite in one direction; it starts from the center O of a finite circle C, intersects the circumference of the circle, and extends infinitely. Consider, moreover, another line L' which is parallel to but distinct from L, and extends infinitely in both directions. Now, suppose that the circle C together with L start to rotate around O, while L' remains motionless and fixed. As a result of this circular motion, these two lines intersect. Therefore, there is a moment of time in which these lines are parallel and there is a moment of time in which they intersect with each other. From this fact, Avicenna concludes that there should be a moment of time T and, accordingly, a point P on L' in which these lines intersect each other for the first time (after the beginning of the circular motion). But there is obviously no such point. For every point P which we consider as the first intersection point of these lines, there are infinitely many points on L' prior to P which would have been passed and intersected by L [...]. Since Avicenna believes that circular motion undeniably can happen, he concludes that what should be rejected is the existence of infinite lines and intervals». Cf. also the figure as presented in ZAREPOUR 2020: 390 (fig. g.1), compared with the same figure adjusted to the letters given by al-Ġazālī (fig. g.2). As it can be seen, the text of the *MF* is partially unsatisfying, as it omits to mention that the radius AB must also extend infinitely in the direction of B, if the geometrical construction is to demonstrate anything at all. On the other hand, the line CD is considered in the *MF* to be a ray (or half-line), infinite in the direction of D, while a more straightforward understanding of Avicenna’s original argument would require it to be a line infinite in both directions.

FIG. g.1.

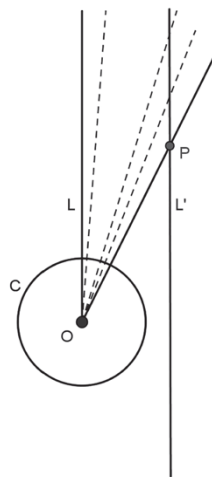
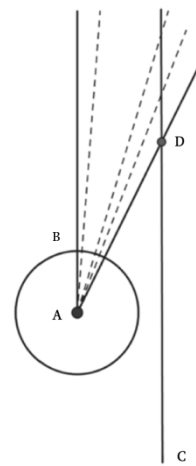


FIG. g.2.



WE INDICATE THE POINT D | Arabic *wa-nuṣīru ilà nuqṭatⁱⁿ D*. Reading simply «D» instead of Duniyā's strange string of characters $(DZ)B$, which appears totally inadequate as designation of a point. In the translation, $Z(j)$ is replaced by «C» (Latin *g*). D-Alt reads ZD , which was probably at the basis of the (interpretative, since it adds the conjunction) Latin translation: «in qua intelligamus duo puncta *g* et *d*» (MUCKLE 1933: 42.11-12).

WITHOUT VARIATION | Arabic *bi-lā tafāwutⁱⁿ*, Latin *equaliter*.

OR ELSE | Restoring here a *wa-immā* to complete the disjunctive clause introduced by *fa-imma* («either») at D198.6, which would otherwise be left suspended.

[§165] D199.8-200.3

The paragraph concludes the treatment of finite and infinite (Sixth division of being, started at §162 *supra*), showing the impossibility of the fourth and last kind of infinity, (b.4) that of the causal chains. The argument (reminiscent of Aristotle's *Metaphysics* α [II] 2) shows the necessity of an uncaused extreme of the chain of causes, either directly, or as the cause of the hypothetically infinite series of causes, taken as a single 'complex'. This 'complex' as well would need a cause, since it is composed by infinite caused items, none of which is necessary in itself. This external, uncaused cause is an extreme of the causal chain, which is thus shown to be finite.

IT [CONSISTS] | A reading like **dalīl^u-hā* or **burhān^u-hā* might be missing in the Arabic text, because the Latin translation reads: «Quod autem cause non sint infinite, *probacio* hec est» (cf. MUCKLE 1933: 42.22-23, emphasis added).

WHEN THEY ARE PRESUPPOSED AS HIERARCHICALLY ORDERED | Arabic *idā furīdat mutarattabat^{an}*, Latin *si sic disposuerimus eas*. Based on the criterion given *supra*, §162, the *tarattub* of the causes is sufficient to deem their infinity impossible.

COMPLEX | Arabic *ǧumla*, Latin *universitas*.

[§166] D200.4-201.6

The Seventh division subdivides being into that which is in potency and that which is in actuality. The present paragraph distinguishes potency into (a.1) potency of acting and (a.2) potency of being acted upon, before introducing a more fundamental distinction between the potency and the actuality of existing things, and the radical potency, or actuality, to existence.

THE EXPRESSION «POTENCY AND ACTUALITY» IS APPLIED IN DIFFERENT WAYS | The focus on the different uses of the linguistical «expression» [*lafz*] of potency and actuality places once again a strong emphasis on the originally linguistical analysis of some philosophical problems. The Arabic expression *yutlaqu 'alā wuǧūhⁱⁿ muhtalifatⁱⁿ* closely resembles Aristotle's well-known signature formula λέγεσθαι πολλαχῶς.

THE POTENCY OF ACTING | Arabic *quwwa al-fi'l*, Latin *potenciam agendi*. (a.1) Through the potency of acting, the agent «is prepared» [*yatahayya'u*] to its action, exemplified by the «act of heating» [*fi'l al-tashūn*] performed by the fire. The Latin translation adds the specification of the heated object, 'water': «calor ignis ad calefaciendum aquam» (MUCKLE 1933: 43.14). The opposition of the two concepts of *fi'l* and *infi'āl* (see here *infra*) was already clear *supra*, §128 and §133, in the context of the treatment of the two accidental categories bearing the same name.

THE POTENCY OF BEING ACTED UPON | Arabic *quwwa al-infi'āl*, Latin *potenciam paciendi*. (a.2) Through the potency of being acted upon, the patient «is predisposed» [*yasta'addu*] to receive an action, like the softness and the suppleness of the wax predisposes it to the reception of forms and shapes. While the heat of the fire was also used *supra*, §128, as an example of the category of «acting», the example of the wax did not occur in that context for the specular category of «being acted upon». However,

the suppleness of the wax has already made its appearance in several important philosophical arguments within the *MF*: cf. *supra*, §108, §132, §140.

SUPPLENESS | I follow *A*'s reading *ludūna* ('softness, pliability, flexibility, suppleness, plasticity', cf. WEHR 1012^b), which is perfectly appropriate for the «wax», and more coherent with the Latin translation: «ut mollicies, et flexibilitas» (cf. MUCKLE 1933: 43.16), while Dunyā's *luzūġa* ('viscosity') appears less appropriate, although not impossible.

EVERY EXISTENT RESULTING IN [ITS] TRUE NATURE | Arabic *kull mawġūd ḥāṣil bi-l-ḥaqīqa*, Latin *quicquid vere est*. Every existent which is truly existing [*ḥāṣil*] is also said to be «in actuality» [*bi-l-fi'l*], although the meaning of this expression («what is intended with» it, [*al-murād bi-hi*]) is different from the preceding concept of *fi'l* as an 'action' or an 'acting' that bring an imperfection to perfection. The English translation could maybe capture in the word «act» the various nuances of meaning of *fi'l* as 'action' and 'actuality' (although probably missing that of 'product', sometimes also surfacing in the text of the *MF*), but the opposition of «potency» to «actuality» in the philosophical jargon is so well-established to suggest a coherent translation as 'actuality' throughout these paragraphs.

THE ACTUAL EXISTENT | Arabic *al-mawġūd al-muḥaṣṣil*, Latin *ipse enim est qui absolute est*. The «First Principle» [*al-mabda' al-awwal*] is given here as example of the second meaning of actuality, which is different from the first one inasmuch as it coincides with realized existence, without potency.

THE POSSIBILITY OF THE EXISTENCE OF THE THING BEFORE ITS EXISTENCE | Arabic *imkān wuġūd l-šay' qabl wuġūd-hi*, Latin *possibilitas essendi rem antequam sit*. The potency opposed to the actuality of existence is the radical potency, or possibility, to exist, which must precede the realization of the actual existence (cf. *infra*, §167, for a wider discussion on the possible receptacle of this preceding possibility). Such a possibly existing thing is an «existent» only in a figurative sense, just like the wine, when it is not drunk, is only potentially, and thus figuratively, intoxicating: cf. *infra*.

«THE WINE IS INTOXICATING» | For the very same example, concerning the mere potency of intoxicating [*iskār*] enjoyed by the wine when stuck in the «earthen jug» [*dann*], cf. *supra*, *Logic* III, §32, in the context of a discussion on the conditions of contradictoriness, and in particular on the impossibility that propositions differing in actuality and potentiality might be mutually contradictory. BERNAND 1990: 235-236 traced back this example to *fiqh* sources, and in particular to the *qiyās šabah* (analogy of similitude) there described. Bernand interestingly emphasizes, though perhaps too sharply, that al-Ġazālī's passage goes here in a different direction than Avicenna's *DN*, which is then for her to be discarded as the antigraph of a translation *stricto sensu*.

NAMELY THAT THE SUBDIVISION IS IN IT IN POTENCY | Cf. the long discussion on the corporeal form and the nature of body developed *supra*, §§110-126 (and esp. §120 for the clearest statement on the potential divisibility of the body). The terminology of 'subdivision' appearing here is also analogous to that employed in that context: «dividing» [Arabic *taqṣim*, Latin *divisio*], «cutting» [Arabic *qaṭ'*, Latin *cissionem* (sic pro *scissionem*?)], and «separation» [Arabic *tafriq*, Latin *separacionem*].

WE WILL PERFECT | Arabic *natimmu*, Latin *perficitur* (impersonal, probably presupposing **yatimmu*, perhaps vocalized in the passive). For the «two judgments» [*ḥukmayni*] cf. *infra* respectively §167 and §168.

[§167] D201.7-202.17

The first of the announced two judgments concludes to the eternity of prime matter, since everything that has a temporal origin requires a preceding possibility for its existence, which must be located in a (material) receptacle. This conclusion is interestingly challenged in the concurring doctrine of the pre-existence of the possibility in the efficient, rather than in the material cause of the originated, a doctrine which is attributed to «Algazelus» in Albert the Great's *Physica* VIII.1.11 (ed. HOSSFELD 1993: 572) most likely via Moses Maimonides (*Guide of the Perplexed* II 15), and which can indeed be elicited from some key-passages of al-Ġazālī's *TF* (First Discussion, MARMURA 2000: 41-42; 45-47). For

a wider documentation on this peculiar aspect of the history of al-Ġazālī's reception cf. SIGNORI 2020^b, and cf. also *infra*, *Metaphysics* IV.b.2.3, §276. In conclusion, the present paragraph also draws a distinction between proximate and remote potency.

LAST POTENCY | Arabic *al-quwwa al-aḥīra*, Latin *potencie possibilitatis ultime*.

A RECEPTACLE AND A MATTER | Arabic *maḥall^m wa-māddat^m*, Latin *substante et materia*.

THE POSSIBILITY OF THE ORIGIN PRECEDES THE ORIGIN | Arabic *imkān al-ḥudūt sābiq 'alā l-ḥudūt*, Latin *possibilitas igitur incipiendi precedit incipere esse*. This reformulates the statement that the possibility of the existence must precede the actualized existence itself (cf. *supra*, §166).

IT HAS A SUBJECT-MATTER | Arabic *an yakūna la-hu mawḍū^m*, Latin *ut habeat subiectum*. In the exhaustive distinction proposed, the «possibility» [*imkān*] preceding the existence is first of all qualified as a «real» [*ḥāṣil*] thing (1.1) (and not as an «expression referring to nothing»). Moreover, it is not (1.1.1) «a self-subsisting substance» [*ḡawhar qā'im bi-naḥs'ī-hi*], this being the «designation» [*waṣf*] of the possible thing rather than of its possibility in itself. Therefore, it remains that the possibility is something requiring a subject-matter (1.1.2).

THE GIST | Arabic *ḥāṣil*, Latin *sensus*. For this same meaning of *ḥāṣil* cf. *supra*, *Logic* IV, §38, and *infra*, *Metaphysics* III.b.4, §208; *Metaphysics* V, title. The «gist» of possibility consists in «the designation of the receptacle for the reception of change» [*waṣf al-maḥall' bi-qabūl' l-taḡayyur'*]. The two examples given, that of knowledge in the «youth» [*ṣabī*], and that of the «man» potentially contained in the «sperm» [*nuṭfa*], are added by al-Ġazālī with respect to the *DN* (cf. JANSSENS 2019: 102).

THE THING BEFORE | Reading *qabl^m* instead of the certainly wrong *qīla* (perhaps due to a stain of ink) which seems to be readable in (my copy of) Dunyā's edition.

THE POSSIBILITY OF EVERY ORIGINATED IS IN ITS MATTER | The identification of matter as the only conceivable receptacle, when it comes to think of the substratum of the possibility of the existence, is at odds with al-Ġazālī's doctrine – which can be derived from the *TF*, cf. *supra* the introduction to the paragraph – of the subsistence of the possibility within the efficient cause, rather than in the material cause.

PROXIMATE | Arabic *qarība*, Latin *propinqua*. The example given is that of sperm for the man.

REMOTE | Arabic *ba'ida*, Latin *longinqua*. The example given is that of dust for the man, since dust can become a man only after «having repeatedly shifted through several stages» [Arabic *an yataraddada fi aṭwār^m kaṭīrat^m*, Latin *nisi post multas permutaciones*]. As noticed by JANSSENS 2019: 102, the distinction between the two kinds of potency, and the examples, are absent in the *DN*. Janssens references however the *Ilāhiyyāt* of the *Šifā'* (ed. QANAWATI-ZAYID 1960: 175,4-15), as a source (cf. *ivi*: fn. 85). The choice of the examples is in itself significant, as it recalls the prominent Ġazālīan interest in matters linked to spontaneous generation; for two analogous examples of 'proximate' and 'remote generation' – in that case as well added by al-Ġazālī with respect to the *DN* – cf. *supra*, §103 (and see the commentary for further bibliography on the issue).

[§168] D202.18-203.16

The second judgment – which concludes the Seventh division started at §166 – articulates a further distinction internal to the potency of acting (a.1) introduced *supra* (§166), *i.e.* the subdivision into (a.1.1) natural potency (only addressed to the action) and (a.1.2) voluntary potency (addressed to both the action and the non-action). (a.1.2) When its conditions (full will and power to act) are realized, the voluntary potency is necessarily actualized, just as it happens with the natural potency; the contrary can obtain only because of an intervening obstacle. Given the proper conditions, then,

every cause acts (and produces its effect) by necessity.

INTO TWO DIVISIONS: THE FIRST [ONE] IS | Dunyā expunges the words *ilā <qismayni: al-awwal> mā huwa*, which I restore following the reading of *A* and (partially) of the Latin translation («dividitur in duo, scilicet vel...», MUCKLE 1933: 45.11-12).

NATURAL POTENCY | Arabic *quwwa ṭabīʿiyya*, Latin *potencia naturalis*. (a.1.1) The natural potency is that which applies to the «actuality» (or more simply the ‘acting’/‘act’) [*fiʿl*], but not to its «contrary» [*naqīḍ*]. The example given is once more that of the fire (cf. *supra*, §166), which burns and cannot not «burn» [Arabic *iḥtirāq*, Latin *comburendum*].

VOLUNTARY POTENCY | Arabic *quwwa irādīyya*, Latin *potencia voluntaria*. (a.1.2) The voluntary potency of acting, by contrast to the natural one, is that which is addressed to both the action and its «omission» [Arabic *tark*, Latin *cessandum*], like a human being can both move and rest by will. Despite this difference between (a.1.1) and (a.1.2), when «the perfect will» [Arabic *al-irāda al-tāmma*, Latin *voluntas firma*] and the «power» [Arabic *qudra*, Latin *posse*] to act are both present, and every «obstacle» [Arabic *māniʿ*, Latin *aliquid quod impedit*] to the action is on the contrary absent, the actualization of the voluntary potency happens «by nature», *i.e.* necessarily, just as in the case of the natural potency. Only the presence of an obstacle, indeed, can account for an action to fail to take place when all its conditions are met, even if that action is «voluntary».

INCLINATION | Arabic *tamayyul*.

OSCILLATION | Arabic *taraddud*.

PEREMPTORY | Arabic *ǧāzima*. The Latin translation renders *ad sensum* the whole sentence as «cum iam firmum est in agendo propositum» (MUCKLE 1933: 45.21-22).

THE BEING ACTED UPON REALIZES ITSELF BY NECESSITY | Arabic *kāna l-infiʿāl ḥāṣil^m bi-l-ḍarūrat^t*, Latin *necessario sequitur passio*. The conditions of realization of the passion, or being acted upon, are the meeting of the «agent potency» [*al-quwwa al-fiʿliyya*] with the «patient potency» [*al-quwwa al-infiʿaliyya*], and the perfection of both potencies.

EACH ONE | Reading *kull^t wāḥidat^m*, in the feminine as the grammatical referent *quwwa*, instead of *kull^t wāḥid^m* as in Dunyā.

EVERY CAUSE [...] WAY OF NECESSITY | Every cause, namely both the natural and the voluntary ones, necessarily produce their effect, when their conditions of acting are met. Only a «shortcoming» [*quṣūr*] in the nature, the will or the essence of the agent can interrupt the course of an actualized potency of acting. Otherwise, if all conditions are met and the effect does not necessarily proceed from the cause, the cause is in potency, and not yet in actuality.

IS RATHER DELAYED | Arabic *taʿaḥḥara*, Latin *differtur*.

[§169] D203.17-204.8

The Eighth division of being is into necessary and possible. A definition of both is provided, on the basis of their respective ability (or inability) to derive their own existence from their essence.

EIGHTH DIVISION | Reading *tāmina* instead of *tālīta* («third») as in Dunyā.

NECESSARY | Arabic *wāǧib*, Latin *id quod debet esse, vel necesse est esse* (with a rather cumbersome double translation; cf. *supra*, §99, and also *infra* in this paragraph: *debitum vel necesse esse*). (a) The existence of the necessary does not depend but on its own «essence» [*dāt*], which is «sufficient» [Arabic *kāfī^m*, Latin *sufficiens*] to itself and to its own existence.

POSSIBLE | Arabic *mumkin*, Latin *id quod possibile est esse*. (b) The existence of the possible depends on something other than its essence. The example given is that of the «chair», used also *supra*, in the discussion on causality (*Metaphysics* I.5, §§156-161), as paradigmatic instance of «caused». The «something other than its essence» [*ġayr dāt-hi*] is thus to be conceived as the cause of the possible, which is therefore necessarily caused.

IT HAS ALREADY BEEN AGREED | Arabic *iṣṭalaḥa ‘alā*, Latin *iam autem convenerunt philosophi*. The VIII-form verb *iṣṭalaḥa* generates the verbal noun *iṣṭilāḥ*, with which al-Ġazālī typically designates in the *MF* the «technical terms» of conventional use in the philosophical jargon. This wording, which emphasizes the lexical and conventional aspect of the crucial Avicennan distinction between possible and necessary, is absent in the *DN*, and it adds up to the several other linguistically oriented examples of additions performed by al-Ġazālī.

THAT WHICH HAS THE EXISTENCE [...] POSSIBLE IN ITS ESSENCE | While the condition of not being able to derive one’s existence from one’s essence seemed before to be sufficient to define the «possible», a more accurate distinction is drawn here: that whose essence is not sufficient to determine the existence can be possible (b.2), but also *tout court* impossible (b.1) («prevented» [Arabic *mumtani‘*; Latin *prohibitum*]). Only (b.2) – *i.e.* that which is neither (a) necessary nor (b.1) impossible – is possible in proper sense, because otherwise the possible would contradictorily encompass in itself the impossible. A tripartition of necessary, possible, and impossible had already been advanced *supra*, *Logic* III, §30. There, two kinds of possibility, one encompassing the necessary («one-sided possibility» in STREET 2002: 135) and the other excluding it («two-sided possibility» *ibidem*), were distinguished. Possible (b.2), as described here, represents an instance of the two-sided possibility described in §30, as the requirement of not being able to derive the existence from the essence clearly excludes the necessary (a) from the domain of the possible. This understanding of the possible is made explicit at the beginning of §170 *infra*.

[§170] D204.9-205.11

The paragraph redefines the crucial concepts of possible and necessary, articulating three ways of considering what is in itself possible, in consideration of its cause.

THE NECESSARILY EXISTENT | Reading *darūrī al-wuġūd* instead of *al-darūrī al-wuġūd* (since if *al-darūrī* were to be interpreted as attribute of *al-wuġūd*, the natural order of the adjective would be after, and not before the noun it accompanies). The structure involved is rather, probably, the same improper construct state employed in the common Avicennan expression *wāġib al-wuġūd* (which also appears in the present paragraph: cf. *infra*).

DOES NOT MAKE [...] FOLLOW | Arabic *lā yulzimu darūrāt^a wuġūd^a-hi wa-lā ‘adam^a-hi*, Latin *non sequitur necessario esse, vel non esse*. The Latin translation appears to interpret *darūra* adverbially (as *darūrāt^{an}*), which would imply vocalizing *wuġūd^a-hu* and *‘adam^a-hu*, in the accusative. This definition of ‘possible’ makes it explicit that what is meant is indeed the two-sided possibility introduced *supra*, *Logic* III, §30 (cf. also *supra*, §169, for a recapitulation of the relevant distinction).

THE FIRST ONE [...] EXISTENCE OF THE CAUSE | (i) The first way of considering the possible entails the simultaneous consideration of the existence of its cause (*i.e.* that which makes the essence of the possible existent, being extrinsic to that essence). Under this respect, the possible is «necessary» [Arabic *wāġib^{an}*, Latin *debitum*], since given the cause it necessarily follows.

FROM THAT WHICH PRECEDES | The reference is to the conclusions on the necessary action of causes achieved in §168 *supra*.

THE SECOND ONE [...] IT WOULD BE NECESSARY | (ii) The second way of considering the possible entails

the simultaneous exclusion of the existence of its cause. Under this respect, then, the existence of the possible is «prevented» [Arabic *mumtani'*, Latin *prohibitum*], because, if it could exist without its cause, it would be necessary rather than possible.

THE THIRD ONE [...] THE POSSIBILITY | (iii) The third way to consider the possible is with respect to «its abstract essence» [*muğarrad dāt'-hi*]. In this way of considering, both the existence and the non-existence of its cause are put in parentheses, so that only the sheer possibility of the possible taken in itself remains. After having expounded the three different respects, the example of the number «four» (caused) and the «two» (cause) is given, showing (i) the necessity of the derivation of 4 once having assumed 2(+2); (ii) the impossibility of the derivation of 4 once having assumed the non-existence of 2; (iii) the intrinsic possibility of 4 taken in itself, in abstraction from any consideration of the 2.

NECESSARY EXISTENT THANKS TO ITS CAUSE | Arabic *wāğib al-wuğūd bi-'illat'-hi*, Latin *debitum essendi ex sua causa*. Every contingent being, in the presence of its cause, is necessary just as the Necessary Existent (as it is susceptible of being designated with the identical expression, *wāğib al-wuğūd*).

IT IS INEVITABLE, THEN, THAT THE POSSIBILITY CEASES | The possibility of existing of the possible caused effect before the actualization of its cause must «cease» [Arabic *yazūlu*, Latin *removeatur*] in some moment, since if it never ceased, the caused would never come to exist, thus being impossible (or 'prevented' in its existence) rather than possible as assumed. As explained immediately *infra*, this possibility has nothing to do with the intrinsic, essential possibility that the possible enjoys, but rather with the possibility (or potency) of its cause. When all the conditions for the cause's performing of its causal action are met, its possibility of acting changes into necessity, and the effect – although merely possible in itself – is necessarily produced.

[§171] D205.12-206.11

JANSENS 2019: 103, comments on this passage as follows : «He opens with what is obviously a personal note (M 205,12-14), namely by posing the question whether God can be the maker, or not, of an eternal world and at the end (M 209,24-26) he offers a substantial rewording: “if the agent is eternal, then also its action (or: its effect?) is eternal because the latter depends on him only insofar as it exists, not insofar as it originates, since that is a consideration of being after non-being” instead of “the true agent is the one from whom results a being that is separate from his essence, for if (i.e. that being) is in his essence (i.e. of the true agent) would be receiving, not making” (DN 73,9-11 [*sic*]). Nevertheless, al-Ghazālī's rewording remains in line with Ibn Sīnā's profound thought insofar as it poses a necessary link between cause and effect». In this regard cf. also *infra* the conclusion of the entire argument (§175).

AN IMPORTANT PRINCIPLE ABOUT THE POSSIBLE | Arabic *aṣl muhimmⁱ fī l-mumkinⁱ*, Latin *radicem possibilem* (presupposing the alternative wrong Arabic text **aṣl mumkin*).

FOUNDATION | Arabic *qā'ida*. Cf. the Latin translation: «super quam constituemus magnum quiddam» (MUCKLE 1933: 47.23). The text is somewhat problematic, because the idea of building a 'foundation' or a 'basis' on a principle is not entirely plain, and it would be more natural to build instead over the foundation itself. Among the possible meanings of the feminine form of the active participle *qā'ida* listed by WEHR 913^a, there are also 'support', 'pedestal', or 'precept', 'rule', 'maxim', 'formula', the latter of which would consent to abandon the architectonic metaphor, allowing perhaps a better sense. It must be mentioned, however, that the very similar form *qa'ida* would rather convey the meaning of 'companion', 'spouse' (WEHR 912^b): given the fact that the theme of the following reasoning is the eternity of the world, whose critique forms in turn the most fundamental asset of the *TF* (see in

particular Discussions 1-2), it would have been tempting to interpret this hypothetical ‘companion’ as a veiled reference to the *TF* itself. The possibility of some sort of textual fault in this point seems to be independently confirmed by the Latin translation, whose extremely generic *magnum quiddam* (‘a big something’) might be seen as an answer to a textual difficulty of the original Arabic. However, *qā’ida* as ‘principle’ is commonly used in (scholarly) Avicennan context to designate a well-known maxim such as the axiom «from the one, only one proceeds» (see AMIN 2020 and *infra*, §) more solid philological analysis on both Arabic and Latin manuscripts would be needed in order to settle this delicate issue, which would entail a direct cross-reference of the *MF* to the *TF*, outside of the prologue and the epilogue and rather embedded in the main text. A further, tempting possibility would be to link the expression *qā’ida* with the title *Qawā’id al-‘aqā’id*, which is given at the end of the First Discussion of the *TF* as the name of the ‘affirmative’ work which will follow the *TF*, establishing «true doctrine» after the refutation of philosophy: cf. MARMURA 2000: 46, and see the Introduction, §1.2. *Chronological and Doctrinal Collocation*, for more information on the problems raised by this reference (and on scholarly interpretations of it).

AN ACT OF GOD MOST HIGH | Arabic *fi’l^{an} Allāh ta’ālā*, Latin *factura dei altissimi*. As the Latin translation makes apparent, the specific meaning of *fi’l* here has probably to do more with the productive aspect of the productive ‘making’ than with a mere ‘acting’. However, once understood that the acting of God is generally speaking a producing (into existence), the standard translation «act» can probably be maintained without harm to the comprehension of the text.

IT EXTRACTS IT FROM THE NON-EXISTENCE TO THE EXISTENCE | Arabic *yuhriḡu-hu min al-‘adamī ilā l-wuḡūd*, Latin *trahat illud de non esse ad esse*. (i) This first outlined feature of the action of the cause is exemplified through the case of the builder of a house, which will also be the model for the creation of the world expounded – and rejected – in §172 *infra*.

THE EXISTENCE OF THE THING IS BY VIRTUE OF IT | Arabic *wuḡūd al-ṣay^x bi-hi*, Latin *ut sit esse rei per illud*. (ii) The example of this second feature of the cause with respect to its caused is the light by virtue of the sun, which would also occur again as an explanatory model *infra*, §174.

THOSE WHO BELIEVED | Arabic *i’tiqadū*, Latin *qui autem dixerunt*.

HAVE THOUGHT | Arabic *ḡannū*, Latin *putabant*.

AUDACITY | Arabic *taḡāsara*, Latin *et fortassis presumet*. These thinkers, disguised under the third-person of the plural and accused with particular bitterness of heretical audacity, would have maintained the existential independence of the world, once created, from God as its creator, so that the ceasing of God’s existence would not entail the ceasing of the world’s existence. This is tantamount to denying the thesis of the continuous creation, as it denies the necessity of God’s action for the conservation of the cosmos. An example and a proof given by the thinkers in question in support of their thesis are propounded, and rejected, in the following §§172-173.

[§172] D206.12-207.6

Having presented the thesis of those who reject the doctrine of conservation as continuous creation, al-Ġazālī expounds here their model for God’s creation, *i.e.* the builder’s construction of a house. The death of the builder, indeed, does not entail the ceasing of the existence of the house, and likewise God’s ceasing should not entail the ceasing of the world. The refutation denies any legitimacy to this example, which is irrelevant to the issue because the builder is not the essential cause for the existence of the house (as the father is not essential for the existence of the son) in the same way in which God is essential for the existence of the world.

THE DEATH OF THE BUILDER, AFTER THE HOUSE HAS BEEN BUILT, DOES NOT HARM THE HOUSE | Arabic *al-*

bannā^{xi} ba‘dⁿ binā^x l-bayt^l lā yaḍurru mawtⁿ-hu l-baytⁿ, Latin *fabricator domus post fabricacionem domus, non nocet domui si moriatur*. (1) The «example» [*maṭāl*] proposed by the aforementioned thinkers aims to persuade that the world does not need God for its conservation through suggesting a comparison with visible examples of causality. Its refutation, undertaken in what follows of the present paragraph, consists in denying the relevance of those examples for explaining the causality of God.

AS FOR THE PROOF [...] | (2) The «proof» [*huḡḡa*] that the aforementioned thinkers wish to provide for their thesis consists in establishing that only the «non-existent» [*ma‘dūm*], and not the «existent» [*mawḡūd*] needs «a giver of existence» [*mūḡid*]. Thus, the existing world, once drawn into existence, would not need God for its conservation. Cf. the elaborate «clarification» and reformulation of this proof (tantamount to a refutation) provided *infra*, §§173-175.

STRUCTURE | Arabic *ṣakl*, Latin *formam*. The Arabic *ṣakl* usually means ‘figure’, so that the «structure» of the house is to be conceived also as its (physical) configuration, *i.e.* the material reciprocal arrangement of its parts.

IS THAT THE PART | Reading *ḡuz*‘ instead of *ḡada*‘ (or *ḡid*‘) as in *Dunyā*. The correction is corroborated by the Latin translation (MUCKLE 1933: 48.14: «pars») and warranted by the context. Moreover, the error is made very plausible by the extreme similarity of the *rasm* of the two words, and in particular by the easy confusion between the two letters *ج* and *ذ*.

IN WHICH IT WAS PLACED | Reading *allāḏī wuḏī‘a fī-hi* as in D-Alt, instead of *allāḏī wuḏī‘a, fa-huwa* printed by *Dunyā*.

THE CAUSE IS ITS WEIGHT, AND THE DENSITY OF THAT WHICH IS UNDER IT | The actual causes of the permanence of the house are the «weight» [*tiql*] and the «density» or ‘thickness’ [*katāfa*] of its materials, while the builder is merely the efficient cause of their arrangement. Likewise, the wall is permanent due to its dryness: cf. *infra*.

[THE DRYNESS] THAT HOLDS ITS STRUCTURE | It might be better to read *ṣaklⁿ-hu* instead of *ṣaklⁿ-hā* as in *Dunyā*: the feminine suffix pronoun should refer to the only available feminine noun, *yabūsa* (‘dryness’), which is however already the subject of the action of holding the structure of the «wall» [*hā‘it*, masculine in Arabic].

AGENT | Arabic *fā‘il*, Latin *factor*. Neither the «builder» nor the «father» are ‘agents’ in proper sense for their effects – *i.e.* respectively the house and the son. Both, rather, are merely efficient causes that have set a process into movement, either with the material assemblage of different elements, or with the sexual intercourse, which moves the sperm to the «uterus» [*rahīm* or *riḥm*].

SPERM | Arabic *minan*. The characteristic desinence of the nouns in *-an* appears to have been misunderstood by the Latin translators, who render as if it were a dual: «motus duorum spermatum» (MUCKLE 1933: 48.26 and ff.). The example of the human generation, not mentioned as relevant at the beginning and added in the conclusion of the paragraph as a sort of afterthought, helps to clarify that in all the earthly processes there are many different causes apart from the one – in this case the «father» – erroneously singled out as the principal and only. For a new human being to exist, indeed, the form of the sperm must change into the form of man (which cannot be explained merely with the mechanics of the sexual intercourse), and the rational soul must also be accounted for (which evokes a separate cause «perpetually existing»; for details on human psychology cf. *infra*, *Physics IV*, §§402-424). The inevitable conclusion is that the examples provided are not relevant to explain God’s causality on the world, since this is not partial, but rather global and essential throughout.

[§173] D207.7-25

The present paragraph opens the final, convoluted reasoning of the First treatise of *Metaphysics*, which will end at the end of the treatise, in §175 *infra*. For a commentary on the entire passage, cf. the long footnote provided by ALONSO 1963: 133-136 fn. 24. There, Alonso aptly mentions the parallel

texts in Avicenna, *Ilāhiyyāt* VI.1-2 and *Iṣārāt* (GOICHON 1951: 373 ff.), together with a useful aperçu of Aquinas' reprises of the same Avicennan doctrine, in the terms of the distinction between *esse* and *fieri*, *causa essendi* and *causa fiendi*. Globally, §§173-175 constitute a qualification or clarification (but ultimately a refutation) of the proof provided by the thinkers – mentioned *supra* in §171 – who deny that the world should need its creator for its conservation in existence. At the beginning of the present paragraph, the alleged proof is reformulated: it is true that the existent does not need a proper giver of existence (since it already exists), but it nonetheless needs a «perpetuator» for its existence (see *infra* the commentary for a delicate textual correction). Why this is the case is not at all immediately clear, and becomes more so only at the conclusion of the line of reasoning, at the end of §175. It is useful to anticipate here how this reasoning unreels, in order to make it easier to follow it in its development. The act can be considered under two respects: in its present existence, and in its past non-existence. Likewise, the agent can be considered under two respects: in its present act of giving existence, and in its past not-giving-existence. The respect under which the act depends on the agent is the existence of the act. Likewise, the respect under which the agent is linked to the act is its giving existence to the act, not its previous not-giving it. As soon as the existence of the act has been realized, the 'giving-existence', which has realized it, translates to the state of the agent according to which the existence of the act is by means of the agent. It is thus possible to draw a diagram of the mutual relations between the act and the agent, in the past and in the present, showing a sort of square of oppositions of existence and non-existence, and conversely of agency and non-agency. The non-existence of the act, as a matter of fact, bi-univocally entails the not-giving-existence of the agent; and likewise, the existence of the act bi-univocally entails the giving-existence of the agent, and more precisely its state of being such that the existence of the act is by virtue of it. If an act is truly dependent on its sole agent (as opposed to the examples of agency due to plural causes expounded in §172), therefore, it is not possible to conceive its existence as deprived of its dependence on the agent, *i.e.* of the action of (continuous) giving-existence performed by the agent upon it. Not-giving existence, as a matter of fact, is proper to the agent *before* its becoming agent; but as soon as the agent becomes actually agent (that is, producing its act), its action of giving-existence, and its consequent state of having an existent that depends upon it, must essentially befall it. In sum, then, the existence of the act always automatically entails the existence of an existence-giving agent, because otherwise the act would not be act, and the agent would not be agent: indeed, the non-existing act is not yet an act, and the not existence-giving agent is not yet an agent. I have made an attempt at visualizing the opposing couples just described in the following Table 32. Cf. also, for an explanation of a similar reasoning, SHIHADÉH 2016: 96-97. The present paragraph has the function of presenting the reformulated proof, and to start its clarification (which thus also works as the refutation of the proof as presented by the deniers of the continuous creation thesis). The two respects under which both the act and the agent can be considered are presented, and a demonstration of the fact that the act depends on the agent because of the act's existence (and not because of its non-existence) is set up.

TABLE 32. *Relationship between the agent and its act in the process of bringing into existence*

	PAST	→	PRESENT (ACTUAL)
ACT [ʿʾl]	Non-existence [ʿadam]	process of becoming existent [ṣayrūra mawǧūd ^{an}]	Existence [wuǧūd]; being existent [kawn mawǧūd ^{an}]

	PAST	→	PRESENT (ACTUAL)
RELATIONSHIP OF ACT AND AGENT	No relationship	→	dependence [<i>ta'alluq</i>]
AGENT [<i>FĀ'IL</i>]	Not-giving-existence	process of giving the existence [<i>iğād</i>] = process of becoming cause and agent [<i>ṣayrūra</i> <i>'illat^{an} wa-fā'it^{an}</i>]	Being such that the existence is by virtue of it

CLARIFICATION | Arabic *bayān*, Latin *quod sic manifestatur*.

PERPETUATOR | Reading *mudīm*, as in BĪĠŪ 2000: and ms. Y, instead of *qadīm* printed by Dunyā. Cf. the Latin translation: «eget tamen conservatore sui esse» (MUCKLE 1933: 48.32), and see also the Spanish one «de quien le conserve la existencia» (ALONSO 1963: 131.36-37). Dunyā's choice of *qadīm* – which can be translated with 'the Infinitely Pre-existent, the Sempiternal, the Eternal' (see WEHR 877^b) – makes appeal to a deceptively appropriate theological substratum, but is ultimately misleading. Saying that the existent needs a pre-existent for its existence, indeed, would not add anything to the alleged «proof» provided by the deniers of continuous creation, as the pre-existence of the cause to its effect is plainly admitted. As apparent from the preceding examples (§172) and the conclusion of the reasoning (§175), what is at stake is rather the conservation of the existence after the existence has been caused. In this regard, the active participle of the IV stem *mudīm* (from the root *dwm* of 'lasting', 'continuing') appears the best textual choice, as it conveys the intended meaning of 'that which causes to last or continue', 'that which makes lasting', or more in short «perpetuator». Moreover, the usage of a present participle of the IV stem like *mudīm* would be in nice parallelism with the analogous voice *mūjīd*, which expresses the idea of the «giver of existence» (or 'creator', *i.e.* that which makes the thing pass from non-existence to existence), while the symmetry would be lost with a reading like *qadīm*.

THE ORIGINATED ACT | Arabic *al-fi'l al-hādīt*, Latin *omne enim quod incepit esse*.

THE AGENT | Arabic *al-fā'īl*, Latin *factor*.

LET US OBSERVE, THEN! | Arabic *fa'l-nanzur*, Latin *consideremus igitur*. The exhortation marks the end of the short presentation of the «two attributes» [*ṣifatānī*] according to which both act and agent can be considered, signalling the beginning of the section in which the «dependence» [*ta'alluq*] of the act on the agent is shown to be relative to the existence of the act (i), and not to its non-existence (ii). The «preceding non-existence» [*al-'adam al-sābiq*] has no dependence on the agent, and the agent conversely has no «influence» [*ta'tīr*] on it (cf. Latin: «factor nichil penitus agit in eo», MUCKLE 1933: 49.8). If the non-existence (ii) is excluded, it is also automatically excluded that the dependence of the act might derive from the combination of existence and non-existence (iii). Therefore, it must derive from its existence alone (i).

[§174] D207.26-208.14

The paragraph presents an objection to the main argument – *i.e.* to the notion that the dependence

of the act on the agent is connected to the existence of the act (rather than to its non-existence) –, by arguing rather that the dependence of the act on the agent consists in the act's being existence *after a non-existence* (and not existence *tout court*). The objection is dissolved, however, by stating that the property of being existent after having been non-existent is essential to the act, because there is no other way for it to be; therefore, it does not derive to it through its relationship with the agent (which rather produces its existence *tout court*, with no consideration of the preceding non-existence).

[THE ACT] DEPENDS [ON THE AGENT] | It might be wise to add in the Arabic text the phrase *bi-l-fā'il*, for reasons of symmetry with the preceding formulations and of conformity with the Latin translation: «necesse est tamen facturam pendere *ex factore*; profecto non restat pendere nisi secundum suum esse» (MUCKLE 1933: 49.10-12). The Latin *ex factore* might however be an addition *ad sensum* of the translators, which leads me to provisionally avoid the emendation the Arabic, which is in any case understandable also without that specification.

IS NOT THE MAKING OF A MAKER | Arabic *laysa bi-ġa'f ġā'ilⁱⁿ*, Latin *non est propter posicionem alicuius*. The fact that the state in which the act is existent follows a preceding state in which it was non-existent is not determined by the agent that gives the act its existence; rather, if a thing starts to exist it must have been previously non-existent, independently from any action and any «influence» [*ta'tīr*] of the agent. While the existence of the possible is possible, the fact that its existence is after a non-existence is necessary.

JUST LIKE THE EXISTENCE OF THE LIGHT | The Latin text has however 'day', 'daytime' [Latin *dies*, Arabic **nahār*] in the place of «light» [*nūr*]: see MUCKLE 1933: 49.33: «sicut esse diei est propter solem». While it is true that the light is always with the sun (hence my translation of *bi-l-šamsⁱ* as «with the sun», rather than as «by virtue of the sun»), it is not true that it is only produced by the sun, as opposed to the daytime, which is rather defined through the sun and thus essentially linked to it (cf. *supra*, *Logic* III, §26, for an example concerning precisely this aspect). However, in the first formulation of the model of the sun *supra* (§171), light was mentioned, which advises for maintaining Dunyā's text despite the plausibility (and perhaps even the greater precision, if one is to give an instrumental meaning to the *bi-* in expressions like *bi-l-šamsⁱ*) of the Latin reading. In Latin, this passage is concluded by the sentence: «factura eciam habet duos status sicut diximus» (MUCKLE 1933: 49.34-35), explained by ALONSO 1963: 133 fn. 23 as an erroneous reduplication of the following sentence: «Cum enim factor eciam habet duos sicut diximus» (MUCKLE 1933: 49.35-50.1) due to a copyist's mistake. The explanation might be plausible, but it should be added that the material mistake – if that is indeed the case – must then have been adapted to its context, with the change of *factor* in *factura* and the elimination of *status* in the second clause (which would have felt superfluous in the light of the preceding one).

[§175] D208.15-209

After the objection posited and resolved in §174, the reasoning considers in greater detail the two attributes distinguished as for the agent (after the same consideration devoted to the act in §172 *supra*). After having shown that the agent is such because the existence of the act is by virtue of it (2.b.1), and not rather because that existence is after a non-existence ([2.b.2]); in perfect symmetry with the conclusion achieved *supra* for the act itself), the paragraph summarizes the relationship of agency and causality already shown in the diagram offered in §173, concluding that the act depends on the agent for its existence «in all its states», so that the ceasing of the agent would entail the ceasing of the act, as well. Assuming the contrary would mean missing the difference between being

existent and the process of becoming existent (on the side of the act), and conversely also the specular difference between being in the state of having the act's existence depend upon oneself, and the process of giving that existence (on the side of the agent).

TWO ATTRIBUTES, AS WE HAVE MENTIONED | Cf. *supra*, §172. The Latin translation mentions again, as opposed to the Arabic text printed by Dunyā, the two 'states' of the act: «factura eciam habet duos status sicut diximus. Cum enim factor eciam || habet duos sicut diximus» (cf. MUCKLE 1933: 49.34-50.1).

CAUSE | Arabic *'illa*, Latin *causa*. The agent in proper sense is identified with the cause, and the two terms will be progressively used as synonyms from now on in the paragraph.

INASMUCH AS ITS EXISTENCE | *i.e.* of the 'act' of the agent, the «something else» mentioned immediately before.

THAT, THEN, REGARDS THE STATE [...] CAUSE AND AGENT | The referent of «that» [*dālika*] is (2.b.2), *i.e.* the hypothesis that the agent's being cause could derive from the act's existence after the non-existence, instead of from its existence *tout court* (2.b.1). The sentence denies the validity of (2.b.2) by affirming that it regards the «state of the non-existence of its being cause» [*ḥukm 'adamī kawnī-hi 'illat^{am}*], which means that, with respect to the non-existence of the act, the agent is not cause, but merely becomes so in consideration of its existence. The same concept is further exemplified with regard to the situation of a willing man, who becomes agent only when the wanted thing is realized through an existing will.

ACTUALLY EXISTENT | Arabic *ḥāṣil/ḥāṣila*.

THE PROCESS OF ITS BECOMING EXISTENT | Arabic *ṣayrūrāt^u-hu mawǧūd^{am}*, Latin *facere eam esse*.

THE PROCESS OF ITS BECOMING CAUSE AND AGENT | Arabic *ṣayrūrāt^u-hu 'illat^{am} wa-fā'il^{am}*, Latin *feri* (sic pro *facere*?) *ipsum esse causam rei et factorem*.

OPPOSES ITSELF TO | Arabic *fī muqābala*, Latin *oppositum est*. The oppositions here explicated are those summarized in the table provided in the introduction to §173 *supra*.

SOMEONE UNDERSTANDS | This and the other voices of *fahima*, here rendered with the corresponding voices of the English 'to understand', are translated into Latin with the verb *intelligo*, usually devoted rather to the rendition of the Arabic root 'q-l.

IT CHANGES INTO CAUSE | Arabic *fā-yataǧayyaru ilā l-'illatⁱ*, Latin *permutatur igitur ad causalitatem* (presupposing perhaps **ilā l-'illīyya*?).

THE CAUSE OF THE EXISTENCE OF A THING, ADDING ITSELF TO ITS ESSENCE | Arabic *'illa wuǧūdⁱ amrⁱⁿ*, *zā'idⁱⁿ 'alā dātⁱ-hi*. This is a given as a general definition of «agent» [*fā'il*], thus showing the convergence of being agent and being cause. The Latin translation: «causa essendi alii, hoc ipsum esse causam, quiddam est additum supra essenciam illius» (MUCKLE 1933: 50.26-27) appears faulty.

THE COMMON PEOPLE | Arabic *al-'awāmm*, Latin *vulgus*. With an instance of the typical élite-vs-mass model often active in Arabic philosophy, the «common people» are said to be unable to grasp the aforementioned «distinction» [*farq*], namely the difference between «being» *x* [*kawn*] and the «process of becoming» *x* [*ṣayrūra*]. Since that distinction was established in an attempt at qualifying the alleged proof given by the deniers of the continuous creation, the pejorative epithet of «common people» ends up with being attributed to those thinkers themselves (mentioned for the first time in §171 *supra*).

PERMANENCE | Arabic *dawām*.

IN ALL ITS STATES | Arabic *fī ǧamī^d aḥwālⁱ-hi*. The Latin translators seem to have had at their disposal a longer Arabic text than Dunyā's: «quod causatum sive sit incessabile, sempiternum sive momentaneum in omnibus suis dispositionibus» (cf. MUCKLE 1933: 50.34-51.1).

ETERNAL | Arabic *qadīm*, Latin *eternus*. This conclusive occurrence of the hypothesis that the agent might be «eternal» could be one of the reasons for Dunyā's substitution of *mudīm* («perpetuator»)

with *qadīm* in §173 *supra*. On the eternalist conclusion of this line of reasoning cf. also JANSSENS 2019: 103, quoted *supra* in the introduction to §171.

AS IT WAS SAID BEFORE | For origin [*ḥudūt*] as expression referring to the passage from the non-existence to the existence cf. *supra*,

Treatise II

[§176] D210.1-12

As its title recites, the Second treatise of *Metaphysics* deals with the essence of the Necessary Existent (referentially identical to God) and His necessary concomitants. The discussion starts by recalling the distinction between necessary and possible existence (cf. *supra*, *Metaphysics* I.8, §§169-175), and presents the first of twelve things, which can be known about the essence of that which is necessarily existent, *i.e.* (1) the fact that He is not an accident.

ON THE ESSENCE OF THE NECESSARY EXISTENT AND HIS INSEPARABLE CONCOMITANTS | Reading *lawāzim^l-hi* instead of *lawāzima* printed by Dunyā. This title is not translated into Latin, which only reads: «Tractatus secundus» (MUCKLE 1933: 52.1).

WE HAVE ALREADY MENTIONED [...] BY ITS ESSENCE. | For this fundamental distinction cf. in particular *supra*, *Metaphysics* I.8, §169.

SO THAT FROM THE NON-EXISTENCE OF THAT SOMETHING ITS NON-EXISTENCE FOLLOWS | Muckle's Latin text: «ad rememoracionem eius sequatur remocio istius» (MUCKLE 1933: 52.3-4) is clearly faulty; comparison with the Arabic makes it clear that *rememoracionem* is a mistake for *remocionem* [Arabic *'adam*, English 'non-existence'].

WE CALL IT | Arabic *sammaynā-hu*, Latin *vocamus illud*. As already noticed *supra* in the commentary to §169, al-Ġazālī is quite insistent on the linguistical and somewhat conventional choice of the names of «possible» and «necessary» to describe the properties of respectively being, and not being, dependent [*yata'allāqu*] on something else as for one's existence.

ABOUT THE ESSENCE OF THE NECESSARY EXISTENT | Arabic *fī dāt^l wāġibⁱ l-wuġūd^l*, Latin *vocamus debitum per se quod est necessarium per se, de quo* [...] (the Latin version substitutes the suffix pronoun of *sammaynā-hu* with its typical alternative rendition for *wāġib*, already noticed *supra*, *Metaphysics*, Premise, §99, and *Metaphysics* I.8, §169).

HE IS NOT AN ACCIDENT | Arabic *anna-hu lā yakūnu 'araḍ^m*, Latin *ipsum non est accidens*. Given the presupposed identity between the Necessary Existent and God, I signal with a capital letter the personal pronouns and adjectives referred to Him, as this is, among the other reasons, also a helpful device to disambiguate the translation in the case of Arabic sentences crowded with suffix pronouns. In line of principle, however, the philosophical reasoning unreel in this entire treatise regards that which is necessarily existent, without making its theological connotation entirely explicit. I do not think, in any case, that forcefully keeping the two planes of analysis apart is particularly helpful, neither for Avicenna nor – *a fortiori* – for an author as deeply interested in theology as al-Ġazālī.

ATTACHMENT | Arabic *'alāqa*, Latin [*non*] *pendet ex alio [ullo modo]*. Every accident depends – the root *'lq*, of «attachment», is the same of «dependence» [*ta'alluq*] – on something else, *i.e.* on its subject of inherence. This is squarely at odds with the characterization of the Necessary Existent as that which has no dependence on anything else at all, so that the Necessary Existent cannot be an accident.

[§177] D210.13-211.6

(2) The second thing that can be affirmed of the essence of the Necessary Existent is that He is not a body. Two reasons for His incorporeality are given, both based on the impossibility of conceiving

any part – either ‘physical’ (2.1) or ‘metaphysical’ (2.2) – in the Necessary Existent. As a matter of fact, both (2.1) the physical parts of the body, and (2.2) the metaphysical composition due to the union of matter and form make the body a compound, and thus a caused, while the Necessary Existent has no cause for His existence.

HE IS NOT A BODY | Arabic *anna-hu lā yakūnu ġism^{an}*, Latin *non est corpus*.

WHOLE | Arabic *ġumla*, Latin *totalitas*.

SURMISING | Arabic *taqdīr*, Latin *si ponantur*.

WE HAVE ALREADY MENTIONED THAT EVERY WHOLE IS CAUSED | The fact that the «whole» is «caused» [here: *mu'allala*] by its parts (*i.e.* that the parts are cause for the «compound» [*murakkab*]) was already explained *supra*, *Metaphysics* I.5, §156.

«WHY IS THE INK EXISTENT?» | For the same example concerning the composition (or «gathering» [*ġtimā*]) of the ink from «water», «gallnuts», and «vitriol», cf. *supra*, *MF, Logic* V.3, §53 – also for further information about the preparation of medieval ink – and *infra*, *Metaphysics* IV.a.3, §248.

MATTER | Here: *hayūlā*. The hylemorphic composition of the body – for which cf. *supra*, *Metaphysics* I.1, §§121-126 – is such that the non-existence (or ceasing) of either the matter or the form would entail the ceasing of the body itself.

WOULD BE MADE NON-EXISTENT | Arabic *in'adama*, Latin *destruetur*.

WE REFERRED TO, AND INTEND | The Arabic repeats *bi-wāġib al-wuġūd* also after the second of the two verbs. The Necessary Existent is such that His existence, and conversely also His non-existence, do not depend but on His essence alone. Thus, He cannot be at any rate a simultaneously physical and metaphysical compound such as a body.

[§178] D211.7-12

(3) The third concomitant of the Necessary Existent is that He is not form nor matter, since they are reciprocally interdependent, while He is not dependent on anything but His own essence. As noticed by JANSSENS 2019: 103, the first three features described in this treatise (§§176-178) «have no direct counterpart» in the *DN*. JANSSENS (*ivi* fn. 86) references the *Ta'liqāt* (ed. BADAWĪ 1973: 186.14), for the denial of accidentality ([1]), §176), and the *K. al-Naġāt* (ed. DANIŠPAŽŪH 1985: 553.4-7), for the denial of corporeality ([2]), §177), formality and materiality ([3]), §178) in God, while he admits that «their detailing may be proper to al-Ghazālī».

FORM | Arabic *šūra*, Latin *forma*.

MATTER | Arabic *hayūlā*, Latin *materia*.

[§179] D211.13-212.8

(4) The fourth characteristic of the Necessary Existent is the identity of His existence and His quiddity, which is demonstrated on the basis of the fact that, were the quiddity of the Necessary Existent something different from His existence, He would derive His existence from a non-existence, which cannot be the case. Necessary existence, then, is the quiddity of the Necessary Existent. On this fundamental Avicennan doctrine, and its legacy, scholarship is extremely abundant: cf. *e.g.* BENEVICH 2015, BENEVICH 2017, BERTOLACCI 2012^b, DRUART 2001, EICHNER 2012, GOICHON 1937, RAHMAN

1958^b, WISNOVSKY 2011.

HIS EXISTENCE IS NOT OTHER THAN HIS QUIDDITY | Arabic *lā yakūnu wuġūd^d-hu ġayr^e māhiyyat^f-hi*, Latin *eius esse, non est aliud ab eo quod est ipsum*.

THAT HIS CONCRETE EXISTENCE AND HIS QUIDDITY ARE UNITED | Arabic *an tattahida annīyyat^u-hu wa-māhiyyat^u-hu*, Latin *necesse est ud idem sit eius esse, et id quod est ipsum*. The two Arabic sentences express the same context using once the more generic *wuġūd* and once the technical *annīyya*, whose substantial synonymity seems thus to be granted (the Latin translation fails to recognize any difference between the two terms, using both times the rendition *esse*). However, the opposing item of the «quiddity» is expressed both times with the technical *māhiyya*, whereas the generic affirmation of the topic of the treatise as dealing with the «essence» of the Necessary Existent given at the beginning (cf. *supra*, §176) had employed the more generic *dāt*. This is probably a careful terminological choice, since in this paragraph the «quiddity» of the Necessary Existent is immediately brought to coincidence with His existence, whereas something more can be said of His «essence» more broadly conceived (as witnessed by the remainder of the treatise, and by the following discussions of the attributes of the First Principle in *Metaphysics* III).

IT HAS ALREADY BEEN SAID [...] IS NOT THE QUIDDITY | Cf. *supra*, *Metaphysics* I.1, §135.

ACCIDENTAL | Arabic *ʿarīd*, Latin *accidens*. As opposed to the rendition with *esse* adopted just before, the *annīyya* which is said to be accidental to the quiddity is translated into Latin as «esse de quo queritur per an est», while *māhiyya* is not rendered anymore with *id quod est ipsum* (cf. *supra*), but rather with «ei quod ipsa res est, scilicet ei de quo queritur per quid est» (reminiscent of §135 *supra*; cf. MUCKLE 1933: 53.14-15). The affirmation of the accidentality of existence with respect to the essence was already affirmed *supra*, *Logic* II, §11, *Metaphysics* I.1, §137, and will also return *infra* at *Metaphysics* V, §295. The character of accidentality attributed to the existence has here the function of demonstrating that the existence is caused.

ABOUT THE CAUSE [...] NECESSARY EXISTENT | Having shown that the existence is caused, it remains to determine what is the cause of the existence of the Necessary Existent. It must be His quiddity, because otherwise He would be accidental and caused, but this is not the case (cf. the denial of His accidentality at §176 *supra*).

[HOWEVER,] IT IS ABSURD [...] A CAUSE FOR IT? | However, the quiddity is not the existence: therefore, the quiddity *qua* quiddity cannot cause the existence, because it is in itself a non-existence.

IF IT HAD AN EXISTENCE [...] AND FOLLOW FROM IT? | An alternative to the previous step of the reasoning would be assuming that the quiddity already had an existence, but this would merely shift the problem, because one would have again to ask what caused that previous existence.

THE CONCRETE EXISTENCE OF THE NECESSARY EXISTENT IS HIS QUIDDITY | Arabic *anna wāġīb^a l-wuġūd^d annīyyat^u-hu māhiyyat^u-hu*, Latin *ei quod est necesse esse, idem sit esse, et id quod est*. It remains, then, the perfect identity between concrete existence and quiddity.

THE NECESSITY OF THE EXISTENCE [...] OTHER THAN HIM | Arabic *kāna wuġūb^a l-wuġūd^d la-hu ka-l-māhiyyat^f li-ġayr^e-hi*, Latin *et esse, hoc idem debet esse ei, quod est id quod res est aliis* (with some infelicities of translation). Moreover, it follows from the demonstrated identity between quiddity that the relationship of the «necessity of the existence» [*wuġūb al-wuġūd^d*] to the Necessary Existent is the same that the «quiddity» of any other thing entertains with that thing. There is thus a radical difference between the Necessary Existent and all the remaining, possible existents, in which a distinction between quiddity and existence is inevitable, and the existence is then contingent, not necessary.

AS WILL BE EXPLAINED | Maybe *Metaphysics* V, on the derivation of things from the First.

[§180] D212.9-19

(5) The fifth characteristic of the Necessary Existent is that He is not taken in any circle of mutual dependence, or causation: as a matter of fact, the direction of the dependence of all possible things on Him is unilateral, and He does not depend on anything that in turn depends on Him.

C | I have always substituted the Arabic Ĝ (cf. Latin *g*) with the letter «C».

BEFORE THAT WHICH IS BEFORE IT | Arabic *qabla mā huwa qabla-hu*, Latin *prius est eo quod est prius se*.

COMPANION | Arabic *ṣaḥīb*, Latin *alio*.

A PATENT ABSURDITY | Arabic *ẓāhir al-butlān*, Latin *manifeste falsum*.

[§181] D212.20-213.7

(6) The sixth characteristic of the Necessary Existent is the denial of His reciprocal dependence on anything else, not in the sense of mutual causation (as in §180 *supra*), but in the sense of the mutual relationship.

CAUSALITY | Arabic *ʿillīyya*, Latin *causalitatis*.

MUTUAL RELATIONSHIP | Arabic *taḍāyuf*, Latin *relacionis*. The root *ḍyf* of the verbal noun of the VI stem *taḍāyuf* is common to *idāfa*, the name of the category of «relation», and the example given is accordingly that of the relationship «between two brothers» [*bayn^a l-aḥwayni*] (cf. *supra*, §128, where «fraternity» [*uḥuwwa*] was precisely used as an instance of the category of *idāfa*).

WE PERMIT | Arabic *nuḡawwizu*, Latin *nos autem concedimus*. Completing the reasoning started in §180 *supra*, it is here confirmed that the direction of the «attachment» must be unilateral, from the Necessary Existent to something else, while it is never allowed to presuppose any dependence of the Necessary Existent on anything other than Himself.

ALL THAT DEPENDS ON SOMETHING OTHER THAN HIM IS POSSIBLE | Given that the Necessary Existent is intrinsically and completely independent from anything else, everything that depends on something other than Him is possible, because it is caused either by that something alone (6.1), which is then «sufficient» [*yakfi*] for the existence of that dependent thing, or by that something together with a further cause (6.2).

[§182] D213.8-214.8

(7) The seventh characteristic of the Necessary Existent is His unicity. This is demonstrated by showing that, were there two Necessary Existents, they could neither be identical to one another, nor different from one another; therefore, the Necessary Existent must be one. The internal arguments used to achieve the conclusion are based on *Metaphysics* I.2, §§142-143, which deal with universals and their instantiations in actual existence. Those results are employed here to show, *inter alia*, that the Necessary Existent has no differentia and no accident, which is crucial to rule out the possibility of His distinction from another Necessary Existent. Conversely, one could say that the Necessary Existent, having no quiddity apart from the necessary existence itself, is no genus, and cannot therefore be instantiated in particular, differentiated instances.

HE CANNOT BE TWO THINGS, EACH OF WHICH NECESSARY EXISTENT | Arabic *anna-hu lā yağūzu an yakūna šay'āni, kull^m wāhid^m min-humā wāğib^u l-wuğūd^f*, Latin *impossibile est esse duo, quorum utrumque sit necesse esse*.

EQUAL | Arabic *nidd*, Latin *comparem*. Equal «as for the necessity», but the Arabic text reads the adjective, rather than the abstract noun [*li-l-wāğib*].

AUTONOMOUS IN ITSELF | Arabic *mustaqill^m bi-nafsⁱ-hi*, Latin *per se sufficiens sibi nichilo egens*.

THEY ARE IDENTICAL UNDER EVERY RESPECT | Arabic *an yatašābaha min kull^m wağh^m*, Latin *similia omnino*.

(7.1) If the two presupposed Necessary Existents were identical, their «plurality» (or 'multiplicity') [*ta'addud*] would be «suppressed» [*butila*], because the intellect cannot distinguish a «duality» [*itnayniyya*] if the two 'distinct' things actually share all their properties. This can be seen as an application of the ontological principle of the identity of indiscernibles.

AS WE HAVE MENTIONED [...] PROPER TO IT | The reference is to the discussion on universals and their particular instantiations offered *supra* in *Metaphysics* I.2, §142. Interestingly, a statement on the unicity of the First Cause had been added by al-Ġazālī precisely there, in clear reference to the present passage. The two texts are thus reunited under the sign of a specific theological reading, particularly concerned with the issue of God's *tawhīd*.

THEY DIFFER | Arabic *yahtalifā*, Latin *diversa*. (7.2) If the two presupposed Necessary Existents were assumed to be different, this would be by virtue of a «differentia» [*faṣl*] or an «accidental» [*ārid*], which apply to the existence, not to the quiddity (cf. *infra*). However, in the Necessary Existent the quiddity is identical with the concrete existence, so that He has no differentia and no accident at all.

IT HAS ALREADY BEEN SAID [...] ITS BEING EXISTENT | Cf. *supra*, *Metaphysics* I.2, §143. As explained there, the differentiae do not enter the quiddities of the universals, but only their concrete existence, once they are instantiated in the particulars. The §§142-143, which elaborate on the characteristics of the universals, form a dyptich closely related to the present discussion on the unicity of the Necessary Existent.

THE EXISTENCE IS ACCIDENTAL WITH RESPECT TO THE QUIDDITY | On the accidentality of the existence cf. *supra*, *Logic* II, §11; *Metaphysics* I.1, §137, *Metaphysics* II.4, §179; *infra*, *Metaphysics* II.11, §189; *Metaphysics* V, §295.

AND TO THE OTHER [THINGS DEPENDING FROM IT] | The Latin translation might be useful to gloss this strange *wa-ğayr^u-hā* (whose suffix pronoun must refer to the feminine «quiddity» [*māhīyya*] that immediately precedes it). Cf. MUCKLE 1933: 55.2-4: «hoc autem contingit ubi esse est accidens supra id quod ipsa res est, et quanta est et cetera». The mention of 'quantity' might imply that the «other things» are in this case interpreted as the accidental categories, which would also have a quiddity (their being 'quantity', 'quality', and so forth), and a supervening accidental existence, distinct from their quidditative accidentality.

NONSENSE | Arabic *lağw*, Latin *superflua* (?). «Differentia» and «accident(al)» are 'null' expressions, mere 'foolish talk' and «nonsense» (see WEHR 1021^b) as for the Necessary Existent.

WHEN THE QUIDDITY IS OTHER THAN THE EXISTENCE | Cf. the Latin translation: «supradictum est autem hoc esse impossibile, quoniam non intrat nisi in id quod res est, eo quod id quod res est diversum est ab esse eius» (MUCKLE 1933: 55.10-13).

IT HAS ALREADY BEEN SAID BEFORE [...] OTHER THAN THE EXISTENCE | Cf. again *supra*, *Metaphysics* I.2, §143, where the application of the differentia only to the existence different from the quiddity was clearly affirmed.

[§183] D214.9-24

(8) The eighth characteristic of the Necessary Existent is that He has no attribute supervening with

respect to His essence (identical with His existence). (8.1) If that attribute were essential to Him, so that the non-existence of that attribute entailed His non-existence, He would be caused, and therefore He would not be Necessary Existent anymore. (8.2) If rather the attribute were accidental to Him, its cause would be either (8.2.1) the essence itself of the Necessary Existent, or (8.2.2) something other than Him (for this latter case cf. *infra*, §185). The present paragraph explains that if (8.2.1) were true, the Necessary Existent would be simultaneously agent and patient with respect to that attribute, so that there would be in Him a multiplicity, already ruled out in §182 *supra*.

ATTRIBUTE ADDITIONAL WITH RESPECT TO THE ESSENCE | Arabic *ṣifa zā'ida 'alā l-dāt*, Latin *nichil...superadditum essencie illius*. The identical expression *ṣifa zā'ida* is used by Averroes to define the existence with respect to the quiddity: cf. BERTOLACCI 2013^a: 256 and *supra*, *Metaphysics* I.1, §137. A COMPOUND | Arabic *murakkab*, Latin *compositum*. The necessary causedness of the compound, demonstrated for the first time in *Metaphysics* I.5, §156, was used *supra*, in *Metaphysics* II.2, §176, as an argument for excluding the possibility of the Necessary Existent's corporeality.

IS NOT ASSEMBLED | Arabic *lā tultammu*, Latin. I interpret the Arabic *rasm* as the feminine third-person singular of the passive imperfect of the VIII stem of *lamma*, while Dunyā vocalizes in *u* the second syllable, suggesting rather a verbal noun of the V form of a hypothetical verb of root *ltm*, a reading which seems untenable to me.

BY VIRTUE OF THEIR SUM | Arabic *bi-mağmū^a-hā*, Latin *propter coniunctionem illarum*.

LIKE FOR INSTANCE KNOWLEDGE | The exemplification of the accidental attribute whose existence in the Necessary Existent is being denied with (human) knowledge might be easily taken for a denial of knowledge in Him; but cf. *infra*, *Metaphysics* III, §§197-213, for a long and detailed elaboration on the possibility of attributing knowledge to the First Principle.

EVERY ACCIDENTAL IS CAUSED, AS IT WAS SAID BEFORE | Cf. *supra*, *Metaphysics* II.4, §179 («that which is accidental for something else has a dependence on [that] something else»).

THE ESSENCE WOULD BE AGENT AND RECEPTIVE | Arabic *kāna l-dāt fā'il^m wa-qābil^m*, Latin *agens, et recipiens*. (8.2.1) If the non-existence of the presupposed attribute did not entail the non-existence of the Necessary Existent, and His essence [*dāt*] were the cause of that attribute, His essence would be simultaneously active and passive with respect to that supervening attribute. This would *ipso facto* entail a «multiplicity» [Arabic *katra*, Latin *multitudo*] within the essence of the Necessary Existent; but a multiplicity of parts (cf. *Metaphysics* II.2, §176) entails the status of being caused, incompatible with the definition of Necessary Existent.

MOTIVATION OF THE WHOLE | Arabic *ta'īl al-ğumlat*, Latin *multitudinem* (presupposing **katra* rather than *ğumla*) *causatam esse ab unitatibus*. The term «motivation» must be taken in the sense of 'causedness', 'being caused': cf. *supra* the commentary to «a compound».

[§184] D214.25-215.6

The paragraph constitutes a side-argument in the principal flow of the reasoning, to the effect that the conjunction of agency and patiency (or action and reception) is not impossible *tout court*, but rather instantiated for instance in the body. This kind of conjunction is however possible only in composite things (and more particularly in hylemorphic compounds).

BY CONTRAST | Arabic *'alā*, Latin *quamvis*.

WE WILL CLARIFY IN THE PHYSICS | Arabic *sa-nubayyinu fī l-ṭabī'yyāt*, Latin *nos eciam probabimus in*

naturalibus. For the discussion on movement cf. *infra*, *Physics* I, §§316-322.

FROM OUTSIDE | Arabic *min ḥāriġ*, Latin *extra*. This is an example of violent (setting into) motion, in which the mover (*i.e.* the «agent» [fā'il]) is not intrinsic to the body, but rather external with respect to it. In this case, the body itself is «receptive» [qābil]. Cf. *infra*, *Physics* I, §321, for the treatment of violent movement.

THE RECEPTIVE [ELEMENT] IS MATTER, AND THE AGENT IS THE FORM | Arabic *al-qābil huwa l-hayūlā wa-l-fā'il huwa l-ṣūra*, Latin *Aliquando vero est recipiens secundum materiam, et agens per formam*. In this second possibility, the receptive and the agent element are both included within the body, but refer respectively to matter and form, which are different metaphysical parts in it.

THE GATHERING OF THE ACTION AND THE RECEPTION | Arabic *īġtimā^a l-fi'l wa-l-qabūl*, Latin *simul esse accionem, et receptionem*.

IS INDEED CONCEIVABLE | The Latin translation has «[i]magina», as if it were an imperative rather than an indicative (cf. MUCKLE 1933: 56.4).

LIKE THE MATTER | Here: *mādda* (cf. *supra* the alternative *hayūlā*).

WE HAVE ALREADY CLARIFIED [...] IS NOT LIKE THAT | Cf. *supra*, *Metaphysics* II.2, §177 for the denial of the Necessary Existent's corporeality (and with it of His hypothetical hylemorphic composition), and *Metaphysics* II.3, §178 for the denial of His being either matter or form.

[§185] D215.7-17

The reasoning started in §183 is concluded with the treatment of the possibility that the hypothetical attribute supervening to the essence of the Necessary Existent might be caused by something other than His own essence (8.2.2). This is impossible because, were it true, the Necessary Existent would be dependent on something else, in contrast to His own definition.

HE WOULD BECOME POSSESSOR OF AN ATTACHMENT TO [THAT] SOMETHING | Arabic *id yaṣīru dā 'alāqat^m ma'a l-ġayr^h* Latin *eo quod tunc necesse esse penderet ex illo alio*.

DESCRIBED BY [THAT ATTRIBUTE] | Arabic *muttaṣif^m bi-hā*, Latin *signatum*. The existence of the Necessary Existent would be in any case dependent on the other thing producing, or not producing, the attribute in His essence, because He would have the attribute (*i.e.* He would be *muttaṣif*, 'described' by that *ṣifa*) if that other thing existed, and He would not have it if that other thing did not exist. This dependence, however, would entail the Necessary Existent's being caused.

REPLACEMENT | Arabic *tabaddul*. The Latin translation reformulates the sentence: «Sic ad ipsum non esse, opus est illud aliud existere, quo existente destruat^r essentia eius» (MUCKLE 1933: 56.16-18).

THE NECESSARY EXISTENT [...] IS SUFFICIENT TO ITSELF | The precise formulation of God's self-subsistency is absent in the *DN*. JANSSENS 2019: 102-103 and fn. 87, while discussing the topic, references Avicenna's *Risāla al-'arṣīyya*, ed. HILĀL 1980: 21.11-20, and the *Ilāhiyyāt*, QANAWATĪ-ZĀYID 1960: 347.10-16, saying (a bit too vaguely) that «the basic idea is somehow present» also there. On the denial of any attachment, or dependence, for the Necessary Existent cf. also *supra*, *Metaphysics* II.1, §176, and *passim* throughout the treatise.

[§186] D215.18-end of page

(9) The ninth characteristic of the Necessary Existent is that He is unchanging. Having defined change in terms of supervenience of an attribute, its impossibility in the Necessary Existent immediately derives from the arguments built in (8), §§183-185 *supra*, which are accordingly

referenced throughout this short paragraph.

«CHANGE» | Arabic *taǧayyur*, Latin *permutacio*. «Change» is defined as the «origin of an attribute» [*ḥudūt šifatⁱⁿ*] «which was not there [before]» [*lam takun*]. As a side note, it is worth noticing that, although indirectly, the temporal (rather than merely logical) sense of *ḥudūt* seems to be confirmed by this definition, as well.

EVERY ORIGINATED NEEDS A CAUSE | Arabic *kullⁿ ḥādītⁱⁿ fa-yaftaqiru ilā sababⁱⁿ*, Latin *Omne verum novum eget causa*. The Latin rendition of *ḥādīt* as *novum* is, in turn, innovative with respect to the common *usus* of the translation, although correct, and witnesses the idea of temporal (*de novo*, in a common Latin wording) origination implicit in the root *ḥ-d-t* (cf. the Introduction, §1.8.2).

AS IT WAS SAID BEFORE | The reasoning retraces the lines of the argument against the existence of a supervening attribute in the essence of God unreeled *supra*, *Metaphysics* II.8, §§183-185. In particular, the denial of the possibility that the cause of that attribute might be other than the essence of the Necessary Existent is detailed in §185 *supra*, while the exclusion of His essence itself was argued for in §183, *supra*.

WE HAVE ALREADY MENTIONED | The negation of the receptivity of the agent (or the agency of the receptive element), *i.e.* the denial of the possibility for one simple thing to be agent and patient at the same time and under the same respect, was argued for in §184, *supra*.

NOTHING, THEN, PRODUCES ANYTHING AT ALL IN HIS ESSENCE | Reading *fa-lā yafʿalu al-šay^x šay^{xm} fi dātⁱ-hi al-battal^a*, as in D-Alt, against Dunyā's omission of *al-šay^x*.

[§187] D216.1-22

(10) The tenth characteristic attributed to the Necessary Existent discusses the procession of the manifold things from Him, stating for the first time the well-known metaphysical principle of *ex uno non fit nisi unum*: cf. *infra*, *Metaphysics* IV.7, §293, and especially *Metaphysics* V, §294 ff., for a further discussion.

ONLY ONE THING PROCEEDS WITHOUT AN INTERMEDIARY FROM THE NECESSARY EXISTENT | Arabic *wāǧib al-wuǧūdⁱ lā yašduru min-hu illā šay^{xm} wāḥid^{um} bi-ǧayrⁱ wāsiṭatⁱⁿ*, Latin *ex necesse esse non provenit nisi unum quid, nullo mediate*. In this longer formulation of the axiom, emphasis is placed on the absence of any intermediary as the basic requirement for the validity of the principle, while «manifold things» [*ašyāʾ kaṭīra*] can proceed from the Necessary Existent in the presence of «intermediaries» [*wasāʾiṭ*] and «according to a hierarchical order» [*alā tartībⁱⁿ*]. Cf. *infra*, *Metaphysics* V, §294.

MULTIPLICITY | Arabic *kaṭra*, Latin *multitudo*. This further inquiry on multiplicity completes, in a way, the one on the analogous concept of *taʿaddud* implicitly contained in the section on one and manifold of the First treatise of *Metaphysics*; cf. *supra*, *Metaphysics* I.3, §§148-153. Here a multiplicity of (physical) autonomous parts (10.1), exemplified by the «composite body» [*al-ǧism al-muʿallaf*], is contrasted with a multiplicity of conceptual ('metaphysical') parts (10.2), exemplified by form and matter, or existence and quiddity.

FROM THE ONE, ONLY ONE PROCEEDS | JANSSENS 2019: 104 comments on this (D216.11) and the preceding (D216.1) occurrence of «the famous Avicennian dictum that "From the One only one proceeds"», remarking that they both are Ġazālīan additions with respect to the corresponding passage of the *DN*.

THE ACT OF THE ONE [...] OF THE ONE AGENT | Three reasons of variation or differentiation [*iḥtilāf*] of the act of the «one agent» [*al-fā'il al-wāḥid*] are given: (i) difference in the «receptacle» [*maḥall*] (for instance if a receptacle is more predisposed than another to the reception of the action of the agent); (ii) difference in the «instrument» [*āla*] (probably a reference to the 'intermediary' through which the action of the one occurs); (iii) for a supervening cause [*bi-sababⁱⁿ zā'id^m*] with respect to the essence of the agent. A cosmological account of how multiplicity occurs from the One will be given *infra*, *Metaphysics* V, §§294-297.

CORRESPONDENCE | Arabic *mumāṭala*, Latin *identitas* (or *similitudo*, in one occurrence: cf. MUCKLE 1933: 57.18). *Supra*, *Metaphysics* I.3, §150, the *mumāṭala* had been described as the «oneness» resulting in two things that share a property.

«CORRESPONDENCE TO ONESELF» | Duniyā has here *fī-l-nafsⁱ*, 'in itself, but the previous expression *lī-nafsⁱ-hi*, «to oneself», appears more appropriate, since it is not the correspondence in itself to be said figuratively, but rather the self-correspondence, *i.e.* precisely the correspondence, or equivalence, to oneself. The argument here advanced can be summarised as follows: different things produce different effects; by contrast, equal effects are produced by equal things. If then the identity of effect entails a «correspondence» (similarity, or identity *tout court*, of a property, *iuxta* §150 *supra*) between the causes, that peculiar kind of «correspondence» represented by self-identity will *a fortiori* require identity of effect. If the cause is one, the effect will accordingly be only one.

THE INTENT [HERE] IS [JUST] TO MAKE UNDERSTAND | Arabic *al-maqṣūd al-tafhīm*, Latin *nos intendimus per hoc te facere intelligere*. JANSSENS 2019: 104 remarks that «al-Ghazālī structures the exposition in such a way that it becomes easier to be grasped», acknowledging the realization of the didactic «intent» announced in the text. The passage would thus be one of those cases in which the exposition of the *MF* rearranges the text of the *DN* in order to make it plainer, and easier to understand: on this feature cf. JANSSENS 1986, and Introduction, §1.4.1 (on the *divisio textus* of the *MF* and its importance for the success of the text).

[§188] D216.23-218.7

(11) The eleventh characteristic of the Necessary Existent is that He is not a substance. While the specular denial of His being an accident (cf. *supra*, *Metaphysics* II.1, §176) was plain, God's non-substantiality requires a more thorough analysis. On this characteristic Avicennan doctrine, whose treatment by al-Ġazālī is, as we shall see, heavily interspersed with linguistic considerations, cf. LEGENHAUSEN 2017.

AS WE HAVE SAID BEFORE | Cf. the denial of the Necessary Existent's accidentality in *Metaphysics* II.1, §176.

«SUBSTANCE» | Arabic *ḡawhar*, Latin *substantia*. For a discussion on the semantics of the polysemous Arabic word *ḡawhar* cf. the Introduction, §1.7.1.1.

IN THE TECHNICAL USAGE OF THE GROUP [OF THE PHILOSOPHERS] | Arabic *fī iṣṭilāḥⁱ l-qawmⁱ*, Latin *sicut enim convenerunt*. As revealed by the lexical indicator *iṣṭilāḥ*, often used in similar contexts throughout the *MF* (cf. Introduction, §1.7.1 and esp. §1.7.1.1), al-Ġazālī is willing to underline here what he sees as the almost nominalistic nature of the dispute on God's substantiality: given a certain conventional definition of 'substance' (see *infra*), some consequences will naturally follow. The parallel passage in Avicenna's *K. al-Šifā'* makes it clear that Avicenna himself was aware of a possible objection to his interpretation of the nature of God, aiming at dismissing his doctrine as purely verbal. The fictional objection he presents is based, indeed, on the idea that one cannot help to think of God as a substance, even if one is not willing to assign Him the *name* of 'substance'. According to the objector,

God would fall as a consequence within the genus 'substance', just like every other substantial, yet contingent, being. Cf. *Ilāhiyyāt*, VIII.4, §§17-18, MARMURA 2005^a: 277-8: «Someone may say, “Although you have avoided assigning the name 'substance' to the First, you do not avoid assigning Him its meaning. This is because He exists in no subject; and this is the meaning of substance, which you have rendered a genus.”».

AN EXPRESSION REFERRING TO A NATURE AND A QUIDDITY WHOSE EXISTENCE IS NOT IN A SUBJECT | Arabic *'ibāra 'an ḥaqīqatⁱⁿ wa-māhiyyatⁱⁿ wuǧūd^u-hā lā fī mawḍūⁱⁿ*, Latin *id quod res est, cuius esse non est esse in subiecto*.

CROCODILE | Arabic *timsāḥ*, Latin *fenix*. For the *timsāḥ* cf. also *supra*, *Logic* II, §11, and *Logic* IV, §49 and §51. Among these three preceding occurrences of the same Arabic term, the most relevant to our present purpose is that of §11, since there as well the Latin translators replaced the 'crocodile' with the 'phoenix'. The context of *Logic* II, §11 makes it clear that *timsāḥ* – and consequently also the Latin phoenix which substitutes it – is used as an example of an animal about whose existence one is allowed to doubt, despite having quite good a grasp of its quiddity. In keeping with the definition of «substance» given before, which requires that the existence of the quiddity, if it exists, is not in a subject, the possible doubt on the actual existence of the crocodile («you can however doubt whether it is immediately realized, or not») clarifies that the definition does not prescribe the actual existence of the quiddity (cf. also *infra* the specification «when the existence accidentally inheres to them»), but only its being «not in a subject» [*lā fī mawḍūⁱⁿ*]. The Latin substitution of 'crocodile' with 'phoenix' might thus be considered as a smart, although innovative, translative solution. Using an example of an explicitly fictional animal (or, at least, one very seldom seen), the Latin text would thus hint at the circumstance that even though the phoenix does not exist in the real world, we are still sure that it falls under the genus of substance, because the concept of its quiddity itself guarantees that, should it ever exist, it would certainly exist not in a subject.

WHEN THE EXISTENCE ACCIDENTALLY INHERES TO THEM | Arabic *idā 'ariḍa la-hā al-wuǧūd*, Latin *cum acciderit ei esse*.

THAT, THEN, WHOSE QUIDDITY [...] APPLICATION TO HIM | The conclusion of the paragraph states – in agreement with Avicenna's own doctrine (cf. *Ilāhiyyāt*, VIII.4 and VIII.7), but with characteristically Ḡazālīan emphasis on the linguistical and conventional nature of the definitions involved (two further occurrences of *iṣṭilāḥ*) – that «substance» does not apply to God, because the true definition of substance implies a proper quiddity, such that one can be sure that, if the thing actually exists, it exists not in a subject. This kind of quiddity, however, does not apply to God – as there is no difference in Him between quiddity and actual, necessary existence –, and God, therefore, cannot be a substance under this «technical usage». Al-Ḡazālī insists however that, by postulating another conventional meaning of substance as merely referring to an existence that has not a receptacle, it would be possible to apply also to the Necessary Existent that newly defined name.

[§189] D218.8-219.13

In this doctrinally rich paragraph, an objection against the denial of God's substantiality is advanced, and an articulated answer is given. Existence is not a genus for God and the other things, and the substance is accordingly not a genus common to God and the other substances. In a way, the same relation of priority that the substance entertains with the accidental categories is entertained by God, the Necessary Existent, with respect to all the possible existents. The reasoning unreheated in the paragraph also gives the occasion to provide, in conclusion, a recapitulation of almost all the characteristics discussed *supra*, in the form of a list of negative 'attributes' of the Necessary Existent.

COMPREHENSIVE | Arabic *šāmil*, Latin *commune*. I transport here, after *šāmil*, the question mark placed by Dunyā at the end of the entire objection (after «definition», D218.10). The objection goes as follows: if the existence is ‘common’, or «comprehensive», *i.e.* encompassing at the same title the Necessary Existent and all the other existents, it might be considered a genus, which would then need to be articulated through a differentia in order to account for the distinction of the Necessary Existent from the other existing things. The Necessary Existent, then, would have a «definition» [*ḥadd*] (cf. *supra*, *Logic* II, §19).

HE IS ALREADY CLASSIFIED WITH WHAT IS OTHER THAN HIM UNDER THE GENUS | Arabic *fa-qad indaraḡa ma’a ḡayr-hi taḡta l-ḡins’*, Latin *necesse esse est ab alio sub uno genere*. The Latin *ab alio* is a wrong translation, which might presuppose the misreading **min* [*ḡayr-hi*] for the Arabic *ma’a* [*ḡayr-hi*].

THE EXISTENCE BEFALLS HIM [...] THE ANTERIORITY AND THE POSTERIORITY | The answer to the objection is that existence does not behave like a genus for the Necessary Existent and the other existing things, but is rather applied *per prius et posterius* [Arabic *‘alā sabīl’ l-taḡaddum’ wa-l-ta’ahḡur’*]. Cf. *supra*, *Metaphysics* I.1, §§134-137; on the graduality admitted by existence see esp. §136.

SYNONYMY | Arabic *tawāṡu’*, Latin *univoce*. For the denial of synonymous predication of existence cf. *supra*, *Metaphysics* I.1, §136.

A NEGATION | Arabic *naḡy*.

AN ABSTRACT NEGATION | Arabic *salb muḡarrad*. The addition of a mere negation cannot transform in a genus something that is not a genus in the first place: having already denied (cf. *Metaphysics* I.1, §§134-137) the genericity of the existence, it must follow that existence-not-in-a-subject is not a genus, either.

THE EXISTENCE NOT IN THE SUBJECT | The kind of existence shared by God and the substances is not a genus, just as the kind of existence shared by substances and accidents is not a genus (cf. *supra*).

THE WAY OF GENERALITY. SUBSTANTIALITY | I modify Dunyā’s gravely misleading punctuation by adding a period between *ḡinsīyya* and *ḡawhariyya*, in accordance with the Latin translation (MUCKLE 1933: 58.15-16: «non dicitur secundum generalitatem; substantialitas vero [...]») and the *DN*.

DOES NOT FALL IN | Arabic *yaḡa’u*.

ANY OF THE TEN CATEGORIES | Cf. Avicenna, *DN*, trans. ACHENA-MASSÉ (1) 1955: 147 [*Que l’être nécessaire n’est ni substance ni accident*]: «Puisque l’être de l’Être nécessaire n’est pas en univocité et en «généricité» avec l’être des autres choses, donc l’être non en sujet qui lui appartient ne se trouve pas dans le sens de «généricité» avec l’être non en sujet qui appartient à l’homme et aussi à autre que l’homme – et cela puisque l’être s’applique par analogie et non par univocité ni par généralité, et puisque ce qui n’est pas en un sujet n’est pas en analogie; donc l’être non en sujet n’est pas le genre des choses sinon dans le sens que nous avons dit, [tandis que] la substance est le genre de toutes les choses qui sont substance; donc l’Être nécessaire n’est pas une substance et, en bref, ne fait partie d’aucune des catégories [...]».

HOW, SINCE THE EXISTENCE [...] THEIR QUIDDITIES | The passage restates the pervading topic of the accidentality of existence, for which cf. *supra*, *Logic* II, §12 and §16, *Metaphysics* I.1, §137, *Metaphysics* II.4, §179, *Metaphysics* II.7, §182, and *infra*, *Metaphysics* V, §295.

THE EXISTENCE OF THE NECESSARY EXISTENT AND HIS QUIDDITY ARE ONE THING | Cf. *supra*, *Metaphysics* II.4, §179. The impossibility of God’s belonging to any of the categories is also made derive from the fundamental notion of the coincidence between His quiddity and His existence, although the denials of His accidentality (see *supra*, *Metaphysics* II.1, §176) and of His substantiality (*Metaphysics* II.11, §188) have also been provided separately. Given the higher ontological status enjoyed by the substance, however, it is the denial of God’s substantiality that entails, *a fortiori*, the denial of His accidentality (which constitutes a less complicated and preliminary issue, dealt with at the beginning of the treatise).

IT APPEARS | Arabic *yazḡaru*, Latin *constat*. By contrast with the following perfect tense voices [Arabic *zāhara*, Latin *ostensum est*], the verb in the imperfect introduces the newly-found acquisitions of the reasoning of §§188-189, *i.e.* the fact that «the Necessary Existent has no genus [*ḡins*], nor differentia

[*faṣl*], nor definition [*ḥadd*]. These, and all the negative attributed that follow, are expressed with the construction of the ‘*lā* of generic negation’ [*lā al-nāfiyya li-l-ḡins*], mirroring the formulations of parallel texts in Avicenna’s metaphysical *summae*: cf. in particular *K. al-Šifāʾ, Ilāhiyyāt*, VIII (some excerpts of which are quoted in the Introduction, §1.7.1.1).

THEN HE HAS NO CONTRARY | Arabic *fa-lā didd^a la-hu*, Latin *ergo non habet contrarium*. The first of the three criteria listed in *Metaphysics* I.3, §153 for contrariety prescribed that the contraries must share their «subject» [*mawḍūʿ*]. Accordingly, and with noteworthy doctrinal precision, the consecutive *fa-* (mirrored by the Latin *ergo*) that introduces the denial of the contrary for the Necessary Existent follows the negation of His having a «receptacle» [*maḥall*] and a «subject» [*mawḍūʿ*] (the negation of a subject is implicit in His being existence not in a subject, as affirmed throughout §§188-189; but cf. also *supra, Metaphysics* II.3, §178 for the denial of His being matter or form). For the distinction between *maḥall* and *mawḍūʿ* (the latter being a *maḥall* for an accident) cf. *supra, Metaphysics* I.1, §104.

EQUAL | Arabic *nidd*, Latin *comparem*. For the unicity of Necessary Existent cf. *supra, Metaphysics* II.7, §182. Despite the fact that the denial of *nidd* and *šarik* have already been introduced, and that the Arabic has accordingly the introducing verb *zahara* in the perfect, the Latin translation reproduces *constat*, in the present, with which the imperfect *yazharu* had been rendered; moreover, its formulation «ergo non habet comparem nec participem» (MUCKLE 1933: 58.26-27) makes the unicity follow from the negation of the «species» [*nawʿ*], in contrast with the formulation of the original Arabic (and probably also with the philosophical sense, since monadic species are in principle admissible).

ASSOCIATE | Arabic *šarik*, Latin *participem*. It is important to notice that the IV form of the verb with the same root is used in expressions referring explicitly to polytheism: *ašraka-hu bi-llāh* has the value of ‘to make s.o. the associate or partner of God (in His creation and rule)’, while *ašraka bi-llāh* means ‘to set up or attribute associates to God, i.e. to be a polytheist, an idolator’ (cf. WEHR 547^{ab}, *sub voce* «šarika»). The noun *širk* coherently means ‘polytheism, idolatry’, and *ahl al-širk* is the name usually given to the polytheists (cf. WEHR 547^b, *sub voce* «širk»), as opposed to the Islamic profession of absolute monotheism (*tawḥīd*). For a conspectus of the passages of the *Ilāhiyyāt* of Avicenna’s *K. al-Šifāʾ* in which the expression *lā šarik^a la-hu* occurs cf. BERTOLACCI 2006: 466 fn. 136.

HE HAS NO CAUSE, NO CHANGE, AND NO PARTS AT ALL | Arabic *lā sabab^a la-hu wa-lā taḡayyur^a la-hu wa-lā ḡuz^x la-hu bi-ḥāʾin*, Latin *non habet causam; ergo non habet permutacionem nec habet partem ullo modo*. The negation of the cause is in a way implicit in the characterization of the Necessary Existent as that which exists by virtue of Himself, but cf. also *supra, Metaphysics* II.5-6, §§180-181, for a sharp denial of any dependence of God on something else. For the negation of parts cf. *supra, Metaphysics* II.2, §177; for that of change see *Metaphysics* II.9, §186. In §177 and §186 parts and change are both denied on the basis of the fact that they would entail the being caused of the Necessary Existent; in this regard, the consecutive *ergo* in the Latin translation can be seen as a warranted addition (perhaps already present in the original Arabic and missing in Dunyā’s edition).

[§190] D219.14-220.5

(12) The twelfth thing to be said about the Necessary Existent is akin to, and completes, the tenth one (cf. *supra, Metaphysics* II.10, §187), as it regards the procession of all existing things from Him, according to a hierarchy of being. Four possibilities (12.1-4) concerning the reciprocal relationships of all existing things are laid down, and the alternative is shown to be exhaustive.

ACCORDING TO THE HIERARCHICAL ORDER | Arabic *ʿalā l-tartīb*, Latin *secundum ordinem*.

ONCE IT HAS BEEN CLARIFIED [...] ONE | On the unicity of the Necessary Existent cf. *supra*, *Metaphysics* II.7, §182 (restated again in *Metaphysics* II.11, §189).

THEY CONCATENATE TO THE INFINITE | Arabic *yatasalsilu ilā ġayrī nihāyat^m*, Latin *connectentur sic usque infinitum*. (12.1) = (a) The first possibility is the absence of a first cause (infinity of the causal chain). This first possibility corresponds to case (a) in the bipartition presented *infra* in order to show the exhaustiveness of the four divisions, as it represents the absence of end in the chain of beings.

ONE COMES TO AN EXTREME [...] NO CAUSE IN ITSELF | (12.2) = (b.2.2) The second possibility considers the case in which the causal chain ends in an uncaused «extreme» [*taraf*]. As such, this possibility is absent in the *DN*, although JANSSENS 2019: 104 and fn. 88 references in this regard *Išārāt* ed. FORGET 1892: 142.4-7 as a possible source. The second, third, and fourth case have in common the assumption of a finiteness of the causal chain, thus corresponding to case (b) in the bipartition proposed *infra*, although they differ as for the identification of the nature of the end they all presuppose. More particularly, the second (12.2) and the third (12.3) case have in common the fact of considering something which is *not* the Necessary Existent as the end of the causal chain, and they are further distinguished because they consider this something either as uncaused [(b.2.2) = (12.2)], or as caused [(b.2.1) = (12.3), cf. *infra*].

ONE COMES TO AN EXTREME [...] OF ITS CAUSED | (12.3) = (b.2.1) The third possibility considers the case in which the causal chain ends in an extreme that is caused, in turn, by one of its effects, *i.e.* a case of circular causation (for a denial of it in the case of the Necessary Existent cf. already *supra*, *Metaphysics* II.5, §180 (but see also II.6, §181).

ONE COMES TO THE NECESSARY EXISTENT | (12.4) = (b.1) The fourth and last possibility considers the case in which the causal chain ends in the Necessary Existent.

THE ASPECT [ACCORDING TO WHICH] THESE DIVISIONS ARE EXHAUSTIVE | Arabic *waġh haṣr hādihī l-aqṣām^t*, Latin *Quod autem hec divisio facta in quatuor complectatur omnia, ratio hec est*.

[§191] D220.6-19

After having laid down the exhaustive division of the possibilities concerning the causal chains in the preceding §190, the present paragraph proceeds to refute all but one of them, namely (12.4) = (b.1), *i.e.* the option according to which the end of the causal chain is the Necessary Existent. This demonstrates that all the existing things derive and descend from Him alone.

AS FOR THE FIRST [...] WE HAVE ALREADY FALSIFIED IT | (a)=(12.1) On the infinity of the causal chain cf. the *Metaphysics* I.6, §162, and especially §165 for the demonstration of its impossibility.

AS FOR THE SECOND ONE [...] THE NECESSARY EXISTENT IS TWOFOLD | (b.2.2)=(12.2) The second possibility, *i.e.* the ending of the causal chain in an uncaused extreme, yet different from the Necessary Existent, would entail the existence of a second Necessary Existent, since He is in Himself paradigmatically uncaused. The duplicity of the Necessary Existent was however already refuted *supra*, *Metaphysics* II.7, §182, and His unicity reaffirmed again in *Metaphysics* II.11, §189, so that also possibility (12.2) is refuted.

AS FOR THE THIRD ONE [...] HAS ALREADY COME BEFORE | (b.2.1)=(12.3) The circular, or mutual, system of causation entailed by possibility (12.3) was already falsified *supra*, *Metaphysics* II.5, §180 (but see also II.6, §181).

THE FOURTH ONE RESULTS THEN SPECIFICALLY IMPOSED | Arabic *fa-ta'ayyana al-rābi'*, Latin *Restat ergo verum esse quartum membrum*. (b.1)=(12.4) The exclusion of the three other possibilities, given that the subdivision was shown to be exhaustive, necessarily entails the truth of the fourth one, *i.e.* the ending of the causal chain in an existent that is the Necessary Existent.

[§192] D220.20-221.13

The objection expounded in the present paragraph asks about the actual proof of the existence of the Necessary Existent, after the preceding determination of His twelve features. The question and its long answer, which lasts until the conclusion of the entire Second treatise in §195 *infra*, have no proper correspondence in the *DN*, and must then be seen as added by al-Ġazālī (cf. JANSSENS 2019: 104). The beginning of the answer, given in the present paragraph, starts with the consideration of the possibility (*i.e.* the state of being possible) of all things of the world, whose existence we cannot help but witness.

YOU HAVE CLAIMED | Arabic *idda'aytum* (VIII stem of the verb *da'ā*), Latin *affirmastis*.

THE NECESSARY IS NECESSITATED TO BE SO AND SO | Arabic *anna l-wāǧīb^a yaǧību an yakūn^a kayt^a wa-kayt^a*. The Latin translation rightly glosses the generic Arabic expression with an explicit reference to the preceding treatment of the characteristics of the Necessary Existent: «quod necesse esse debet esse hoc, et hoc scilicet, quicquid de eo predictum est» (MUCKLE 1933: 59.32-33, emphasis added).

YOU HAVE NOT SHOWN | Reading *lam tadallū*, second-person plural of the conditional of *dalla*, without the separation *alif* printed by Dunyā (given that the *rasm* *تدلو* would force to translate the verb as third-person plural of *tadalla* in V form, here completely out of context). Cf. Latin: «nondum tamen assignastis» (MUCKLE 1933: 59.34).

IN THE ACTUAL EXISTENCE | Arabic *fī l-wuǧūdⁱ l-hāsiⁱ*, Latin *inter ea quae sunt*.

THE SIGN THAT ESTABLISHES [THE EXISTENCE OF] THE NECESSARY EXISTENT | Arabic *al-dalīl 'alā itbātⁱ wāǧībⁱ l-wuǧūdⁱ*, Latin. In Avicennan metaphysical contexts, the Arabic *itbāt* specifically denotes the 'establishment in the existence' (hence my integration in square brackets).

HE IS THE EXISTENT WHOSE DESCRIPTIVE FEATURE YOU HAVE NOT MENTIONED | Arabic *huwa l-mawǧūd alladī wasfⁱ-hu mā dakartū-hu*, Latin *esse cuius designacio fuit, quicquid supradixistis de eo*. The Latin translation interprets *mā* as a relative pronoun, rather than as negation. Both interpretations are viable, provided that one makes explicit what is intended by *wasf*: if it is a way to express the description 'the existent whose existence is identical with his quiddity' (or similar formulations), the reading of the Latin text is perfectly acceptable; under my reading, the text would rather underline the impossibility of properly describing and defining the essence of God, in keeping with the general theological stance of *Metaphysics* II and III (on God's attributes).

DEMONSTRATION | Arabic *burhān*, Latin *probacio*.

THE EXISTENCE OF THE SENSIBLE WORLD IS APPARENT | Arabic *al-ālam^u al-mahsūs^u zāhū^u l-wuǧūdⁱ*, Latin *huius sensibilis mundi esse manifestum est*. Given the self-evident existence of the «sensible world», the text qualifies its components – «bodies» [*aǧsām*] and «accidents» [*a'rād*] – as possible, because subsisting by virtue of something else (the bodies for the accidents; matter and form and their physical parts for the bodies).

WE HAVE ALREADY ESTABLISHED [...] POSSIBLE | Cf. *supra*, *Metaphysics* I.8, §§169-170.

WE HAVE CLARIFIED [...] NOR ACCIDENT | For the negation of the Necessary Existent's being matter or form cf. *supra*, *Metaphysics* II.3, §178; for the negation of His being body cf. *Metaphysics* II.2, §177; for the negation of His being accident cf. *Metaphysics* II.1, §176 (and *passim* also II.11, §188). It is noteworthy that the textual basis for this demonstration, added by al-Ġazālī, is constituted, in turn, by the three preliminary characteristics of the Necessary Existent that al-Ġazālī himself had added with respect to the *DN*. The operation of rearrangement of Avicenna's text performed by the author of the *MF* is thus confirmed to be conscious, precise and thoughtful.

THE UNIVERSAL NEGATIVE CONVERTS IN A [PROPOSITION] SIMILAR TO ITSELF | On the conversion of the universal negative cf. *supra*, *Logic*, III.6, §33.

[§193] D221.14-end of page

The paragraph ultimately states that the world, although possible and hence originated, is coeternal with God.

WE HAVE ALREADY MENTIONED [...] SOMETHING ELSE | For the definition of possible cf *supra*, *Metaphysics* I.8, esp. §§169-170.

THE MEANING OF ITS BEING ORIGINATED | Arabic *ma'nā kawnⁱ-hi muḥdat^{an}*, Latin *de omni quod factum est*. Dunyā's footnote *ad locum* remarks that this *ḥudūt* is to be seen as 'essential' [*dātī*] rather than 'temporal' [*zamānī*], due to the eternalist conclusion of the argument, incompatible with a temporal origin of the «world» [*ālam*]. Consistent hints to the actual temporal creation of the world are however deployed throughout the *MF*, as shown in the Introduction, §1.8.2 (and cf. SIGNORI 2020^b). It is then reasonable to assume that two notions of the *ḥudūt* of the world, one entailing a merely logical/ontological priority of God, and the other more precisely a chronological one, are at work in the *MF*. The first one, squarely expressed in this and the following paragraphs, is more in keeping with Avicenna's original thought; the second one, although only surreptitiously surfacing here and there in the *MF*, is mirrored in al-Ġazālī's *TF*, and could thus represent a deeper, and more relevant, level of analysis in the *MF*, as well.

ITS NON-EXISTENCE, THEN, IS BEFORE ITS EXISTENCE | Arabic *fa-'adamⁿ-hu qablⁿ wuġūdⁿ-hi*, Latin *igitur eius non esse prius est quam eius esse*. The priority of the non-existence of the world over its existence is due to the non-existence's being essential [*bi-l-dātⁱ*] to the world, while its existence is extrinsic to it [*bi-l-ġayrⁱ*]. Up to this point in the reasoning, the eternalist conclusion which follows is not immediately foreseeable, and rather this sentence in particular – with its usage of *qablⁿ*, i.e. the paradigmatic particle of temporal anteriority (cf. *supra*, *Metaphysics* I.4, §154) – might be seen as foreshadowing the opposite – and surely more properly Ġazālīan – anti-eternalist conclusion. This kind of textual indicators might seem to indicate al-Ġazālī's struggling with the philosophical interpretation of the origin of the world, as they show that his exposition of an ultimately Avicennan account in the *MF* is frequently interspersed with anti-eternalist doubts and detours. Cf. on this the Introduction, §1.8.2.

ETERNALLY AND FOREVER ORIGINATED | Arabic *muḥdatⁿ azal^{an} wa-abad^{an}*, Latin *factus est ab eterno perpetuus*. The formulation epitomizes Avicenna's theoretical option for the doctrine of the creation *ab aeterno* (cf. also on this the Latin rendition).

IT HAS ALREADY BEEN SAID [...] ITS BEING AN ACT | Arabic *wa-qad sabaqa anna dawām^a l-šay^x lā yunāfiyu kawn^a-hu fi^{l^m}*, Latin *Iam autem prediximus quod sempiternitas rei non aufert ei esse facturam*. Cf. *supra*, *Metaphysics* I.8, §§173-175, and especially §175 for the affirmation of the possibility of an eternal agent producing an eternal act. Those final paragraphs of the first treatise of *Metaphysics* are globally a significant parallel to these §§192-195, which specularly conclude the second treatise by discussing the same topic, i.e. the eternity of the world.

[§194] D222.1-17

The paragraph deals with the emanation of all existing things from God as the source of existence, anticipating in a way the theme of the flux, which will form the bulk of the following Fifth treatise of *Metaphysics* (see *infra*).

THAT FROM WHICH [...] PROVOKED TO THE ACT | JANSSENS 2019: 104 emphasises this eternalist sentence as a particularly significant addition on the part of al-Ġazālī.

THAT FROM WHICH THE THING PERPETUALLY EXISTS | Arabic *mā yūğadu min-hu al-šayʿu dā'im^{am}*, Latin *Ille vero a quo res semper est*.

WORTHIER | Arabic *afḍal*, Latin *dignior*.

THAT WHICH REMAINS INACTIVE FOR AN INFINITE PERIOD OF TIME | Arabic *mā yata'aṭṭalu muddat^{am} lā nihāyat^a la-hā*, Latin *ille qui infinita mora cessans*. The idea that creation in time should entail the previous idleness of the creator is strongly challenged in the First discussion of the *TF*.

THE UNIVERSE | Arabic *al-kull*, Latin *universitas*. Given the previous insistence on the origin of the «world» [*ālam*], I interpret *kull* in the sense of 'cosmos' (as attested for instance in the title of the Arabic Alexander of Aphrodisias' *Mabādi' al-kull*; and cf. also *infra*, *Metaphysics* III, §198), rather than with the still possible meaning of 'totality' (as interpreted by the Latin translation).

THE CAUSES ASCEND [...] INEVITABLY ONE | For the termination of the causal chain in the one God as Necessary Existent, cf. *supra*, *Metaphysics* II.12, §§190-191.

NECESSARY EXISTENT | Reading *wāğib* instead of *w-ğ-b* as in Duniyā.

PRINCIPLE | Arabic *awwal*, Latin *primum principium*.

BY ESSENCE, THE TRUTH OF THE PURE EXISTENCE | Arabic *haqīqat^a l-wuğūdⁱ al-maḥḍⁱ fi dātⁱ-hi*, Latin *ipse est verum, et purum esse in seipso*.

SPRING OF THE EXISTENCE | Arabic *yanbū' l-wuğūdⁱ*, Latin *origo essendi*.

PERFECT AND ABOVE PERFECTION | Arabic *tāmm wa-fawq^a l-tamāmⁱ*, Latin *perfectum, et perfectissimum*. Globally, the lexicon of the passage is highly theological. The qualification of being «above perfection» attributed to God is present in Avicenna's *K. al-Šifā', Ilāhiyyāt* VIII.6, ed. QANAWATĪ-ZĀYID 1960: 355.6-356.5 (cf. the Latin translation in *Philosophia prima*, VAN RIET 1980: 412.55-413.78, as «plus quam perfectum»); and see also the parallel passages of Avicenna's *Ta'liqāt* (ed. BADAŪĪ 1973: 16.26-27) and of the *DN* itself, in which God is defined as «most perfect» [Persian *tamāmtarīn*] (cf. ed. MO'IN 1952: 108.10-11 = ACHENA-MASSÉ (1) 1955: 178, 'super-parfaite'), quoted by WISNOVSKY 2003^a: 185 (L51) and 188 fn. 8. This kind of terminology, together with the characteristic use of the adjective «pure» [*maḥḍ*] (cf. *supra* in this paragraph), can be traced back to the pseudo-Aristotelian *Book on the Exposition of the Pure Good* [*Kitāb al-īdāḥ fi l-ḥayr al-maḥḍ*]; the expression *fawq^a l-tamāmⁱ* is at TAYLOR 1981: 21, 23.1 (cf. on this, also for a thorough discussion, WISNOVSKY 2003^a: 191 [L54] and ff.; on the same passage as a source for Avicenna's aforementioned text of the *Ilāhiyyāt* of the *K. al-Šifā'*, see also D'ANCONA 2000: 109-112). According to WISNOVSKY 2003^a: 191, the Avicennan concept of «above perfection» is best understood in terms of a 'productive causal self-sufficiency' assigned to God, as opposed to the unproductive causal self-sufficiency of the intellects. In this regard, the qualification of being *fawq^a l-tamāmⁱ* is strictly connected with God's being the «spring» [*yanbū'*] (see *supra*) of the existence, because His super-perfection is precisely to be understood as the overflowing of existence coming from Him. On this process of emanation cf. *infra*, *Metaphysics* V, *passim*. For a further occurrence in cosmological context of the description *fawq^a l-tamāmⁱ* cf. *infra*, *Metaphysics* IV.a.1, §246.

RELATIONSHIP | Arabic *nisba*, Latin *comparacio*.

BRIGHTNESS | Arabic *ḍaw'*, Latin *lux*. In the simile, the «brightness» is compared to the existence, since it flows from the sun as the existence flows from God. Thus, the sun and God are connected, inasmuch as they are bright/existent by themselves, while all the other things are made bright (or existent) through them.

BRIGHT | Arabic *muḍī'a*, Latin *lucet*. The comparison between the emanation of existence from God and the illumination performed by the sun was already hinted at *supra*, *Metaphysics* I.8, §171 and §174.

[§195] D222.18-end of page

Despite the seemingly accurate net of relationships emerging from the comparison of God with the Sun, the present paragraph – which concludes the Second treatise of *Metaphysics* – expounds two reasons for its actual inappropriateness, *i.e.* the fact that the Sun is not pure brightness devoid of a subject (while God is pure existence), and the fact that the action of the Sun is natural and unconscious, while the action of God is intellectual and conscious. Of these two reasons of differentiation, only the first one is mirrored in the parallel passage of the *DN* (cf. Achena-Massé: 151.27-31).

THIS SIMILE WOULD BE SOUND | Arabic *hādā l-maṭāl^l kāna yastaqīmu*, Latin *hoc autem exemplum esset congruum*.

IF THE SUN WERE IN ITS ESSENCE A BRIGHTNESS WITHOUT A SUBJECT | Reading *law kānat al-šams^u ḍaw^{xm} bi-ḍāt^l-hi min ḡayr^l mawḍū^{ān}* instead of *an (?) law kāna li-l-šams^l ḍaw^{xm}* [...] as in *Dunyā*. The idea is indeed that the sun would be a sound term of comparison if it *were* brightness in itself (just as God is pure existence in Himself), not if it *had* a brightness, as *Dunyā*'s text suggests.

ITS KNOWLEDGE OF THE EXISTENCE [...] BRIGHTNESS FROM IT | Since the illumination provided by the sun is a natural phenomenon, not provoked by will or knowledge, it is not the case that the sun's knowledge of its brightness is the cause for its emanation of the brightness itself. By contrast, this is precisely the case with the existence of God, whose knowledge of Himself is immediately the cause for the existence of the other things. For a discussion of this kind of divine productive knowledge cf. *infra*, *Metaphysics* III.b.7, §§214-218.

INTELLECTUAL RULING | Arabic *al-niṣām al-ma'qūl*, Latin *ordinacionem intellectualem* (the Latin translation reads the adjective only in the second occurrence of the phrase). The «knowledge» [*ilm*] of the «ruling» (or 'order' of the cosmos) present in the «First» [*al-awwal*] is the «principle [itself] of [that] ruling» [*mabda' al-niṣām*].

REPRESENTED | Arabic *mutamaṭṭal*, Latin *exemplar*.

Treatise III

[§196] D223.1-18

After the demonstration of the actual existence of the Necessary Existent in *Metaphysics* II.12, §192, the Third treatise of *Metaphysics* deals explicitly with the divine attributes of the First Principle. For a presentation of the theme of divine attributes in Avicenna and al-Ġazālī, cf. WOLFSON 1956; further studies focused on Avicenna's treatment of them, with various inquiries into his influence on subsequent authors, include ROSHEGER 2000 and TAYLOR 2019. The treatise is articulated in a «premise» (§§196-198), eleven «allegations» (§§199-238), and an «epilogue» (§§239-244). In the present paragraph, which begins the treatment of the premise, a classification of five kinds of descriptions is expounded, together with their possible or impossible application to the First Principle: only the attributes that preserve God's unity can be predicated of Him. The first two kinds of descriptions are dealt with in greater detail.

WITHIN IT, ALLEGATIONS AND A PREMISE ARE TO BE FOUND | I do not consider this sentence as belonging to the title of the treatise, as done instead by Dunyā and by Muckle's Latin edition (cf. MUCKLE 1933: 62.2-3), but rather as part of the prose of the text.

ALLEGATIONS | Arabic *da'āwā* (sg. *da'wā*), Latin *sentencie*.

IT HAS ALREADY BEEN SAID BEFORE [...] IN ANY WAY | The absence of any plurality whatsoever in the essence of the First Principle is implicit in the affirmation of the identity between His quiddity and the pure existence (cf. *supra*, *Metaphysics* II.4, §179), and is somehow reaffirmed throughout the Second treatise of *Metaphysics*, both in the nature of the negative features there attributed to the Necessary Existent, and in the arguments used to demonstrate those features (cf. *e.g.* the negation of parts in *Metaphysics* II.3, §178).

IT IS NOT ESTABLISHED FOR HIM [...] TO THE MULTIPLICITY | Arabic *lā yaḡbutu la-hu illā mā lā yu'addī ilā l-kaṭratī*, Latin *sic ut non atribuantur ei nisi he sole que nullam faciunt multitudinem*. There is an oscillation in the Latin translation between the rendition of *kaṭra* as *multitudo* (as in this occurrence) and its translation as *pluralitas* (in the preceding occurrences in this same paragraph).

THE DESCRIPTIONS ARE OF FIVE KINDS | Arabic *al-awṣāf^h ḡamsat^u aṣnāf^h*, Latin *designaciones vero dividuntur in quinque*. These «descriptions» are later glossed also as «attributes» [Arabic *ṣifāt*, Latin *designaciones* (with no terminological variation for the two different Arabic words, which share however the same root *w-ṣ-f*)], with the same expression used to define the divine attributes in the title of the treatise.

OF A SPECIFIED MAN | Arabic *li-l-insānⁱ l-mu'ayyanⁱ*, Latin *aliquis homo*. The specification is useful, inasmuch as it reveals the fundamental human origin of the classification of the attributes. The underlying rationale is that the (philosophical) theologian must at first analyse what is available to them in terms of possible descriptions, and only in the second place must they reflect on which of these kinds of attributes might be applicable to the First Principle. This kind of philosophical theology is heavily indebted with the basic tenets of Aristotelianism, and in particular with the precept of getting to know the unknown starting from the known (cf. for instance *supra*, *Logic* IV, §34). For a clear formulation of the necessity of finding in ourselves some parallelisms to God in order to be able to touch, in some way, His otherwise unspeakable transcendence cf. also *infra*, *Metaphysics* III.b.2, §201, and then again in the *Epilogue* of this Third treatise, esp. §§239-240.

BODY | Arabic *ḡism*, Latin *corpus*. (a.1) As explained *infra* in this same paragraph, «body» stands here for all essential attributes, which can only pertain to a thing endowed with a quiddity, and thus

definable thanks to the specification of a genus by a differentia. The Necessary Existent, *i.e.* the First Principle, is however devoid of genus and differentia, as explained *supra*, *Metaphysics* II.11, §189.

WHITE | Arabic *abyaḍ*, Latin *albus*. (a.2) As explained *infra* in this same paragraph, «white» is used as an example of an accidental attribute, which as such cannot pertain at any rate to the essence of the First. On the denial of the accidentality of the essence of the Necessary Existent cf. *supra*, *Metaphysics* II.1, §176; on the denial of any supervening accident in His essence see *supra*, *Metaphysics* II.8, §§183-185 (and partially also *Metaphysics* II.9, §186).

KNOWING | Arabic *‘ālim*, Latin *sciens*. (a.3) Cf. *infra*, §197, for the discussion of the impossibility of this kind of attribute in the First.

MAGNANIMOUS | Arabic *ḡawād*, Latin *largiens*. (a.4) The corresponding example in the *DN* is that of ‘father’ (*DN* 80.4-5), which probably makes more immediately explicit the relational nature of this kind of attribute (see *infra*, §197). While commenting on this alteration, JANSSENS 2019: 104 notices however that the notion of ‘generous’ is also in the *Ilāhiyyāt* of the *K. al-Šifā’* (cf. JANSSENS 2019: 105 fn. 90: *Ilāhiyyāt*, ed. ANĀWĀTĪ-ZĀYID 1960: 368.8-10). Cf. *infra*, §197, for the discussion of the admissibility of this kind of attribute in the First.

POOR | Arabic *faqīr*, Latin *indigens*. (a.5) The corresponding example in the *DN* (80.6) is that of the ‘inertness of a stone’; JANSSENS 2019: 105 remarks however that the notion of ‘poor’ [Persian *derviš*] «appears later in the chapter of the *Daneshname*, *i.e.* at *DN* 81.8». Cf. *infra*, §197, for the discussion of the admissibility of this kind of attribute in the First.

[§197] D223.19-224.14

The paragraph discusses the three further kinds of attributes, stating the impossibility for the First of (a.3) (exemplified by «knowing»), but declaring nonetheless the admissibility of (a.4) (exemplified by «magnanimous») and (a.5) (exemplified by «poor»).

«KNOWING» | (a.3) The word «knowing» [*‘ālim*], just like «white» (cf. (a.2) *supra*), designates an accidental property. The «discriminating [element]» [*fāriq*] between the two is however the fact that the knowledge is an accident for the man but also have a dependence on a third thing, *i.e.* the «known», whereas «whiteness» does not behave like this. In any case, the exclusion of any supervening attribute in the essence of the First (*Metaphysics* II.8, §§183-185; *Metaphysics* II.9, §186) excludes this further kind of accidental attribute, as well. No accident, regardless of whether it is dependent or independent, can pertain to the essence of God.

«MAGNANIMOUS» | (a.4) The word «magnanimous» [*ḡawād*] exemplifies the relational attributes, *i.e.* those which indicate the «relation» [*idāfa*] that the thing of which the attribute is predicated entertains with «an act that proceeds from it» [*ilā fi^{tn} ṣadara min-hu*]. This kind of attributes is admissible in the case of the First, because their relational nature does not entail a multiplicity in the essence of the agent (one agent can refer to many acts proceeding from him, being nonetheless just one).

IF THAT MAN MOVED TO YOUR RIGHT | Reading *‘alā yamīnⁱ-ka* for *Dunyā’s ‘alā yasārⁱ-ka* («to your left»). If the ‘you’ introduced in the preceding sentence was at the right of the man, as a matter of fact, the latter was already at the left of ‘you’, so that ‘moving to the left’ would not be a relationally significant shift. The Latin translators either read the correct Arabic text, or were able to emend it *ope ingenii*: «Si vero mutetur ille ad tuam dexteram» (cf. MUCKLE 1933: 63.4-5).

«POOR» | (a.5) The word «poor» [Arabic *faqīr*, Latin *egestas* (as if reading **faqr*)] is the example given for the class of the negative attributes. Since many things «are denied» [*suliba*] of the First, also this kind of attribute is admissible for Him.

FOR AN ATTRIBUTE THAT DENIES | Arabic *li-ṣifatⁿ salaba*, Latin *designacio negativa*. Dūnyā's text is somewhat hard, as it would be much more natural to read instead *li-ṣifatⁿ salbiyyatⁿ* («for a negative attribute»). It can however be salvaged as a *lectio difficilior*, also in consideration of the fact that the analogous structure of relative clause following an indeterminate noun is used shortly *supra* in the description of «magnanimous» [*ilā fiⁿ ṣadara*]. A, for its part, reads [*ismⁿ*] *itbātⁿ li-ṣifatⁿ salbiyyatⁿ*, which would translate to «the name of an establishment of a negative attribute».

THE NON-EXISTENCE OF THE WEALTH | Arabic *'adamⁿ l-māl^l*, Latin *privacio census*.

BUT WITH RESPECT TO THE EXPRESSION [...] ESTABLISHMENT | For a previous discussion of apparently affirmative expressions, which conceal however a negative meaning, cf. the Persian-Arabic interlinguistical discussion of the attributes 'blind' and 'non-seeing' propounded *supra*, *Logic* III, §27.

EXPRESSION | Arabic *lafẓ*, Latin *vocem*.

PERMITTED | Arabic *masūġ* or *musawwaġ*, Latin *posse dici*.

[§198] D224.15-22

The paragraph, which concludes the Premise (a) of the Third treatise of *Metaphysics*, declares the possible deduction of many attributes for the First, starting from the two kinds of descriptions (a.4), *i.e.* the attributes of the relation, and (a.5), *i.e.* the attributes of the negation. Some examples of divine names are given, although the actual attributes will then receive a separate treatment in the following «allegations».

MULTIPLE NAMES | Arabic *aṣāmī kaṭīra* (this form of the plural of *ism* is not attested in WEHR: 498^b, but for it cf. FREYTAG II: 359^b), Latin *multa nomina*.

«ONE» | Arabic *wāḥid*, Latin *unum*. The meaning of the fundamental divine attribute of unicity is said to be the «negation» [*salb*] of any «associate» [Arabic *ṣarīk*, Latin *similem*] and «matching» [Arabic *naẓīr*, Latin *coequalem*] for God, plus the negation of the «subdivision» [Arabic *inqisām*, Latin *divisionem*] within Him. For the denial of the existence of any *ṣarīk* of God cf. *supra*, *Metaphysics* II.11, §189 (and cf. also the tangential remarks on the issue in *Logic* III, §27, and *Logic* IV, §66). For the denial of subdivision, and hence of divided parts [*aqsām*] cf. *supra*, *Metaphysics* II.3, §178. For the concept of «matching» of God cf. *infra*, *Metaphysics* III.b.11, §227. The epithet of *al-Wāḥid* (or *al-Aḥad*) is the sixty-seventh name of God in the list of the Ninety-nine Beautiful Names. Cf. al-Ġazālī's treatise *The Noblest of Aims in the Explanation of God's Most Beautiful Names* [*al-Maqṣad al-Asnā fi Sharḥ Ma'ānī Asmā' Allāh al-Ḥusnā*] (henceforth *al-Maqṣad al-Asnā*), Arabic ed. SHEHADI 1971: 63 (mention); 144.3-14 (discussion); for the reading *al-Aḥad* cf. STADE 1970 *apud* MCCARTHY 1980: 354 («He Who is Uniquely One»; cf. the less bombastic Spanish rendition in ASÍN PALACIOS 1929: *Appendix* III, *apud* MCCARTHY 1980: 354: «Uno»), and cf. also SHEHADI 1971: 63 fn. 5.

«ETERNAL» | Arabic *qadīm*, Latin *eternus*. The meaning of the attribute of divine eternity is said to be «the negation of the beginning with respect to His existence» [Arabic *salb al-bidāya 'an wuġūd^l-hi*, Latin *negari incepisse suum esse*]. For this understanding of *qadīm* as expressing an eternity *a parte ante* cf. *e.g.* *TF*, First discussion, MARMURA 2000: 12.9 (Arabic), 12.15 (Latin) and *passim*. «Eternal», in the list of the Ninety-nine Beautiful Names, is rather expressed by *al-Bāqī*, the ninety-sixth name of God: cf. al-Ġazālī, *al-Maqṣad al-Asnā*, ed. SHEHADI 1971: 63 (mention); 159.8-160.10; and for further translations cf. STADE 1970 *apud* MCCARTHY 1980: 354: «the Everlasting One»; ASÍN PALACIOS 1929: *Appendix* III, *apud* MCCARTHY 1980: 354: «Eterno».

«MAGNANIMOUS» | Arabic *ġawād*, Latin *largus* (but cf. *supra* the rendition as *largiens*). This is not one of the divine names. The meaning of this and the following two attributes is said to be relational, coherently with the analysis of «magnanimous» as a relative attribute (a.4) in §197 *supra*, and it is

said to refer to «His relation to acts that proceed from Him» [Arabic *idāfat^a-hu ilā afāl^m šadarat min-hu*, Latin *relative ad acciones que proveniunt ex eo*].

«GENEROUS» | Arabic *karīm*, Latin *dapsilis* (lit. ‘copious’, ‘bountiful’). The name *al-Karīm* is the forty-third of the Beautiful Names: cf. al-Ġazālī, *al-Maqṣad al-Asnà*, ed. SHEHADI 1971: 63 (mention); 127.15-128.7 (discussion); and for further translations cf. STADE 1970 *apud* MCCARTHY 1980: 353: «the Selflessly Generous One»; ASÍN PALACIOS 1929: *Appendix III*, *apud* MCCARTHY 1980: 354: «Generoso».

«MERCIFUL» | Arabic *raḥīm*, Latin *pius*. The name *al-Raḥīm* is the third of the Beautiful Names, appearing together with its cognate *al-Raḥmān* in the Qur’ānic *basmala*: cf. al-Ġazālī, *al-Maqṣad al-Asnà*, ed. SHEHADI 1971: 63 (mention); 65.9-70.3 (discussion, together with *al-Raḥmān*); MCCARTHY 1980: 349 (who seems at first to translate *al-Raḥīm* as «Compassionate» and *al-Raḥmān* as «Merciful», but *ibidem* switches the two, translating *al-raḥīm al-muṭlaq* as «the Absolute Merciful»).

THE PRINCIPLE OF THE UNIVERSE | Arabic *mabda’ al-kull*, Latin *principium universitatis*. In sharp but meaningful contrast with the mainly Qur’ānic origin of the attributes used before as relevant examples, this description has a clearly philosophical background in the *Alexander Arabus* (cf. Alexander of Aphrodisias, *Mabādi’ al-kull*, ed. BADAWĪ 1978). However, the explanation given for this ‘philosophical’ attribute is perfectly coherent with that provided for the previous three instances: it is said, namely, that it means the «relation» [*idāfa*].

[§199] D224.23-225.14

The paragraph introduces the section on the «allegations» [*da’awā*] (b) concerning the First Principle. (b.1) The first allegation nominally deals with the life of the First Principle, but the attribute of «living» is immediately shown to be coincident with the property of being self-knowing. The allegation thus ends up with consisting in a preliminary treatment of the concepts of knowledge, knower and known, which is later applied to the First Principle in the following §200.

LIVING | Arabic *ḥayy*, Latin *vivens*. This notion of ‘life’ as self-knowledge («he who knows his own essence is living» [Arabic *man ya’lamu dāt^a-hu, fa-huwa ḥayy^m*]) is not present as such in the *DN*. JANSSENS 2019: 105 and fn. 91 references the *Risāla al-‘aršīyya* (ed. HILĀL 1980: 27.3) as a possible source, since that text «defines God’s living [*sic*] as ‘having knowledge of Himself as He is’».

KNOWING | Arabic *‘ālim*, Latin *sciens*.

THE DEMONSTRATION OF HIS BEING KNOWING [...] AND KNOWN | I have for now translated the text following Alonso’s interpretation (ALONSO 1963: 150: «La demostración de que se conoce y entiende a sí mismo consiste en dar a conocer qué significá ser sabio o cognoscente y qué significa la ciencia y qué significa el objeto conocido»). There is however an air of familiarity with the doctrine of the identity of knower, known, and knowledge, already hinted at with the linguistical *calembour* expounded *supra* in *Logic IV*, §75.

IN THE BOOK ON THE SOUL, WITHIN THE *PHYSICS* | Arabic *fi kitābⁱ l-nafsⁱ fi l-ṭabī‘īyyāt*, Latin *in naturalibus in libro scilicet de anima* (deleting the misleading comma printed by Muckle after *scilicet*). The internal crossreference to the section on the soul in the *Physics* is very precise: on the knowledge and self-knowledge of the soul cf. in particular *infra*, *Physics IV*, §412 (the fourth reason for the immateriality of the intellect is its self-perception, not shared by the bodily faculties); cf. also the end of §413. Dunyā considers the expression ‘book on the soul’ as a title (he brackets it, being brackets his inverted commas); however, *Kitāb al-nafs* is not the title given *infra* to the Fourth treatise of the *Physics* of the *MF* (cf. §376), despite being indeed the title of the sixth book of the section on natural philosophy [*Ṭabī‘īyyāt*] of Avicenna’s *K. al-Šifā’*.

OUR SOUL INTUITIVELY KNOWS HERSELF | Arabic *al-nafs min-nā taš‘uru bi-nafsⁱ-hā*, Latin *anima nostra*

percipit se ipsam.

HER [OWN] ACTION OF KNOWING | Reading *ta'allum'-hā* for *Dunyā's* suffix *-hi*. *Dunyā's* text might have been meant to be vocalized as *ta'lamu-hu*, i.e. as another verb, almost synonym to *taš'uru*, depending on the same subject («our soul»), so that the entire sentence would translate to: «our soul intuitively perceives and knows herself and the things other than herself». However, in this case as well the suffix pronoun *-hā* would be a better grammatical choice (as it would refer, as a neutral plural, to both the feminine 'soul' and the 'other things' [*ǧayr^u-hā*] known by her).

A BEING FREE FROM MATTER | Arabic *mawǧūd^{an} barī^{an} 'anī l-māddatī*, Latin *esse immunis a materia*. The property of being «knowing» [*'ālim*] is equivalent to being «free» [*barī*] from matter.

ABSTRACT FROM MATTER | Arabic *muǧarrad 'anī l-māddatī*, Latin *nudata a materia*. While the knower is «free» from matter, the «known» [*ma'lūm*] or the «intellectually known» [*ma'qūl*] is defined as «abstract» [*muǧarrad*] with respect to matter.

INDEED, WHENEVER THE DESCENDING [...] IS A KNOWER | Given the two preceding definitions of «knowing» [*'ālim*] and «known» [*ma'lūm*], the combination of the two generates a definition of «knowledge» [*'ilm*], i.e. the «descending» or 'inherence' [*ḥulūl*] of what is abstract into what is free from matter. Thus, «that which descends» [*ḥāll*] is a «knowledge» (which is to be intended here as the content of the knowledge, not as the process of knowing: thus being close to the «known» than to «knowledge» *tout court*), while the «receptacle» in which the abstract things descends [*maḥall*] is the «knower»/'knowing' [*'ālim*].

«KNOWLEDGE» [...] HAS NO MEANING BUT THIS | In this passage, with its characteristically Aristotelian circular structure (the conclusion reprises the same formula used as the beginning, as frequent e.g. in Aristotle's *Categories*), the relationship between knowledge, known and known is rewritten in a further way: «knowledge» (as a process) is the «impression» [*intibā'*] of a form abstract from all «material [bounds]» [Arabic *min al-mawādd*, Latin *a materiis*] in a «free» essence, «knowledge» (as a content, i.e. a «known») is «that which is impressed» [*al-munṭabi'*], and the «knower» is «that within which it is impressed» [*al-munṭaba' fī-hi*]. For a comparison among these various characterizations of knowledge cf. the following table of correspondences.

TABLE 33. Terminology for the subject, object, and act of knowledge

	SUBJECT (knower)	OBJECT (known)	ACT (knowledge)
KNOWLEDGE	<i>'ālim</i> sciens	<i>ma'lūm</i> secundum quod scitur; scitum	<i>'ilm</i> sciencia
SENSIBLE KNOWLEDGE cf. §202	[<i>muḥiss</i>] sciens	[<i>maḥsūs</i>] sensatum	[<i>ḥiss</i>] sensus
INTELLECTUAL KNOWLEDGE	[<i>'āqil</i>]	<i>ma'qūl</i> secundum quod intelligitur	[<i>'aql</i>]
RELATION WITH MATTER	<i>barī</i> [?] immunis	<i>muǧarrad</i> nudatus	[<i>taǧrīd</i>]
INHERENCE	<i>maḥall</i> id in quo fit	<i>ḥāll</i> id quod fit	<i>ḥulūl</i> advenire
IMPRESSION	<i>al-munṭaba' fī-hi</i> id in quo sigillacio fit	<i>munṭabi'</i> quod sigillatur	<i>intibā'</i> sigillacio

The line concerning sensible knowledge is added here on the basis of the following §202. The terms in square brackets are not present in §199, and I have integrated them for the sake of completeness, on the basis of other passages of the *MF* where they are employed (although of course in different contexts): for 'āqil see §75, §230; for 'aql *Met. IV, Phys. IV, passim*; for taḡrīd §315, §418.

[§200] D225.15-226.1

The paragraph argues for the greatest freedom from matter of the First Principle, also by means of a comparison to the human soul (with a prospective reference to the treatment of psychology in *Physics IV, infra*). The First is self-knowing inasmuch as His abstract essence ('known') is present to His free essence ('knower'); thus, according to the definition of «living» given *supra* (§199), He is also living.

WE HAVE SPECIFICALLY CHARACTERISED | Arabic *ḥaṣṣaṣnā*, Latin *atribuimus*.

SO THAT THERE IS NO DUBIOUSNESS IN THE REITERATION OF THE WORDS | Arabic *ḥattā lā yaltabisa fī tardīd' l-kalām'*, Latin *ut non confundatur significatio vocabulorum*. «Reiteration» [*tardīd'*] has here the specific meaning of 'constant usage', 'frequent repetition' (of the words «free» and «abstract» in the text). Once again, al-Ġazālī expresses here a linguistical and definitional concern, showing his will to demarcate in the clearest way the field of application of the technical terms of philosophy.

HE IS NOT CONCEALED FROM HIMSELF | Or: «from his own soul». Throughout the text there is an ambiguity, perhaps in part wanted (or in any case implicit due to the structure of the Arabic language), of the expression 'an *naḥs'*-hi – which can express the reference to the 'self', but also maintain its proper meaning of 'soul' – due to the present metaphysical, but also heavily psychological, context. Cf. the Latin translation: «absens sibi» (MUCKLE 1933: 64.10).

OF HIS [OWN] LIKENESS AND OF HIS [OWN] FORM | Arabic *maṭāḥ'*-hi wa-ṣūrat'*'*-hi, Latin *simulacrum sui, nec formam*.

SO THAT HE KNOWS HIMSELF | Arabic *bi-naḥs'*-hi, Latin [*ad sciendum*] *se*. Here again, the translation could also be, in principle, «his own soul» (cf. the ambiguity described *supra*).

IT HAS ALREADY BEEN SAID [...] MATERIAL [BOUNDS] | On the immateriality of the Necessary Existent cf. *supra, Metaphysics II.2, §177* (He is not a body); *II.3, §178* (He is not matter).

FREEDOM | Arabic *barā'a*, Latin [*multo*] *liberius*.

FOR THE DEPENDENCE [DUE TO] THE ACT [OF THE MATTER] ON HER | Arabic *al-naḥs' tata'allaqu bi-l-māddat' ta'alluq' l-fi' fī-hā*, Latin *anima enim pendet ex materia, et accio pendet ab ipsa*. Cf. ALONSO 1963: 151: «porque ésta depende de la materia como acto de ella». I have interpreted the sentence as meaning that the dependence of the soul on the matter is due to the effect that matter exerts on the soul (due to the partial dependence on the body that every soul, despite her immateriality, still endures). Cf. *infra, e.g. Physics IV, §414* (on the fact that a damage in the body can somehow hinder the action of the soul), §§421-422 (on the origin in the body of the soul, despite the fact that her permanence is detached and free from that origin). Alonso's interpretation is for its part closer to the latter passages, as his translation glosses the dependence of the soul on matter as the soul's being a 'product' (or an 'act') of matter. This might seem reasonable, although at a grammatical level it does not seem possible to give the *fī-hā* of the original Arabic the required meaning of a simple genitive.

THE ESSENCE OF THE FIRST [...] MATERIAL [BOUNDS] | It is slightly awkward that the same negation of any material attachment concerning the essence of the First, repeated at the beginning and the end of a circular structure similar to that noticed *supra* (§199), is initially sustained by a backward reference to the preceding treatment, while being glossed here, instead, with a prospective reference to a future discussion, especially since the immateriality of the First Principle seems to be taken for

granted in what follows. There is however a terminological distinction between the two formulations: in the first one the «Necessary Existent» [*wāǧib al-wuǧūd*] is said to be «free» [*barī*] from the material bounds; in the second one, the «essence of the First» [*dāt al-awwal*] is said to be «separated» [*munqaṭi*] from those bounds.

ATTACHMENTS | Arabic *‘alā’iq* (as the broken form of the plural of *‘alāqa*, besides the regular one), Latin [*nullo modo*] *pendet [ex materia]*.

HIS ABSTRACT ESSENCE IS NOT CONCEALED FROM HIS FREE ESSENCE | Arabic *dāt^u-hu l-muǧarrad^u ǧayr^u ǧa’ibatⁱⁿ ‘an dātⁱ-hi l-barī^{at}*, Latin *essencia eius nudata, non est absens sue essencie inmuni a materia*.

Given the equivalence provided *supra* in this paragraph between «abstract» and the «known», on the one hand, and «free» and the «knower», on the other hand, this sentence achieves the wanted result of showing that the First Principle knows Himself; and given the initial equivalence between «living» and ‘self-knowing’ (see *supra*, §199), the ‘life’ of the First Principle is also demonstrated.

CONDITION | Arabic *ḥāla*, Latin *hoc*.

[§201] D226.2-16

(b.2) The second allegation argues that the knowledge of the First Principle is identical to His essence, and accordingly it does not cause any multiplicity in Him. In order to prove the point, the present paragraph starts with a premise concerning man’s necessity to find a parallel in himself for what he wishes to know outside himself. This also applies to the case of God, so that the identity of His essence and His self-knowledge can only be understood by man on the basis of an analogy with human self-knowledge. The conclusion achieved by the present paragraph is the identity (‘union’) of knower and known in the human act of self-knowledge.

ITS DIRECT APPEARANCE IN HIS SOUL | Arabic *bi-mušāhadatⁱ-hi fī nafsⁱ-hi*, Latin *quia est representatum anime sue*.

BY VIRTUE OF THE EXTERNAL SENSE OR THE INTERNAL SENSE | Arabic *bi-ḥissⁱⁿ zāhirⁱⁿ aw bi-ḥissⁱⁿ bāṭinⁱⁿ*, Latin *per sensum exteriorem, vel per sensum interiorem*. For the distinction between external and internal senses – a crucial tenet of Avicennan psychology – cf. *infra*, *Physics* IV.2, §§381-382, and then the following treatment of the external senses (§§383-393) and of the internal ones (§§394-400).

FOR THE DIVINE | Arabic *fī ḥaqqⁱ l-ilahⁱ*, Latin *in deo*. The construction of *fī ḥaqq* and following genitive only expresses the argument of the predicate, and should not be overtranslated, although in this particular case a reference to the ‘truth’ or ‘true nature’ of God would not have been entirely out of place. I choose the rendition «Divine» over «God» to distinguish *al-ilah* from *Allāh*. Notwithstanding this slightly weaker terminological choice, this is one of the few passages in which the referential identity between the Necessary Existent or First Principle and the God of monotheistic religion is made explicit (albeit being of course active throughout the treatment of philosophical theology). Cf. *supra* the commentary to §176, and *infra* for further cases of explicit convergence of the philosophical and religious planes.

BY DRAWING AN ANALOGY | Arabic *bi-muqāyasatⁱⁿ*, Latin *secundum considerationem*. The verbal noun of the III stem *muqāyasa* shares the root with *qiyās*, the term which designates the Aristotelian syllogism but also, and in the first place, the juridical reasoning by analogy.

A MATCHING [ELEMENT] | Arabic *naẓīr^{an}*, Latin *similitudinem*.

THE KNOWER AND THE KNOWN WOULD ALREADY BE UNITED | Arabic *fa-qad ittaḥada al-‘ilm wa-l-ma‘lūm*, Latin *unum igitur sunt, sciens et scitum*. JANSSENS 2019: 105 and fn. 92 ascribes to al-Ġazālī with respect to the *DN* a further elaboration «on the identity between subject and object of knowledge»; however, he references once more (cf. *supra*, §198) Avicenna’s *Risāla al-‘arṣīyya*, ed. HILĀL 1980: 25.11-18, as a

possible source for that elaboration.

[§202] D226.17-227.23

The present paragraph extends the relationship of identity of knower and known, which was the conclusion reached by §201, to also embrace knowledge, so that knowledge, knower and known are one. This conclusion, valid for man, is then immediately applied to God, Whose essence is known by Himself, so that He is also knower of Himself, and knowledge of Himself. All this applies without any multiplicity, because of the identity between object, subject, and act of knowledge just established.

BASIS | Arabic *aṣṭ^{an}*, Latin *fundamentum*. What is meant is that the «known» is taken as a starting point, or 'basis' or 'principle', of the threefold relation of identity that must be demonstrated, inasmuch as both the knower and the knowledge will be shown to be identical with it. From this, by transitive property, the identity of knower and knowledge results demonstrated, and hence the identity of all three elements of the process of knowledge.

ALL [THESE] ARE ONE [THING] | Reading *anna l-kull^a wāḥid^{an}* as in *Y* for Dunyā's *anna li-l-kull^a mabda^{an} wāḥid^{an}* («all [these] have one principle»); and cf. also the wrong reading of *A*: *anna kull^a wāḥid^{an}* («each one [has no multiplicity in it]»). The reading of *Y* corresponds to the Latin translation: «quod hoc scilicet, sciens, et scitum, et sciencia unum sunt» (MUCKLE 1933: 65.3-4), and conveys a better sense than the alternative Arabic readings. As made apparent by the *scilicet*, the Latin translators have glossed *al-kull* by the – useful – repetition of the three elements of knowledge, whose identity is indeed to be demonstrated.

THE SENSE IS THE SENSED | Arabic *al-ḥiss huwa l-maḥsūs*, Latin *sensus est sensatum*.

SENSING | Arabic *muḥiss*, Latin *sciens* (probably for a difficulty in rendering the Arabic active participle with the root of *sensus*). Together with the preceding *ḥiss* and *maḥsūs*, the term *muḥiss* completes a further triad of subject, object and act of knowledge, in this case of a sensory kind. As shown by the wording of this paragraph, the relationships of reciprocal identity which hold among the three elements of every knowledge remain true also in the case of sensible knowledge (accordingly, I have added in the summarizing Table 33 of §199, *supra*, a line concerning sensible knowledge).

THAT TRACE IMPRESSED IN HIM | Arabic *li-dālika l-aṭar^a al-muṭṭabi^a fī-hi*, Latin *illam impressionem que est sigillata in eo*. For the lexicon of 'impression' [*intibā^a*] as applied to the theory of knowledge, cf. also *supra*, §199 and Table 33.

THE EXTERNAL THING | Arabic *al-ṣay^a al-ḥariḡ*, Latin *res...extrinseca*.

IT CORRESPONDS | Arabic *muṭābiq*, Latin *est coequalis consimilis*.

WHAT YOU RECEIVE | Arabic *al-mulāqā la-ka*, Latin *quod tibi inest*.

«SENSE» [...] THAT FORM | The example of sensible knowledge, in which the identity between «sense» and «sensed» holds true, is used to show the validity of the same identity also in the case of knowledge *tout court*, so that knowledge and known are demonstrated to be one and the same.

SINCE, THEN, [...] KNOWER HIMSELF | This recalls the identity, demonstrated in §201 *supra*, of knower and known. Given, then, that we know from §201 that knower = known, and from the present §202 that knowledge = known, the triple identity knower = known = knowledge results demonstrated, and can be applied to God, as well.

THE FIRST IS KNOWER OF HIMSELF, AND HIS KNOWLEDGE AND HIS KNOWN ARE HIMSELF | Arabic *al-awwal 'ālim^{um} bi-nafsⁱ-hi wa-'ilm^u-hu wa-ma'lūm^u-hu huwa huwa* (reading *huwa huwa*, as confirmed by *Y*, for Dunyā's *huwa*), Latin *primus est sciens se ipsum, et sciencia eius scitum suum est ipsemet*. A way of paraphrasing the text (but also a possible alternative translation) would be: «the First knows Himself,

and His knowledge and His known are identical» – namely both between themselves, and with God Himself as knowing them. For *huwa huwa* as expression of sameness and identity cf. *supra*, *Metaphysics* I.3, §151.

THE EXPRESSIONS ONLY DIFFER FOR THE DIFFERENCE OF THE CONSIDERATIONS | Arabic *wa-innamā taḥtalifu al-‘ibārāt^u bi-ḥtilāf^ī l-‘tibārāt^ī*, Latin *hee autem interpretaciones non sunt diverse, nisi diversitate respectuum*. Having shown the triple identity of ‘knower’, ‘known’, and ‘knowledge’, it is now clear that these three linguistic expressions actually designate the same thing (in modern Fregean terms, they have the same ‘reference’, *Bedeutung*), and they differ, therefore, only for their ‘senses’, *Sinne* (*i.e.* the way in which they designate their referent). The Arabic text expresses the idea with a wordplay between *‘ibāra* (expression) and *‘tibār* (consideration, way of considering).

HE IS KNOWLEDGE IN HIS ESSENCE | As noticed *supra* as for the expressions *‘an / bi-naḥs^ī-hi*, also the phrase *bi-dāt^ī-hi* is ambiguous in Arabic, especially in as highly philosophical a context as the present one. The expression literally means «for/in His essence», or «by virtue of His essence», but its common meaning is «by/in itself» (as also in the analogous compounds with *naḥs* – literally ‘soul’, cf. *supra* – and *‘ayn* – literally ‘eye’). In this specific section of the argument, God is said to be knowledge in itself, but He can be defined as such only because He is knowledge of His own essence, subject and object, *sciens et scitum* at the highest possible degree. In the presence of this not trivial doctrinal point, the double translation adopted in Latin can be seen as particularly accurate, rather than only attributable to an uncertainty in the rendition: «est sciencia sue essencie, est sciencia per se» (cf. MUCKLE 1933: 65.29).

A DISTINCTION | Arabic *taḥṣīl^{um}*, Latin *discrecionem*. The text of the Latin translation is useful to better grasp the sense of the passage: «conveniencius est autem scire se ipsum quam aliud scilicet, ipsum magis esse notum sibi quam aliud» (cf. MUCKLE 1933: 65.33-35).

[§203] D227.24-228.12

(b.3) The Third allegation argues that the First Principle knows all the genera and the species of the things proceeding from Him – and thus every existent (omniscience) – because, by knowing Himself, He knows Himself as a principle for every other existent. God’s knowledge of His effects is thus comprised, or included, in His knowledge of Himself as their cause.

NOTHING, THEN, ESCAPES HIS KNOWLEDGE | Arabic *fa-lā ya‘zibu ‘an ‘ilm^ī-hi ṣay^{um}*, Latin *Unde nichil deest sciencie ipsius*. JANSSENS 2019: 105, notices that this expression «corresponds *verbatim*» to *Risāla al-‘arṣūyya*, ed. HILĀL 1980: 26.7.

MORE SUBTLE AND MORE OBSCURE | Arabic *adaqq wa-aḡmaḍ*, Latin *difficilior et profundior* (perhaps presupposing the misreading **a‘maḡ* for *aḡmaḍ*). A similar *caveat* of increasing difficulty will occur again *infra*, §204, about the fourth allegation (b.4).

UNVEILED | Arabic *makṣūfa*, Latin *apertus*.

HIS TRUTH [...] PURE EXISTENCE | Cf. *supra*, *Metaphysics* II.4, §179.

THE SPRING OF THE EXISTENCE [...] THE QUIDDITIES | For the terminology of the «spring» or ‘fountain’ of existence [*yanbū*] applied to God cf. *supra*, *Metaphysics* II.12, §194.

PRINCIPLE | Arabic *mabda^{um}*, Latin *principium*. The self-knowledge of God as «principle» of the other things («substances», «accidents» and «quiddities») is the reason that explains His knowledge of all those things.

THE KNOWLEDGE OF THEM IS ALREADY INVOLVED IN HIS KNOWLEDGE OF HIMSELF | Arabic *fa-qad intawā al-‘ilm^u bi-hāfi ‘ilm^ī-hi bi-dāt^ī-hi*, Latin *tunc sciencia eorum includitur in sciencia sui*. The idea of inclusion, involvement, or encompassment of the knowledge of all things within the knowledge of God,

expressed by the VII stem of the root *ṭwy*, constitutes the doctrinal core of the passage.

ACCORDING TO THE WAY OF THE INCLUSION | Arabic *'alà sabīl l-taḍammun'*, Latin *secundum continenciam*. For the logical notion of «inclusion» (there translated into Latin as *consequentia*) cf. *supra*, *Logic* I, §5.

[§204] D228.13-23

(b.4) The Fourth allegation argues for the perfect unity of the knowledge of the First Principle, without multiplicity, despite His knowledge of all the manifold things. Distinct knowledges of different things necessarily entail a multiplicity, but the possibility of maintaining unity despite the knowledge of multiple things is secured through a comparison with the behaviour of the human soul, which can epitomize in herself the entire world, remaining nonetheless one and the same.

THIS IS MORE OBSCURE THAN THE PRECEDING [ONE] | JANSSENS 2019: 105 notices that this *caveat* (for which cf. also *supra*, §203) is an addition by al-Ġazālī, and that it «might be completely his». Indeed, the problem of characterizing in a satisfying manner the knowledge of God, while maintaining both its unity and its connection with human knowledge, will become crucial in 12th-century Islamic philosophy: cf. GRIFFEL 2021: 336-383 for a broad discussion on various epistemological issues linked to this problem in post-classical Islamic authors.

OF DISTINCT KNOWN [THINGS] | Arabic *bi-ma'lūmāt mufaṣṣala*, Latin *de multis scitis discretis*.

UNITY | Arabic *waḥda*, Latin *vera unitas*.

THE SOUL IS AN ABRIDGED TRANSCRIPTION OF THE WHOLE WORLD | Arabic *fa-inna l-naḥs^a nushat^m muḥtaṣarat^m min kull l-'ālamⁱ*, Latin *anima enim est quasi cartula brevis continens summam omnium que in mundo sunt*. This brief psychological insertion, absent in the *DN*, is of a particular interest in terms of the history of philosophy, as it can be seen as an instance – as far as I know completely overlooked in scholarship – of the doctrine of man as microcosm, or more precisely of the notion of the human soul as intellectual epitome of the universe. For the same idea in al-Ġazālī, although based on the anatomic configuration of man rather than on his soul, cf. *al-Maqṣad al-Asnà*, name *'mālik al-mulk'*, ed. SHEHADI 1971: 152. There, the «body of the human being» [*badan al-insān*] with its «several different limbs» [*a'dā' kaṭīra muḥtalifa*] is said to be the «likeness» [*maṭāl*] of the world, and viceversa, «the entire world [*al-ālam kull^m-hu*] is like one [single] individual [*ka-ṣaḥṣ^m wāḥid^m*], the parts [*aḡzā'*] of the world being like his limbs [*a'dā'*] (an excerpt of this passage is quoted, with a very free English translation, as far as I can see, in EL SHAMSY 2015: 93). As for the occurrence of this same idea in the *MF*, it is noteworthy that the attention is rather drawn to psychology, since the soul, and not the body, of man is said to be microcosm of the universe. Moreover, it is intriguing that the metaphor chosen by al-Ġazālī pertains to the domain of manuscript production, the Arabic term *nusha* referring in general to a 'copy', and more precisely to a written copy of a book or a manuscript. The same term is also employed by Abū l-Barakāt al-Baġdādī to describe existence [*wuġūd*] as a copy with no error in it [*nusha...lā ġalaṭ^a fī-hi*] (quoted in GRIFFEL 2021: 218). This scriptorial metaphor approaches the present passage to the vast series of texts, philosophical and literary, which do compare the human soul, or a part of it – most prominently the faculty of memory –, to a manuscript or book: for a glaring example of this ancient and medieval *topos* cf. the well-known *incipit* of Dante Alighieri's *Vita nova* («In quella parte del libro della mia memoria...»), on which see CURTIUS 1992: 335-385 (chapter *Il libro come simbolo*), and more recently FENZI 2005. The memorable image of the soul as *nusha muḥtaṣara*, translated into Latin as *c(h)artula brevis*, also caught the attention of Albert the Great, who reprised the expression twice in his *Summa theologiae* (cf. SIGNORI 2019: 482 and fn. 45; see also *ivi*, *Appendix*: 616-617 [n. 318] and 622-623 [n. 334], for the two quotations). A brief writing

titled *Tractatus de anima et viribus eius* with *incipit* «Sicut vult Algazel in sua Metaphysica anima est quasi cartula brevis» is registered under the *siglum* ADV in a 14th century catalogue of Parisian manuscripts compiled by a certain Johannes [Jean (de Pouilly?)]. The catalogue was edited in DELISLE 1868: 79-114 and, under a different arrangement, in GLORIEUX 1966: 288, from which I quote. The comparison of the soul with a *chartula brevis* also appears, attributed to Eustratius, in the revised version of William of Conches' *Glosae super Boethium*; cf. NAUTA 1993: 190 and NAUTA 2004: 455: «Similiter huic concordat Eustracius qui dicit quod anima creata est sicut cartula brevis in qua nichil depictum est. Possibilis tamen ad hoc quod in ea depingantur omnes forme tam necessariorum quam contingencium». Nauta (NAUTA 2004: 455-456 fn. 33) admits that he was not able to locate the quotation in Eustratius, nor was Eustratius' former editor Mercken able to do so (Mercken rightly suggested in an oral communication to Nauta to look for the phrase in Albert the Great, although Nauta reports once again that he could not find it: but *contra* see the evidence provided *supra*). Moreover, the presence of Eustratius' name in the revised version of the *Glosae* is one of Nauta's main arguments for securing the late dating of said revision of the *Glosae* to the second half of the 13th century (*post* 1247, date of Grosseteste's translation of the *Nicomachean Ethics* with Eustratius' commentary – thus long after William's death), against Peter Dronke's alternative suggestion that at least some of the revised notes might have been the fruit of William's own work (see DRONKE 2002: esp. 160). Thus, the circumstance that the same, very characteristic phrase is present in the Latin Algazel – and documentably reprised in later thinkers such as Albert and the anonymous author of the *Tractatus de anima et viribus eius* – is a remarkable piece of evidence, certainly worthy of further scholarly attention.

WITHIN WHICH THERE IS A MATCHING [ELEMENT] FOR EVERYTHING | Arabic *yūğadu li-kullⁱⁿ šayⁱⁿ fi-hā nazār^m*, Latin *in qua invenitur exemplum omnis rei*. The text describes a one-to-one correspondence between things of the world and things known in the soul, building further on the analogy between microcosm and macrocosm.

ONE TAKES POSSESSION OF THE KNOWLEDGE OF THE UNIVERSE | Arabic *yatamakkanu min ma'rifatⁱ l-kullⁱ*, Latin *per quam fit possibile cognoscere universa*. The conclusion of the reasoning, left implicit, is that the human soul is able to know all the different things of the world while remaining one, just as is the case with God. This conclusion will however be explicitly reached only *infra*, §207, after a minute analysis of the different kinds of knowledge possible for man.

[§205] D228.24-229.16

The paragraph expounds three states, or conditions, of human knowledge. (i) The first and lowest one is the 'analytical' knowledge, which articulates, distinguished and classifies its objects according to a discursive, ordered way of proceeding. (ii) The second and (apparently) highest condition (but cf. *infra*, §209) is the 'synthetical' knowledge, which is a unique disposition from which the manifold knowledges flow as from their principle. (iii) The third and intermediate one is a 'synthetical' comprehension of a problem, however conjoined with the ability (or the necessity) to articulate the answer in an 'analytical' fashion. The exposition of these three modes of knowledge has no proper counterpart in the *DN*, as also noticed by JANSSENS 2019: 105-106 (Janssens remarks that Avicenna's *Ta'liqāt* might be considered as a «remote source» for al-Ġazālī's addition, but the textual parallelism seems quite far-fetched to me). The only kind of knowledge properly expounded by Avicenna, as relevant for the explanation of the unity of God's knowledge despite its infinitely manifold objects, is the third one (iii) (cf. in particular the following §206 for the closest counterpart of that passage in the *MF*).

STATES | Arabic *aḥwāl*, Latin *disposiciones*. The numbering that follows is, coherently, always feminine in Latin («Prima [...] secunda [...] tertia dispositio [...]», cf. MUCKLE 1933: 67.5.10.23), while in Arabic it is masculine in the first and the second case [*aḥād^h-hā; al-tānī*], but feminine in the third [*al-tālīṭa*], due to the following term «condition» [*ḥāla*]. D-Alt however did read the corresponding feminine forms also in the first two cases [*iḥdā-hā; al-tānīyya*], which might lead to presuppose a reading like **ḥālāt* («conditions») for *aḥwāl* at the beginning of the paragraph, not reported however by Dunyā.

HE ARTICULATES | Arabic *yufaṣṣilu*, Latin *ut distinguat*.

ABOUT A JURIDICAL FORM | Arabic *fi šūratⁱⁿ fiḥṭīyyatⁱⁿ*, Latin *in formis legum*.

ORDERING A PART OF IT AFTER ANOTHER | Arabic *murattib^{om} ba‘d^h-hā ba‘d^h ba‘d^h*, Latin *cum disponit se dicturum singula suo ordine alia post alia*. The Latin translation hypothesizes *ad sensum* that the ordering of the reciprocal parts of the reasoning is finalized to the oral exposition of that reasoning [*se dicturum*]. This might certainly be the case, but it is not strictly necessary to think of a proper speech, as the analytical articulation can also occur within a merely interior reflection.

ARTICULATED KNOWLEDGE | Arabic *al-‘ilm al-mufaṣṣal*, Latin *hec est scientia dispositionis sue ordinationis*.

PRACTICED | Reading *maris* for Dunyā’s *māris* (‘soaking’: cf. WEHR 1059^b). The Latin translation is expanded with respect to Dunyā’s Arabic text: «cum fit adeo peritus in radicibus, et principiiis legum» (MUCKLE 1933: 67.10-11).

WITHOUT ENUMERATION | Arabic *min ḡayrⁱ ḥaṣrⁱⁿ*, Latin *absque recolleccione eorum*. For the notion of *ḥaṣr* cf. also *supra*, *Logic* IV, §52; and, in a different context, *Metaphysics* II.12, §190.

IN THE STATE OF HIS UNAWARENESS WITH RESPECT TO ARTICULATION | Arabic *fi ḥālⁱ ḡaflatⁱ-hi ‘arī l-taḥṣīlⁱ*, Latin *secundum hoc quod non eget recolligere singula que dicuntur*. The Latin translation is very free but captures quite well one of the two possible interpretations of the Arabic phrase: under that assumption, what is meant would be that the second kind of knowledge leaves aside any articulation or detailing proper of ‘analytical’ knowledge, replacing it with a ‘synthetical’ form of cognition. A comparison with the explanation given at §209 *infra*, however, suggests that it might be better to translate *ḡafla* not as ‘indifference’ with respect to articulation (thus hinting at a possible positive quality of that unmixed indifference), but rather as «unawareness». In this sense, the seemingly higher rank of the second kind of knowledge with respect to the third would be scaled back, or maybe entirely reconsidered (cf. also the commentary *infra* in this paragraph).

A JURISPRUDENT | Arabic *faqīh^{om}*, Latin *legista*. JANSSENS 2019: 106 fn. 93 reasonably remarks that «al-Ghazālī’s use of the word *fiqh* (and related terms) in this context not necessarily refers to the “Islamic law”, but can have a more general meaning of “understanding.”». However, the reference to law matters might in any case be appropriate as a concrete example of what the text wants to express, while the generic sense of ‘understanding’ would probably not work as well.

HE ACQUIRES A CONDITION AND A DISPOSITION | Arabic *iktasaba ḥālāt^{om} wa-malakāt^{om}*, Latin *comparavit ipse sibi dispositionem, et habitum*. For the notion of *malaka* | *habitus* cf. *infra* the psychological discussion of intellect, *Physics* IV, §411.

AN EFFUSIVE PRINCIPLE | Arabic *mabda‘^{om} fayyāq^{om}*, Latin *principium scientie exuberantis*. The use of the terminology of the flux (root *f-y-d*), and the description of the condition/disposition presupposed by this kind of knowledge as «simple and plain» [*basīṭa sādiḡa*] (due to the one and only «relation» [*nisba*] that all forms entertain with it) could easily lead one to think that the kind of knowledge recognized in God is precisely this second typology. However, the development of the text (§206) makes it clear that it is rather the third kind of knowledge, intermediate between the first two kinds, to be identified with the knowledge proper to God. In the following §207, however, only the possibility of God’s having the first kind of knowledge – the analytical or articulated one – is explicitly discarded, so that one gets the impression that the second and third typologies are somehow gathered under one single consideration, despite their preliminary distinction in the present paragraph. Since the third kind appears to be the only typology properly treated by Avicenna in the *DN* (see *infra* in this paragraph and §206), it might be surmised that al-Ġazālī has at first

distinguished in man a higher form of knowledge than that described by his source, but has later rejoined his analysis to the solution given by Avicenna. This only partial allegiance to the source of the *DN* could indeed account for the peculiar arrangement of the text, and for the logical discrepancies just remarked. However, much later in the text, in §209, al-Ġazālī adds a further justification of the reasons why the third condition pertains to the First Principle better than the second one. It is not easy to determine whether this is an attempt at salvaging *in extremis* an initially inaccurate distinction, or if it is instead a conscious, and philosophically valid, addition to Avicenna's text.

AN INTERMEDIATE CONDITION BETWEEN THE [FIRST] TWO CONDITIONS | Arabic *ḥālat^m bayn^a l-ḥālatayni*, Latin *Tercia dispositio est media inter utramque dispositionem*. The intermediate character of the third kind of knowledge would make it natural to presuppose that it cannot be the highest of the three degrees, making its following application to God, in turn, all the more surprising (cf. *infra*, §206).

«THE WORLD IS ETERNAL» | Arabic *al-ʿālam^u qadīm^m*, Latin *mundus non cepit*. In the corresponding passage of the *DN* this kind of knowledge is described in generic terms, without the concrete example of doctrine added by al-Ġazālī. This is thus a particularly significant instance of al-Ġazālī's addition of anti-eternalist examples within the text of the *MF*, since the eternity of the world is described as a «specious argument» (see just *infra*), and counterposed to the true knowledge of its having a (temporal) origin. For a discussion cf. SIGNORI 2020^b: 172. JANSSENS 2019: 106 notices as well that this example is a Ġazālīan addition, saying that it is «his favourite» (thus recognising at least al-Ġazālī's insistent focus on the doctrine of the origin of the world), but fails to comment any further on the context in which the example appears, and which makes it clear that al-Ġazālī was indeed committed to the truth of its contrary (*i.e.* of the anti-eternalist thesis).

BY MEANS OF A SPECIOUS ARGUMENT SUCH AND SUCH | The term «specious argument» [*ṣubḥa*], which shares the Arabic root with the far more common verb for «resemble, bear a resemblance, be similar» (*ṣābiḥa*, in the III stem), takes its meaning from the passive of the II stem (*ṣubbiḥa*, «to be doubtful, dubious, uncertain, obscure») and led to a misunderstanding in the Latin translation. Instead of the correct translation: «As if he had heard [his opponent] saying: “The world is eternal”, by means of a *specious argument* [*ṣubḥa*] *such and such*, while he knows that it has an origin», the Latin text reads: « Sicut si audierit dici quod mundus non cepit eo quod videtur *similis illi, et illi corpori*. Ipse vero novit, et quia cepit [...]» (emphasis added). Gundissalinus is namely forced to add the word 'body' in order to make sense of the relationship of resemblance of the world with some unspecified object. The Arabic text, on the contrary, simply read *kaḏā wa-kaḏā*, 'such and such', as an attribute to qualify the word *ṣubḥa*, misinterpreted in Latin. Cf. SIGNORI 2020^b: 172 and fn. 72; *Appendix* 200-201 [22] and [23] (also for a comparison between the Arabic and the Latin texts).

WHILE HE KNOWS THAT IT HAS AN ORIGIN | Arabic *wa-huwa ʿālim^m bi-anna-hu ḥādīt^m*, Latin *ipse vero novit, et quia cepit*. As noticed *supra*, also the concrete affirmation of the anti-eternalist position is only Ġazālīan, as in the *DN* one only finds the generic example of the man who intuitively knows an answer, without a proper exemplification concerning the world and its origin (cf. Achena-Massé I: 154-155). On the anti-eternalist examples deployed by al-Ġazālī throughout the text cf. Introduction, §1.8.2.

[§206] D229.17-end of page

The present paragraph concludes the description of the third of the three kinds of knowledge described *supra*, attributing this third and last kind to the First Principle. Unlike the classification of §205, the content of this paragraph quite closely mirrors that of the *DN*: cf. Achena-Massé I: 154.16-33.

ORDERING | Arabic *tartīb*, Latin *ordinacio*.

HAS TREATED EXHAUSTIVELY THE ELUCIDATION | Reading *yastafā idāh^a mā* [...], as in D-Alt, for Dunyā's *yastafā fi idāhⁱ mā* [...] (given that *yastafā* is not construed with the *fi* of the object, and a direct complement rather than an oblique one seems in any case to be required). Cf. Latin: «quousque perfecte manifestetur id quod habebat [...]» (MUCKLE 1933: 68.4-5).

THE SIMPLE ANSWER | Arabic *al-ġawāb al-basīṭ*, Latin *de responsione simplici*.THANKS TO PREMISES AND ARTICULATIONS | Arabic *bi-muqaddimāt wa-tafāṣīl*, Latin *per preposiciones et ordinationes*.

A CREATOR FOR IT | Arabic *ḥallāq^{um} la-hu*, Latin [*principium*], *et creator [ordinationis eorum]*. I follow the suggestion provided by the Latin translation, reading a *tašdīd* over the *lām* in *خلاق*. An alternative reading for the same *rasm* would be *ḥalāq*, with the meaning of «share [of positive qualities]», which might be intended as a reference to the following affirmation of the greater nobility [*ašraf*] of the aforementioned third kind of knowledge (iii) with respect to the (i) analytical knowledge which proceeds by way of «articulation» [*tafṣīl*], but the grammatical structure of the sentence would in this case be strictly worse.

THE KNOWLEDGE [...] THIRD CONDITION | Arabic *'ilm^a al-awwalⁱ bi-l-kullⁱ min qabilⁱ l-ḥālatⁱ l-tālīyatⁱ*, Latin *sciencia primi, quantum ad universa que sunt, est de maneria tercię dispositionis*. The identification of the third, intermediate condition just described (iii) with the kind of knowledge proper to God may arouse some doubts in the light of the high description given of the (ii) kind in §205 *supra*. The soundness of the identification is however corroborated by further affirmations against the possibility that the First Principle's knowledge is like the (i) first (see §207) and the (ii) second (see §209) condition. Rhetorically, the identification of the third condition with the authoritative paradigm of divine knowledge gives in turn a particularly strong flavour to the anti-eternalist statement provided *supra*, in §205, as an example of that specific kind of knowledge, since we can then be surer of al-Ġazālī's commitment to the truth of that anti-eternalist position: cf. SIGNORI 2020^b: 172.

[§207] D230.1-18

As remarked by JANSSENS 2019: 106, this entire last part, corresponding to D230-231.26, is «a huge elaboration of the brief concluding remark of DN 88,6-7». The present paragraph elaborates on the impossibility that the knowledge of the First Principle could entail any kind of articulation, since this would necessarily entail a multiplicity in Him. The knowledge devoid of any articulation is worthier and more noble than the analytical one, which is only proper to man. Reprising an acquisition already hinted at, but not developed, in §204, the paragraph ends by affirming that the First knows all the things as their principle; what is more, the First is the creative principle for the knowledges themselves which angels and men enjoy.

ONE COMES TO PASS AFTER THE OTHER | Arabic *yušādīfu wāḥid^{um} wāḥid^{um}*, Latin *una succedit post aliam*.A PICTURE IN THE SOUL | Arabic *naqṣ^{um} fi l-nafsⁱ*, Latin *quasi celatura in anima*. For the metaphor of the impression in the wax in gnoseological theory cf. in particular *supra*, *Metaphysics* I.2, §140.THEY CLOSELY SUCCEEDED TO ONE ANOTHER | Arabic *yata'āqabā 'alā l-qurbⁱ*, Latin *succedunt sibi adeo subito* (the verb *succedo* was used also *supra* to render instead the Arabic *yušādīfu*).FOR THE FINENESS OF THE TIME | Arabic *li-luṭfⁱ l-zamāni*, Latin *propter brevitatem temporis*.COMBINED | Arabic *muḡammala*, Latin *simul coniuncta*.

TRANSFER | Arabic *intiḳāl*, Latin *mutacio*. The notion of «transfer» must probably be interpreted in the sense of mentally moving from one form to another in order to articulate discursive, analytical knowledge.

IN [THEIR] DISTINCTION | Arabic *mufaṣṣil^m*, Latin *distincta*.

ENGAGEMENT | Arabic *iṣṭiḡāl*, Latin [*cum anima*] *intendit*.

HIS BEING KNOWER | Arabic *‘ālimiyyat^t-hi*, Latin *quod intelligitur de divina sciencia*.

HIS BEING PRINCIPLE | Arabic *mabda’iyyat^m-hu*, Latin *principium*.

FLOWING | Arabic *faḡḡān*, Latin *fluendi*. Cf. *supra*, §205, the usage of the same root to describe what happens in the (ii) second condition of knowledge (rather than in the third, which is however said to correspond to the way of knowing proper of the First Principle).

THE CREATIVE PRINCIPLE | Arabic *al-mabda’ al-ḡallāq*, Latin *principium creans*. Cf. *supra*, §206, for the usage of the same expression in the case of human knowledge.

IN THE ESSENCES OF THE ANGELS AND OF MANKIND | Arabic *fi dawāt^t l-malā’ikat^t wa-l-ins^t*, Latin *in essenciis angelorum, et hominum*. The fact that God is said to be the «principle» not only of the existence, but also of the knowledge that belongs to angels and men is the crucial aspect that will be represented in the example of the following §208, and that will ultimately justify the attribution of the predicate of knowledge to the First Principle Himself. Apart from two cursory references in the *Preface to Logic* (§2) and in the First Premise to *Metaphysics* (§92), this is the first proper reference to the theme of the angels, which will become quite crucial in what follows (cf. on this the Introduction, §1.7.2).

[§208] D230.19-231.12

The paragraph provides an example that aims at clarifying in which sense the First, as principle of the knowledge of all knowing beings, can be said to be knowing. The elaborate example compares knowledge to material wealth, the First to a king, and all knowing things to the subjects of the king. Since a king that has at his disposal all the riches in the world, and that bestows them on his subjects, is undoubtedly considered «rich», likewise the First – who has at His disposal all the knowledge, and bestows it on His creatures – must undoubtedly be said to be ‘knowing’ or «knower». As the entire section in which it is contained, this interesting example is a Ḡazālīan addition. However, JANSSENS 2019: 106 and fn. 94 tries to find sources for it in Avicenna, referencing the *Ilāhiyyāt* (268.10-11) for «the First’s having the keys of the hidden things, and hence knowing the hidden and the manifest», and (rather surprisingly) the *Iṣārāt* (FORGET 1892: 159.2) for «the (real) king as rich». Of course, the latter is a self-explanatory common notion, which does not need any source for being justified, while the first one is indeed present in the text. However, al-Ḡazālī’s addition is precisely to be recognized in the comparison between the notion of the bestowal of riches from the king, and that of the bestowal of knowledges from God, so that it can hardly be reduced to Avicenna’s claiD-Alt further, embedded comparison is added, in conclusion of the paragraph, between the condition of the First Principle with respect to the discrete pieces of knowledge (the items of the articulated, analytical knowledge proper to man) and the role of the alchemy as productive of the single dinars. The elements involved in the extended simile of the king are summarized in the following Table 34.

TABLE 34. *Comparison between the wealth of the king and the knowledge of the First Principle*

STARTING POINT	INSTRUMENT	OBJECT	RECEIVER	SNGLE ITEMS	PROPERTY	CONCLUSION
King [<i>malik</i>]	keys of the treasuries	gold and silver	people (the poor)	dinars	wealth	rich [<i>jani</i>]

STARTING POINT	INSTRUMENT	OBJECT	RECEIVER	SNGLE ITEMS	PROPERTY	CONCLUSION
First Principle [<i>al-mabda'</i> <i>al-awwal</i>]	keys of the unknown	(principle of the) know- ledge of the unknown and of the creed	universe (angels and men, cf. §207)	articulated pieces of knowledge	knowledge	knowing [<i>'ālim</i>]

A KING | Arabic *malik^{um}*, Latin *regem*.

THE KEYS OF THE TREASURIES OF THE RICHES OF THE EARTH | Arabic *mafātīh^u ḥazā'inⁱ* (sg. *ḥizāna*) *amwālⁱ l-arḍⁱ*, Latin *claves thesaurorum tocius terre*.

MAKES THEM FLOW ON THE PEOPLE | Arabic *yufīḍu-hā 'alā l-ḥalqⁱ*, Latin *distribuat eos gentibus*. The Arabic terminology chosen by al-Ġazālī corroborates in itself the comparison between the king and God that is being brought about, since the verb *afāḍa* (IV stem of the root *f-y-d*) is typically employed to describe the emanation of existence from the First Principle (cf. also *supra*, *Metaphysics* III.b.4, §205), while the chosen expression for «people» or «mankind», *ḥalq*, also has the meaning of «creation» (WEHR 299^b). Despite being applied to the king, therefore, the sentence could as well be predicated of God, thus substantiating with lexical tools the conceptual comparison.

THE KEYS OF THE UNKNOWN | Arabic *mafātīh^u l-ḡaybⁱ*, Latin *claves omnium scienciarum*.

CREED | Arabic *śahāda*, Latin *cognicio*.

FLOW UPON THE UNIVERSE | Arabic *yufīḍu 'alā l-kullⁱ*, Latin *procedit [sciencia, et cognicio] omnium*. Cf. *supra* the usage of exactly the same verb to describe the action of the king (observed in Latin, where two different translations are employed), and in general the symmetry of the two expressions.

AS IT IS IMPOSSIBLE [...] THE KEYS OF KNOWLEDGE | The sentence draws the conclusion of the argument, *i.e.* the fact that – given the structural homology just expounded – if the king is said to be «rich» [Arabic *ḡaniyy^{um}*, Latin *divitem*], likewise the First must be said to be «knower» [*'ālim*].

THE POOR | Arabic *al-faqīr*, Latin *pauper*. The «poor», who receives money from the rich king, and becomes rich in turn, does not have an explicit counterpart in the series of elements referring to God, but the corresponding element can easily be supplied by mentioning the initially ignorant or generally not-knowing rational beings, like the angels and the men mentioned *supra* in §207, who receive their knowledge from the First Principle and become, in turn, «knowers».

NUMEROUS DINARS | Arabic *danānīr ma'dūda*, Latin *pecuniam*.

BY VIRTUE OF HIS BENEFICIAL HELP | Arabic *bi-īfādatⁱ-hi*, left untranslated in Latin.

THE RELATION OF THE CONDITION [...] OF THE MULTIPLICATION OF THE EXEMPLAR | The conclusion of the passage introduces a second simile for the knowledge of God, partially contained within the wider comparison with the king but distinct from it. The way in which the knowledge of God is related to the «articulated knowledges» [Arabic *al-'ulūm al-mufaṣṣala*, Latin *sciencias singulas*] is said to be analogous to the relation that «alchemy» [Arabic *al-kimīyā*, Latin *alquimia*] entertains with the dinars.

MORE PRECIOUS | Arabic *anfas* (comparative of *naḥs*), Latin *nobilior*. The Latin translation is not wrong in principle, but I think it is important to maintain the idea of preciousness and value implicit in the Arabic adjective *naḥs*, since alchemy is here compared to the golden coins it produces: being those dinars precious, the alchemy producing them is all the more precious. This is of remarkable importance for the comparison to be effective, since the wanted conclusion of the argument is that God is knowing, because He is in such a state that knowing things flow from Him (just like precious things, the dinars, «flow» from alchemy).

BY VIRTUE OF THE APPRAISAL | Arabic *bi-ḥukmⁱ l-taqdīrⁱ*, Latin *secundum mensuram*.

THE MULTIPLICATION OF THE EXEMPLAR | Arabic *ḍarb al-maṭāl*. The Latin translation misunderstands the conclusion of the passage, as it reads: «dictum est autem hoc causa exempli» (MUCKLE 1933: 69.25-26). This is also noticed by Alonso 1963: 157 fn. 29, who however also translates the passage in a slightly misleading way: «monetas de las mismas y exactas proporciones y acuñadas del mismo modo». The Arabic *ḍarb* can also convey the idea ‘minting’, which would appear particularly appropriate in the context where the production of many dinars is at stake. However, the action performed by alchemy is not properly speaking that of minting coins, so that the more generic notion of ‘multiplying’ the dinar taken as a ‘model’ or «exemplar» seems globally more accurate.

THE STATE OF THE DISCUSSANT TO THE GIST OF THE ARTICULATED ANSWERS | Reaffirming the analogy between the knowledge of the First and the third kind of knowledge expounded *supra*, §§205-206, the paragraph conclusively compares His knowledge to the condition experienced by the «discussant» [*munāẓir*] when he knows (as explained in §206 *supra*) the «gist» [*ḥāṣil*] of the «articulated answer» [*al-ḡawāb al-mufaṣṣal*] that he will then expound part by part. For this sense of *ḥāṣil* cf. *supra*, Logic IV, §38; *Metaphysics* I.8, §167; and *infra Metaphysics* V, title (§294).

[§209] D231.13-232.1

The paragraph, which brings to conclusion the fourth allegation, presents an objection to the account of the divine omniscience just expounded, by asking whether this attempt at safeguarding the unity of God’s knowledge would not be tantamount, in the end, to affirming that God is devoid of any knowledge. The answer explains that this would be the case only if the second, rather than the third, kind of knowledge distinguished *supra* (§205) were attributed to God.

DEVOID OF THE KNOWLEDGE | Arabic *ḥāl^{īn} ‘anī l-‘ilmī*, Latin *expers sciencie*. The objection considers the condition of God’s knowledge described in the preceding paragraph (§208) as a lack of knowledge, to whose «reception» [*qabūl*] God would be merely «predisposed» [*musta’add*].

DISJOINED FROM THE KNOWLEDGE | Arabic *munfakk ‘anī l-‘ilmī*, Latin *non est sapiens; expers sciencie* (for the same expression cf. *infra*, *Physics* V.3, §429). According to the objector, under the preceding description of His knowledge God could be said to be ‘knowing’ only because of His «proximate potency» [*al-quwwa al-qarība*] to knowledge, while in actuality He would be not knowing and rather entirely «disjoined» from the attribute of knowledge. If one adds to this that God cannot be in potency, He would then be devoid of knowledge both in actuality and in potency.

QUESTION | Arabic *su’āl*, Latin *oppositio*.

THE THIRD CONDITION [...] NOT [YET] PRESENT IN HIS MIND. | The long passage expresses a basic distinction between the second and the third kinds of knowledge distinguished *supra* in §205. The «possessor» [*ṣāhib*] of the second condition may be «unaware» [*ḡāfil*] (cf. the parallel use of the noun *ḡafla* in §205) of the proper unreeling of his intuitive knowledge, while the possessor of the third condition is vividly conscious not only of the answer, but also of his own ability to articulate and detail it in a discursive fashion. This is expressed in the text with reference to (a) a «present condition» [*ḥāla ḥādira*], which the knower of the third kind possesses in actuality and which is not yet articulated in analytical fashion, and to (b) a further «condition» [*ḥāla*], which will consist in the proper articulation of the answer to the opponent’s false claim that the world is eternal (cf. *supra* §§205-206). The «present condition» consists in a «relation» [*nisba*] to all the articulated pieces of knowledge that will follow, and in a way contains them *in nuce*, so that it is possible to deem that condition as a «knowing» state. This is appropriate to God as well. The vocabulary of ‘presence’ [Arabic *ḥuḍūr*] and of ‘relation’ [here: *nisba*, but often *iḍāfa*] in connection to knowledge cannot but remind one of the crucial developments of (and against) Avicenna’s epistemological position which

took place in 12th century Islamic philosophy. In particular, knowledge as relation is prominently defended by Abū l-Barakāt al-Baġdādī in his *Kitāb al-Mu'tabar* (where he uses the expression «relational attribute», *ṣifa idāfiyya*; see *K. al-Mu'tabar, Ilāhiyyāt*, ed. in AL-BAĠDĀDĪ 2007: 2.9-12); it must be noted however that Avicenna himself had considered the notion of knowledge as relation in his *K. al-Hidāya*: ed. 'ABDUH 1974: 268-269, Italian transl. in LIZZINI 1995: 407. As for knowledge as «presence», it is a well-known, and for certain respects pivotal, aspect of al-Suhrawardī's novel 'illuminationist' epistemology. For a broad recent discussion on all these issues, see GRIFFEL 2021: 351-383 (and compare EICHNER 2011^b). A possible source of al-Suhrawardī's notion in the thirteenth discussion of al-Ġazālī's *TF*, devoted to God's knowledge of the particulars, was already pointed at in SINAI 2016: esp. 289-292; and cf. again GRIFFEL 2021: esp. 373-383, who nicely explains how the idea of knowledge as a «state which is pure relation» [*ḥālat^{mn} hiya idāfat^{mn} maḥḍat^{mn}*] (MARMURA 2000: 137.16) is introduced by al-Ġazālī as a philosophically tenable alternative for Avicenna's doctrine, which at the same time would not clash with the outer meaning of revelation. For the treatment of that same issue in the *MF* (here however thoroughly Avicennan) cf. *infra*, §§210-213.

[§210] D232.2-21

(b.5) The Fifth allegation concerns God's foreknowledge of the possible particulars (problem of the future contingents). The present paragraph sets the issue by redefining the concept of 'possible', whose occurring, or failure to occur, would seem in principle unforeseeable. However, when its cause is taken in consideration the possible becomes necessary, so that the knowledge of all the causes of a possible event will determine the foreknowledge of that possible event. This is substantiated by the concrete example of the haphazard event *par excellence*, i.e. the fortuitous finding of a treasure.

THE POSSIBLE EVENTS | Arabic *al-mumkināt al-ḥādīṭa*, Latin *possibilia que contingunt*.

THE OCCURRING OR THE NON-OCCURRING | Arabic *wuqū^{at}-hu aw lā wuqū^{at}-hu*, Latin *an contingat, vel non contingat* (the same verb *contingo* was also used, immediately *supra*, for the root ḥ-d-t).

IT IS POSSIBLE THAT IT IS, AND IT IS [ALSO] POSSIBLE THAT IT IS NOT | For this notion of «two-sided possibility» (to existence and to non-existence) cf. STREET 2002: 135 and *supra*, *Logic* III, §30 and *Metaphysics* I.8, §169.

WE HAVE ALREADY MENTIONED [...] NECESSARY, NOT POSSIBLE | Cf. *supra*, *Metaphysics* I.8, §170.

THE ARRIVAL OF ZAYD | Arabic *quḍūm Zayd*, Latin *advenire Petrum*. If a *prima facie* possible event like the arrival of Zayd was 'inevitable' [*lā budd^a...*], then it would be «necessary» [*wājib^{mn}*], not possible.

IF THEN WE POINTED OUT ALL THE CAUSES OF ONE THING | Arabic *fa-law aṭla'nā 'alā ġamī^d asbābⁱ ṣayⁱⁿ wāḥidⁿ*, Latin *Cum enim sciverimus omnes causas alicuius rei*. Since the human mind is not actually able to know all the causes of a contingent event, the Arabic text coherently uses the particle of the irreal conditional, *law* (on the grammatical interpretation of the particle cf. the ample historical discussion in VERSTEEGH 1991). The possible «thing» used as an example is mentioned shortly *infra*: «that Zayd finds a treasure tomorrow» [Arabic *wiġḍān Zayd ġad^{mn} kanz^{an}*, Latin *cras Petrum invenire thesaurum*].

AND WE KNEW THEIR EXISTENCE | Arabic *wa-'alimnā wuġūd^a-hu*, Latin *sciverimus ipsas esse*. The text is careful in specifying that one should know not only the causes of the event (i.e. their quiddity), but also their existence, since it is the existence of the cause (and not its quiddity) to necessitate the existence of its effect.

IF YOU KNEW | Reading *in* instead of *an*.

ON THE LINE SO AND SO | Arabic *'alā ḥaṭṭⁱⁿ kaḍā*, Latin *super lineam aliquam*. The same term vocalized in *ḍamma* [*ḥuṭṭ*] might indicate the 'quarter' or 'district' of a town (WEHR 284^b), but the basic sense

of 'line', with its possible specification of 'path' or 'trajectory', seems to me a better choice in the context.

IT WILL BE KNOWN [...] THE EXISTENCE OF ITS CAUSES | Given all the conditions for the happening of Zayd's discovery of the treasure, that discovery, in itself only possible, will become necessary (in the light of the existence of its causes).

[§211] D232.22-233.8

The paragraph, which concludes the treatment of the fifth allegation, argues that the First knows the future contingents on the basis of His knowledge of all their causes. A concrete example taken from human activities is given, namely that of the astronomer (or astrologer), who is able to determine some future events through his study of the astral causes. The astronomer can however be mistaken in his prognostications, because it is difficult for him to get to know all the causes of the event he is trying to foresee, as well as all the possible hindering factors of that event. God, instead, knows all the causes because all the causes lead back to Him, so that His foreknowledge is complete.

THE FIRST GLORIOUS AND MOST HIGH | Arabic *al-awwal subhān^a-hu wa-ta'ālā*. The rather elaborate eulogy is rendered by the Latin translators as «*primus autem qui est benedictus*» (cf. MUCKLE 1933: 71.10-11).

SINCE THE REASONS AND THE CAUSES GO BACK TO THE NECESSARY EXISTENT | For the demonstration of the role of the Necessary Existent as endpoint of all causal chains cf. *supra*, *Metaphysics* I.6, §165, and in particular *Metaphysics* II.12, §§190-191.

REASONS | Arabic *'ilal*. Cf. *supra*, *Metaphysics* I.5, §156.

GO BACK | Arabic *tartaqī*, Latin *preveniunt* (sic pro *perveniunt*).

ASTRONOMER | Arabic *munağğīm*, Latin *astrologus*. As remarked by JANSSENS 2019: 106 and fn. 95, this concrete example is added by al-Ġazālī with respect to the corresponding passage in the *DN*. Janssens references the *Ta'liqāt* (ed. BADAWĪ 1973: 14.18-15.5) and the *K. al-Nağāt* (DĀNİŞPAZŪH 1986: 707.1-708.7) as texts in which Avicenna uses the same example. Janssens omits to quote the passage of Avicenna, *K. al-Şifā', Ilāhiyyāt* X.1, ed. QANAWATĪ-ZĀYID 1960: 439-440 (transl. MARMURA: 362-363), perfectly parallel to the one of the *Nağāt*, translated (in French) and discussed in MICHOT 2006: 15*-17*.

HE SCRUTINIZES | Arabic *tafhaşu*.

A [MERE] OPINION | Arabic *ẓann^{om}*, Latin *opinando*.

RATHER THAT [...] [POSSIBLE] HINDERING [FORCES] | Arabic *bal dālika ma'a intifā'^t l-mu'arađāt'*, Latin *hoc autem non potest esse, nisi propter remocionem eorum que accidunt*. The Arabic text is very condensed, and it is not entirely clear whether the referent of *dālika* should be the preceding «what he mentioned» [*mā dakara-hu*], and namely the complex (maybe not exhaustive) of the causes of the event, or – *ad sensum* – the event itself that the astronomer/astrologer is trying to prognosticate. I interpret the «hindering [forces]» [*mu'arađāt'*] in the sense of the possible further causes, not mentioned by the astronomer because unknown to him, which might work against the known causes, hindering their action and potentially preventing the occurring of the effect foreseen by the *munağğīm*.

HIS OPINION STRENGTHENS | Arabic *qawiya ẓann^u-hu*, Latin *corroborabitur eius opinio*. The consideration of a greater number of causes corroborates the 'foresight' of the astronomer, which remains however merely opinable as long as not all the causes, but only a subset of them is taken into account.

THE KNOWLEDGE [OF THE FUTURE EVENT] RESULTS FOR HIM | Arabic *haşala la-hu l-'ilm^u*, Latin *apprehendet*

scienciam. Or: «he obtains the knowledge due to [this]» (*i.e.* to his previous knowledge of all the causes). The consideration of all the causes of an event produces a necessary knowledge of its happening, even though the event is in itself only possible. The example given is that of the knowledge, in winter, of the warming up of the air that will happen in the summer.

WILL BECOME HOT | Arabic *sa-yahmà*, Latin *calefiet*.

IN THE [SIGN OF THE] LION | Arabic *fī l-asad*, Latin *in leone*.

[THE ASTRONOMER] KNOWS ON THE STRENGTH OF THE HABIT AND OF THE INDUCTIVE PROOF | Reading *ya'lamu bi-ḥukmī l-'ādatī wa-l-dalīlī* as in D-Alt, instead of Dunyā's text *ya'lamu ḍālīka bi-ḥukmī l-'ādatī. Wa-l-dalīlī*, which makes a new sentence begin with: «And the proof...». Cf. the Latin translation, which agrees with A: «et scitur secundum usum, et secundum probacionem, quod [...]» (MUCKLE 1933: 71.28-29).

TRAVEL | Arabic *masīr*, Latin *cursum*.

[§212] D233.9-234.9

(b.6) The Sixth allegation discusses God's atemporal knowledge of the particulars. This is a crucial issue for al-Ġazālī, since it represents one of the three doctrines on the basis of which he accuses the philosophers of unbelief in the *TF* (cf. *supra*, *Logic*, Preface, §2), and one of the topics with which he deals more extensively in the latter work (cf. *TF*, Thirteenth discussion, MARMURA 2000: 134-143). The problem of God's knowledge of the particulars in Arabic philosophy – especially, but not exclusively in relation with Avicenna's doctrine – has received consistent and valuable scholarly attention: cf. MARMURA 1962; LEAMAN 1985; SAMIR 1986 (on Yahyā ibn 'Adī); ACAR 2004^b; ZGHAL 2004; ADAMSON 2005; BELO 2006 (on Averroes); LIM 2009; NUSSEIBEH 2009; ZADYOUSEFI 2018; LÁNCZKY 2019. Through the example of the solar eclipse – taken from the *Ilāhiyyāt* of Avicenna's *K. al-Šifā'* – the present paragraph presents the *pars destruens* of the Avicennan argument, *i.e.* the denial of a temporal knowledge of the particulars on the part of the First, since this would necessarily entail a change in His essence. An English translation of this Sixth allegation (§§212-213) is also available as T2 in AL-AKITI 2009: 63-64.

THE FIRST GLORIOUS AND MOST HIGH | The Arabic eulogy is identical to that which opens the preceding §211, but the Latin translation provided for it is different (and simpler): «*primus qui est laudabilis*» (cf. MUCKLE 1933: 71.32).

UNDER THE PAST, THE FUTURE AND THE PRESENT | Arabic *taḥta al-māḍī wa-l-mustaqbalī wa-l-ānī*, Latin *sciencia in qua scit preteritum et futurum et presens* («with the knowledge in which He knows the past, the future and the present», which is misleading).

THAT THE SUN WAS NOT ECLIPSED TODAY, BUT IT WILL BE ECLIPSED TOMORROW | Arabic *anna l-šams^a lam tankasif al-yawm^a, wa-anna-hā sa-tankasifu ḡad^m*, Latin *quod sol hodie non paciatur enclipsim, sed cras*. The example of the eclipse is also used in Avicenna's *K. al-Šifā'*, *Ilāhiyyāt* VIII.6, ed. Cairo: 360-362 (§§6.5-6.7 in BERTOLACCI 2007: 670-673), while in the corresponding passage of the *DN* the denial of the divine knowledge of particulars in temporal fashion is argued with a different astronomical example, concerning rather the conjunction and the occultation of a star (cf. ACHENA-MASSÉ I: 157-160). Moreover, the example given in the *DN* is applied in the first place to a human «astronomer», for whose appearance in the *MF* cf. rather *supra*, §211.

AS A MATTER OF FACT [...] THE VARIATION OF THE ESSENCE. | The long passage aims at denying the possibility of God's temporal knowledge of the particulars on the basis of the fact that such a knowledge would provoke an impossible «change» [Arabic *taḡayyur*, Latin *permutacio*] in His unchanging essence. The future, the ongoing, and the already occurred eclipse are, as a matter of

fact, three different known things. Since the knowledge changes at the variation of the known, and the knower changes at the variation of the knowledge, if God knew those three different states He would change, which is impossible.

VARIATION | Arabic *iḥtilāf*, Latin *diversitas*.

IT HAS ALREADY BEEN SAID BEFORE THAT THE CHANGE IS IMPOSSIBLE ABOUT HIM | For the denial of any change whatsoever in the essence of the Necessary Existent cf. *supra*, *Metaphysics* II.9, §186 (and its short reprise in II.11, §189).

THE WAY OF THE NECESSARY FOLLOWING OF THE CHANGE | Arabic *wağh^u luzūmⁱ l-tağayyurⁱ*, Latin *Modus vero ex quo sequeretur permutacio*. What is meant is ‘the reason why the (aforementioned) change (in the essence of the First) will necessarily follow’, once having presupposed His knowledge of temporal particulars.

THE KNOWN IS FOLLOWED BY THE KNOWLEDGE | Arabic *al-ma‘lūm yatba‘u-hu al-‘ilm^u*, Latin *scitum comitatur scire*.

LIKE ITS BEING RIGHT AND LEFT | Arabic *ka-kawnⁱ-hi yamīn^{an} wa-šimāl^{an}*, Latin *sicut est ipsum sedere a dextris vel a sinistris*. Cf. *supra*, *Metaphysics* I.1, §127, for the usage of ‘being right and left’ as example of the accidental category of «relation».

A VARIATION [OCCURRING] IN IT | *i.e.* in the knowledge.

IMAGE | Arabic *miṭāl*, Latin *exemplum*. Even though the knowledge of the past, present and future eclipse might be considered to be just one, since every knowledge is the «image» – or the likeness, the mirror – of the known, if the known changes the knowledge will also change.

WHEN, THEN, IT HAS BEEN SURMISED [...] HE WOULD CHANGE. | The «condition» [*ḥāla*] thanks to which the First knows that the eclipse will occur cannot be the same condition thanks to which He knows the it is occurring, nor the same through which He knows that it has occurred. Thus, the condition of God’s knowledge of the future occurring of the eclipse will transform itself in an opposite condition – that of «ignorance» [*ḡahl^{an}*] – as soon as the eclipse will be ongoing, or will have come and passed, since those states are different ‘known things’, which need different ‘knowledges’ and different states of the ‘knower’ in order to be properly known. In order for God to remain knowing throughout the occurring of a temporal event, therefore, a change in His essence must be presupposed.

[§213] D234.10-end of page

The present paragraph, which concludes the Sixth allegation, presents the *pars construens* of the philosophical argument for God’s atemporal knowledge of particulars. The First Principle knows the changing particulars in a universal manner, according to an atemporal universal species. God, then, atemporally and eternally knows all the particular things, even though they are temporal, because He atemporally knows all their causes, of which He is the ultimate principle.

BY VIRTUE OF A UNIVERSAL SPECIES | Arabic *bi-naw^{an} kulliyⁱⁿ*, Latin *secundum maneriam universalem*.

BY WHICH HE IS CHARACTERIZED ETERNALLY AND FOREVER | Arabic *yakūnu muttaṣiḡ^{an} bi-hi azal^{an} wa-abad^{an}*, Latin *et talis intelligendus est ab eterno sine fine*. Since God is eternally endowed with the universal kind of knowledge with which He also knows every particular, this atemporal knowledge does not entail a change in His essence (as opposed to the temporal knowledge, excluded precisely for this reason in §212 *supra*).

THE DESCENDING NODE | Arabic *‘uqda al-ḡanab* (literally ‘knot of the tail’), Latin *nodum caude*. ALONSO 1963: 160 wrongly translates «el nudo de la cola del león», although no mention of an *asad* («lion») is made in the Arabic text. While the Arabic name *‘uqda*, ‘knot’, could in principle refer to the star

modernly known with the Bayer designation of Alpha Piscium – a binary system of stars, one called in Arabic *al-Riṣā'* ('the well rope') and the other *al-'Uqda* –, or else to the asterism of four stars, the most luminous of which is Iota Hydrae, that was known to Ptolemy as Καμπή ('winding', 'turn'), what is here at stake is certainly not the name of a star, but rather the technical astronomical notion of «node», *i.e.* each of the intersections of the moon's orbit with the ecliptic (Earth-Sun plane). More specifically, the «descending node» is nowadays defined as the point at which an orbiting body (in our case, the Moon) passes from the northern side of a reference plane (in our case, the ecliptic) to the southern side. Since an eclipse (either lunar or solar) can only occur when the Moon (full or new) is close to either lunar node, the mention of the notion of *'uqda* in the reasoning about the eclipse is, by all means, particularly appropriate; while the mention of the movement of the Sun, rather than that of the earth, is of course imputable to the underlying geocentric understanding of astronomy. The use in this technical sense of the phrase *'uqda al-danab* comes from Ptolemy, as it appears for instance in the Arabic text of Ptolemy's *Planetary Hypotheses*, I.15 (cf. MORELON 1993: 59.20; and *ivi*: 59.17-18 for the specular concept of 'ascending node' [*'uqda al-ra's*, literally 'knot of the head']; in French translation «nœud descendant» and «nœud ascendant» respectively); on Ptolemy's text cf. the bibliographical survey by JUSTE 2020^b. The respectively corresponding Latin expressions *nodus caude* (used by Gundissalinus in this passage of the *MF*) and *nodus capitis* are used throughout Gerard of Cremona's Latin translation of Ptolemy's *Almagest*: cf. *e.g.* IV.9, LIECHTENSTEIN 1515: 44^v-45^r (available also online on the wonderfully rich website of the *Ptolemaeus Arabus et Latinus* project, to which I am indebted for much of the astronomical information here gathered); for further information on Gerard's *Almagesti* see JUSTE 2020^a. In many further texts of medieval astronomy, moreover, the two lunar nodes involved in an eclipse come to be designated with the expressions *caput draconis* and *cauda draconis* ('head' and 'tail of the dragon'); for a vernacular reception of this notion, cf. for instance RESTORO D'AREZZO, *La composizione del mondo*, I.14, ed. MORINO 1976: 21-22.

WITH AN IMPERFECT OPPOSITION | Arabic *muḥādāt^m jayr^u tāmmat^m*, untranslated in Latin. The hypothetical eclipse used in the example is a partial solar eclipse, in which only a third of the sun is supposed to be hidden. This is probably functional to the particularization of the event used as an example, in order to reaffirm that God's knowledge of it can nonetheless be universal – no matter how small, or how apparently specific and peculiar, the event is (cf. also *infra* the «weight of an atom»).

IN THE GEOGRAPHICAL REGION SO AND SO | Arabic *fi iqlīmⁱ kadā*, Latin *in aliquo proprie climate*.

OF THE WEIGHT OF AN ATOM | Arabic *fi miṭqālⁱ darrat^m*. The expression is a Qur'ānic quotation, for which cf. *Qur'ān* 10.61; *Qur'ān* 34.3; *Qur'ān* 35.11. Accordingly, the rendition «atom» for *darra* (otherwise also 'speck of dust') replicates the most commonly used English translation for the Qur'ānic occurrence of the expression, although that is not of course the technical term for the atom as minimal part (cf. *supra*, *Metaphysics* I.1, §§111-116). The Latin translation of the phrase is not literal: «Nichil igitur adeo minimum est quod scienciam eius effugiat» (MUCKLE 1933: 73.5-6). JANSSENS 2019: 106 and fn. 96 aptly remarks that it is not necessary to assume that al-Ġazālī himself has added «this religiously connotated affirmation», since it is present as well in Avicenna's *Ilāhiyyāt* VIII.6, ed. QANAWATĪ-ZĀYID 1960: 359 (§6.2 in BERTOLACCI 2007: 668). This is certainly true, given the identity of context between the two texts and the aforementioned parallel passages (cf. §212), which guarantees that al-Ġazālī certainly knew very well those passages of the *Ilāhiyyāt*. Nonetheless, the fact that the Qur'ānic quotation is not present in the *DN* makes the addition extremely significant, because it suggests that al-Ġazālī consciously selected, for the treatment of this rather crucial topic of his philosophical *summa*, precisely those Avicennan passages that showed the most noticeable Islamic, and more generally religious, influences. Not by chance, the Qur'ānic appeal to God's knowledge of even the weight of an atom also opens the Thirteenth discussion of al-Ġazālī's *TF*, where Avicenna's philosophical doctrine will be sophisticatedly criticized (MARMURA 2000: 134-143). For some comments on the same issue, cf. also AL-AKITI 2009: 64-65 fn. 33.

[§214] D235.1-15

(b.7) The Seventh allegation concerns the will of the First, a concept that according to GRIFFEL 2021 will become utterly crucial for the relationship between theology and philosophy in Islamic milieu in the 12th century.

WILLING | Arabic *murād*, Latin *volens*.

A WILL AND A PROVIDENCE | Arabic *irādat^m wa-‘ināyat^m*, Latin *voluntas, et cura*. On the notion of «providence» cf. in particular *infra*, *Metaphysics* III.b.7, §§219-221.

THE AGENT IS EITHER AGENT BY THE PURE NATURE, OR BY WILL | Arabic *al-fā‘il immā an yakūn^a fā‘il^m bi-l-ṭab^d al-mahq^d, aw bi-l-irādat^d*, Latin *factor autem aut est agens tantum ex natura pura, aut ex voluntate*. The opposition between action «by nature» [*bi-l-ṭab*] and «by will» [*bi-l-irāda*] had already been presented *supra*, *Metaphysics* I.5, §158, within the treatment of the agent in the discussion on the final cause.

THE ACT DISJOINED [...] THE ACT [ITSELF] | The action by nature is characterized by its being separate («disjoined» [*munfakk*]) from the knowledge of its «product» [*maf‘ūl*] and its «act» (or action) itself [*fi‘l*]. Knowledge of the outcome of the action, and knowledge as self-consciousness concerning the action itself, are thus used as the discriminating point between natural action and voluntary action. Indeed, in what follows the will of the First is deduced from His knowledge (already demonstrated: cf. for instance *supra*, *Metaphysics* III.b.3, §203, but also the following paragraphs), because *irāda* and *‘ilm* are said to go hand in hand.

ITS FLOWING FROM HIM | Arabic *ḥayḍān^u-hu min-hu*, Latin *fluxus eius ab eo*.

IS NOT INCOMPATIBLE WITH HIS ESSENCE | Arabic *ḡayr^u munāḡ^m*, Latin *non displicet sibi*.

SO THAT IT IS HATED | Arabic *ḥattā yakūn^a kārih^m*, Latin *sic ut aborreat illum*.

INDEED, THERE IS NO HATRED FOR IT IN HIM | Arabic *fa-lā karāhat^a fi-hi la-hu*, Latin *quoniam nichii horum odit*. The tight reasoning argues, by steps, (i) that the existence flows from God; (ii) that God knows that flowing; (iii) that that flowing is from God's essence, and thus compatible with His essence; (iv) that God does not hate anything that flows from Him (since it flows from Him). Hence, He is «satisfied» [*rāḡ^m*] with what flows from Him. The conclusion – drawing once more on a semantic analysis – is that «it is permitted» [*yaḡḡuzu*] to call this «condition» [*ḥāla*] of the First with the name of «will».

RULING | Arabic *nizām*, Latin *ordinacionis*. For the clearest affirmation of God's knowledge of the «ruling» as principle of existence of that ruling, cf. *supra*, *Metaphysics* II.12, §195.

[§215] D235.16-end of page

The paragraph presents a fourfold (but ultimately only threefold, because 'belief' is mentioned and immediately abandoned) classification of voluntary acts based on their possible causes, which are all of a gnoseological nature: firm (decisive) belief, knowledge, opinion, imagination. This is in agreement with the acquisition of §214, according to which will always depends on knowledge. JANSSENS 2019: 106-107 and fn. 97 remarks that the examples have been added by al-Ġazālī, and references the *Ta‘liqāt* (ed. BADAŪI 1973: 16.14-17) as a possible source.

A DECISIVE BELIEF | Arabic *i‘tiqād ḡazm*, Latin *pura credulitas*. JANSSENS 2019: 106 does not take into consideration this kind of voluntary action, mentioning only the other three, probably because al-

Ġazālī himself omits any further treatment of it (and also its refutation) in the remainder of the paragraph; cf. *infra* in the commentary.

A KNOWLEDGE | Arabic *‘ilm*, Latin *sciencia*. The voluntary action coming from a knowledge is exemplified by the act of the «geometer» [*muhandis*] performed «in accordance» [*bi-mūǧib*] to the «true knowledge» (or ‘science’) [*al-‘ilm al-ḥaqīqī*]. The fact that the the voluntary act caused by *‘ilm* is explained through the recourse to the same notion of *‘ilm* may appear, and probably is, circular.

AN OPINION | Arabic *ẓann*, Latin *opinio*. The voluntary action caused by an opinion is exemplified through the case of an act of circumspection or «caution» [*iḥtirāz*] performed by an «ill [person]» [*marīḍ*] in order to avoid what he «estimates» [*yatawahhamu*] could harm him. The *ẓann* is thus linked to the faculty of ‘estimation’ [*wahm*], for which cf. also *infra*, *Physics* IV.2.2, §396 and *passim*.

AN IMAGINATION | Arabic *taḥayyul*, Latin *imaginacio fantasie* (a double translation later adjusted to a genitival construction?). The voluntary action coming from imagination is exemplified by the action of the soul when she looks for what is similar to her «loved» [*maḥbūb*], or when she avoids what is similar to «that which she hates» [*mā yakrahu-hu*].

IT IS NOT POSSIBLE [...] WHICH DO NOT PERSIST | The possibility that the (voluntary) action of the First (cf. *supra*, §214) is due to an opinion or an imagination is ruled out on the basis of the already demonstrated impossibility of any changeable accident in His essence: cf. *supra*, *Metaphysics* II.8, §183-185; *Metaphysics* II.9, §186.

IT IS NECESSARY [...] INTELLECTUAL KNOWLEDGE | Having excluded the cases of opinion and imagination, «true intellectual knowledge» [Arabic *‘ilm ‘aqlī ḥaqīqī*, Latin *sciencie intelligibilis vere*] is immediately said to be the right possibility, thus excluding *de facto* any consideration of the fourth case, listed as first in the exhaustive list of possibilities offered *supra*, i.e. the case of the «decisive belief» [*‘itiqād ḡazm*]. The exclusion might be motivated by the fact that belief is a purely human action, thus not applicable in any case to God.

[§216] D236.1-23

The present paragraphs aims at explaining how knowledge can be cause for the existence. The text gives two psychological examples of human situations in which a knowledge – or, more broadly speaking, a mental state – can determine a fact in actual reality: the desire (for instance for writing) that provokes an effect (for instance a written line); the thought of a fall, which can provoke the fall of the man walking on a trunk (used as a bridge). The example is reprised by Faḥr al-Dīn al-Rāzī in his Qurānic *Tafsīr* (3.45), in a surprising passage translated into French by MICHOT 1993: 308-309 fn. 48. There, Rāzī suggests that Mary’s virginal conception of Jesus might be explained by means of the same token – the power of imagination affecting reality, proved *inter alia* by the fall of the man traversing the trunk – which the *falāsifa* have evoked in relation to the powers of the soul outside the body.

AS FOR THE FIRST [...] THE DIRECT TESTIMONY OF THE SOUL | I read *ammā l-awwal^a fa-lā yu‘lamu illā bi-matālⁱ mušāhadatⁱ l-nafsⁱ*, as in D-Alt, instead of *...illā matāl...* (without *bi-*) as in Duniyā. Moreover, I interpret *يُعلم* as the passive voice of the imperfect of the I stem [*yu‘lamu*], with the preceding interrogative question («how the knowledge [can] be a cause [...] His knowledge») as implicit subject. The alternative would be to interpret it as an active form, but this would entail an impossible reduction of the knowledge of the First to the knowledge enjoyed by the human soul. In agreement with the principle according to which man can only settle theological matters by finding a parallelism for them in himself (cf. *supra*, *Metaphysics* III, §196; *Metaphysics* III.b.2, §201), the meaning of the passage is rather that we can only know how knowledge can be a cause for the

existence in the case of God by looking for an instance of the phenomenon within our soul and her behaviours. The Latin translation has *Primus* ('the First') as a subject, but ultimately conveys the meaning just expressed: «*Primus non potest intelligi nisi per exemplum consideracionis anime*» (MUCKLE 1933: 74.3-4).

WHEN WE HAPPEN TO CONCEIVE [...] THE RESEARCHED ACT RESULTS | The passage contains a general account of the physiological and physical consequences of the psychological act of longing, with a terminology which anticipates the account of the desiderative faculty that will be given in *Physics* IV.2, esp. §380. Later on, a concrete example of this process is given (albeit more involved with estimation, here not mentioned): cf. *infra* in this paragraph.

CONCEIVE / CONCEPTION | Arabic *taṣawwur*, Latin *imaginari* / *imaginacione*.

THE POWER OF LONGING | Arabic *quwwa al-šahwa*, Latin *virtus desiderii*.

DESIRE | Arabic *šawq*, Latin *quod* (with reference to the preceding *desiderii*, used however to render *šahwa* rather than another occurrence of *šawq*).

THE POWER SENT OUT | Arabic *al-quwwa al-munbatta*, Latin *virtus que discurrit*.

IN THE MUSCLES | Arabic *fi l-ʿaḍalāt*, Latin *in musculis*.

THE TENDONS | Arabic *awtār* (sg. *watar*), Latin *cordarum* (the Arabic *watar*, apart from the anatomical sense, also has the generic meaning of 'string', i.e. the Latin *corda*).

THE ORGANIC LIMBS | Arabic *al-aʿḍāʾ al-ālīyya*, Latin *membrorum instrumentalium*. Cf. also *infra*, §220.

WE IMAGINE THE FORM OF THE LINE [...] AS WE HAVE CONCEIVED IT RESULTS | The physiological chain of effects described *supra* in general terms is here instantiated with a concrete example, that of the drawing of a line, deriving from the desire to draw such a line. The steps described are: (i) imagination («we imagine» [Arabic *nataḥayyalu*, Latin *ymaginamur*]); (ii) estimation («we estimate» [Arabic *natawahhamu*, Latin *putamus*]); (iii) «desire» [Arabic *šawq*, Latin *desiderio*]; (iv) movement of the hand and the pen; (v) resulting of the line.

THAT WE WANT TO DRAW | Arabic *nurīdu katabta-hu*, Latin *quam volumus facere*.

THE MEANING OF OUR SAYING [...] FOR THE RESULTING OF A THING | The path which leads to the obtainment of the drawn line is here retraced backwards, from the realized line up to the knowledge of its 'necessity' (a necessity of our will, i.e. the line's being pleasant or useful to us). The steps covered are in this case: (v) drawn line (implicit); (iv) movement of the hand; (iii) «desiderative faculty» [*al-quwwa al-šawqīyya*]; (i/ii) «conception» [Arabic *taṣawwur*, Latin *imaginacione*] and «knowledge» [Arabic *ʿilm*, Latin *sciencia*] of the necessity of the line. JANSSENS 2019: 107 remarks that this example is an addition by al-Ġazālī; he references it together with the following example (of the man walking on the trunk), but finds an Avicennan source only for the latter. The example of the drawing of the line has rather, indeed, a distinct Ġazālīan character, as it also appears – in a much-elaborated fashion – in his *Iḥyāʾ ʿulūm al-dīn* IV.v šaṭr I, bayān 2, ed. LAĠNA: 218-219; Italian transl. in VECCIA VAGLIERI-RUBINACCI 1970: 500 ff. The psychological/intellectual path traced by al-Ġazālī in those pages expands the one here described quite much, although deploying the same example, which starts from the stain of ink, gets back to the hand that produced it, and arrives at last as the knowledge as an origin of the chain of effects. The steps touched in the passage of the *Iḥyāʾ* are paper, ink, pen, hand, power, will, intellect, and then heart and science/knowledge. In the same passage, one also finds a comparison with the Divine Pen which writes the sciences (or knowledges) on the tables of the hearts, for which cf. *infra*, *Physics* V.5, §435, the concept of *al-lawḥ al-maḥfūz*.

[EVEN] MORE APPARENT [...] RESULTING OF THE CONCEPTION [ITSELF] | The second and final example of the causality of a cognitive state – which is deemed to be «more apparent» [*aṣḥar*] than the first – is also added by al-Ġazālī, although JANSSENS 2019: 107 and fn. 98 references Avicenna's *K. al-Nafs* (ed. RAHMAN 1959: 200.2-6) as a possible source for it. The fact that the «estimation» of a fall may provoke the occurring of the fall itself closely resembles the characteristic example given for the possible action at distance of the soul in *Physics* V.9, §446, which precisely involves the estimated fall of a camel.

HE WHO WALKS ALONG A TRUNK | Arabic *allādī yamšī ʿalā ḡidʿān*, Latin *ambulans super trabem*.

WE HAVE THEN ALREADY COME ACROSS | Arabic *fa-qad šādāfnā*, Latin *iam igitur invenimus*.

[§217] D236.24-237.11

After the digression of §§215-216 on the kinds of act and on the possibility of the human soul's causality from a mental state, the present paragraph reconcentrates the attention on the cognitive causality of the First, stating that it must be from His knowledge, and in particular His conception, that He causes things to be.

WE RETURN, THEN, TO THE FIRST | In this case the Arabic text has no eulogy, which appears instead in the Latin text: «ad primum qui est benedictus in secula» (MUCKLE 1933: 74.29).

<EITHER> | The *immā* of Dunyā's Arabic text is not followed by a second term of the disjunction, and it might require emendation.

PROCEEDS | Arabic *yaşdurū*, Latin *provenit*.

THERE IS BY NO MEANS ANYTHING IN POTENCY [...] COME BEFORE | The possibility of any «desire» and «longing» is excluded with respect to the First on the basis of the demonstration of the impossibility of anything in potency within the essence of the Necessary Existent: cf. *supra*, *Metaphysics* II.8, §183-185; *Metaphysics* II.9, §186. On the intrinsic defectiveness of that which has a goal cf. also *supra*, *Metaphysics* I.5, §159 (and the discussion in the following §218 and §221).

HIS CONCEPTION [...] RULING FROM HIM | Apart from the terminology of *taşawwur*, which is innovative of this paragraph, this very same idea was already expressed *supra* on two occasions: cf. *Metaphysics* II.12, §195; *Metaphysics* III.b.7, §214.

THAT WHICH IS CONVENIENT FOR US | Arabic *mā yuwāfiqū-nā*, Latin *conveniencia*.

THAT WHICH IS INCOMPATIBLE FOR US | Arabic *mā yuḥālifū-nā*, Latin *non conveniencia*.

WE KNOW THE CONVENIENCE AND THE INCOMPATIBILITY | I have interpreted *taḥluqu* as the imperfect of *ḥaluqa*, 'to be fit, suitable', and *na'rifū* as depending on the indeterminate *quwwa šawqiyya*, with the returning pronoun at the end of the sentence [*bi-l-idāfa ilay-hā*].

IN THE REALIZATION OF OUR INTENT | Dunyā chooses *li-quşūd-nā* over *A*'s reading *li-maqşūd-nā*, which – although probably *facilior* – seems however preferable to me, and according to which I translated.

[§218] D237.12-24

Two differences between us and the First Principle are expounded: (i) following from the previous argument, the fact that the knowledge of the First, becoming will, is immediately sufficient for the creation of the known and wanted thing (while we need further instruments for the realization of our will); (ii) the fact that the First never acts on the basis of the consideration of a good for Himself (while we never act without such a consideration).

GOOD | Arabic *ḥayr*, Latin *bonam*. Here and *infra*, the Arabic *ḥayr* would also admit of an interpretation as comparative, and thus also of being translated as «better». This is also precisely the reason why such an utilitarian evaluation of an action cannot pertain to the First Principle: being already at the utmost degree of perfection, nothing can exist that could make Him better with respect to a previous state.

GOAL | Arabic *ğaraḍ*, Latin *intencionem scilicet causam finalem*. The double translation of the Latin

text may be reminiscent of the fact that the previous treatment of the concept of goal came precisely after the discussion of the notion of final cause: cf. *supra*, *Metaphysics* I.5, esp. §§158-159.

WE HAVE ALREADY CLARIFIED [...] DEFECTIVE [BEING] | For the demonstration of the state of being «defective» [*nāqis^{am}*] of the agent endowed with a goal cf. *supra*, *Metaphysics* I.5, §159.

[ADDRESSED] TO THE UNIVERSAL RULING | Arabic *li-l-niẓāmⁱ l-kullī*, Latin *de ordine universitatis* (presupposing perhaps **li-niẓāmⁱ l-kullī*).

MORE COMPLETE AND MORE PERFECT | Arabic *al-atamm wa-l-akmal*, Latin *plenius et perfectius*.

THAT WHICH IS NOT SO IS DEFECTIVE IN RELATION TO IT | Arabic *wa-mā ‘adā-hu nāqis^{um} bi-l-iḍāfatⁱ ilay-hi*.

The Latin translation appears to presuppose a different Arabic text: «et quod ex omnibus id quod est magis unum, minus simplex est comparacione eius» (MUCKLE 1933: 75.24-25). The hierarchy of more perfect and less perfect beings is presented as part of God's «universal ruling».

PROGRESSIVE ELEVATION | Reading *‘alā tarqī-hi*, as in D-Alt, instead of *‘alā tarbiyatⁱ-hi* as in Dunyā.

UP TO THE UTMOST DEGREE OF THE RULING ORDER | Arabic *ilā ġāyatⁱ l-niẓāmⁱ*, Latin *a principio usque ad finem ordinis* (the Latin *a principio* has no correspondence in Dunyā's Arabic).

[§219] D237.25-238.19

In order to discuss the providence of the First, the paragraph presents an example concerning the teleological intelligent design of the human hand, whose various functions are performed thanks to God's knowledge of what is necessary, and without which man would be defective. God gives rather preponderance to the good over the evil, so that all the existing things are such according to the most perfect of the possible ways of existence.

THE MEANING OF HIS PROVIDENCE FOR THE CREATION | Arabic *ma'nā ‘ināyatⁱ-hi bi-l-ḥalqⁱ*, Latin *Sensus autem de hoc quod ipse procurator est creature*.

A HITTING INSTRUMENT | Arabic *āla bāṭiṣa*, Latin *instrumento facile agendi* (and later, for the same Arabic expression: *instrumentum congruum*). Rather than a systematic misunderstanding, these alternative translations might entail a different Arabic text: a working hypothesis could be that of a reading like **basīṭa*, or even more closely **bāsīṭa*, which would have a very similar *rasm* (with the sole inversion of *t* and *s*, being *sin* and *šin* undistinguishable when undotted), and the wanted meaning of 'easy', 'simple'.

A HARM | Arabic *šarr^{am}*, Latin [*et sic non esse,*] *male esset [ipsi homini]*.

THE HAND | Arabic *al-yad*, Latin *manus*.

THE PALM OF THE HAND | Arabic *al-kaff*, Latin *vel palma*. The Latin translation also adds here the incongruous *vel pes* («or the foot»), absent in Dunyā's Arabic text.

FINGERS | Arabic *aṣābiⁱ* (sg. *iṣba^a*), Latin *digitis*. The reciprocal positions of the fingers, in various «rows» [sg. *ṣaff*] and with respect to the «thumb» [Arabic *ibhām*, Latin *pollex*], receive an ample description in the text. This is a Ġazālīan elaboration, since the example of the fingers is absent in the *DN* (cf. JANSSENS 2019: 107).

THE FORCE [OF THE HAND] | Arabic *baṭṣ*, Latin *facilitas agendi*. Here as well, the reading of the Latin might have rather been *baṣṭ* (or *baṣṭa*, which could also mean 'skill', 'capability'; cf. WEHR 72^b).

IN THE VARIETY OF ITS MOVEMENTS | Arabic *fi ḥtilāfⁱ ḥarakātⁱ-hā*, Latin *de diversitate motuum manus*. The text gives three examples of the possible actions performed by the hand in its movement, *i.e.* its being «hitting» [Arabic *bāṭiṣ^{am}*, Latin *ut aliquando tribuat*] (cf. *supra* for the systematic discrepancy of Arabic and Latin on this root); «rapacious» or 'grasping' [Arabic *ḍāriy^{am}*, Latin *aliquando percuciat*]; «pushing» [Arabic *dāfi^{am}*, Latin *aliquando repellat*].

IS ONE [...] FROM THE OTHER CONFIGURATIONS | Restoring the pericope of text *wāḥid^{um}*, *wa-lakin*

yu'ayyinu hādā l- waḍ' wa-yumayyizu-hu 'an sār' l-awḍā', expunged by Duniyā but reported in D-Alt (and cf. also the Latin translation of the entire passage in MUCKLE 1933: 76.9-13: «Verum est autem quod comparatio sciencie eius ad multos alios situs manus, qui esse possent, *una est, sed hic situs est precipue assignatus ei, et est distinctus ab aliis sitibus* eo quod maior perfectio est in isto», with emphasis added on the expunged excerpt). Its absence in one of Duniyā's mss., which is probably at the basis of the erroneous expunction in the printed text of the edition, is very well explainable by a *saut du même au même* that occurred between the first and the second *awḍā'* («configurations»), and the text must then be restored.

CONFIGURATION | Arabic *waḍ'* (pl. *awḍā'*), Latin *situs*. I have previously translated the term *waḍ'*, which occurs in *Metaphysics* I.1, §128 and §133 as the name of the accidental category of *κείσθαι*, with the English «position». Here, however, the temporary reciprocal position of the parts of the hand is not at stake, because the reasoning rather focuses on the hand's functional and permanent «configuration».

WHICH GIVES PREPONDERANCE | Arabic *yatarāḡḡahu*, Latin *quod dignius est [ab ea fluere bonum quam malum]*. Cf. *supra*, *Metaphysics* I.4, §160, for an occurrence of the active participle of the II stem *muraḡḡih*, of the same root of the Arabic V form here employed, as «selectively determining factor» or 'preponderator' of the existence over the non-existence. Although it may appear that here the preponderance is given to the good over the bad, the context is actually the same in the two passages, the argument being that God only chooses the existence of what is valuable and good, *i.e.* only those existences which are better than the corresponding non-existences.

THEREFORE, ALL THE EXISTENTS [...] IMPERFECT IN RELATION TO IT. | The final affirmation of the goodness of existence, and rather of the fact that the actual existence is such because it is the best of the possible ways of existing, is a classical argument of philosophical optimism, which anticipates the core idea of the answer that will be given *infra* to the problem of theodicy: cf. *infra*, *Metaphysics* V, §§307-314.

[§220] D238.20-239.2

After the example of the hand of man, the present paragraph concludes the main reasoning on will and providence (a side-argument will follow in §221) by giving a further example of God's providence, this time of zoological nature, concerning the function of the beak of chicks. The example opens the way for three closely interconnected Qur'ānic quotations, which are put to use in the philosophical argumentation to corroborate the idea that the work of creation would not be for the best, if it were not completed by the continuous «guidance» provided by God to the world also after its creation.

DID NOT GUIDE THEM | Arabic *lam yahdi*. The Latin translation of this difficult Qur'ānic verb (cf. *infra*) is in this occurrence: «nec intinaret eis...» (cf. MUCKLE 1933: 76.23).

IDLE | Arabic *mu'atṭal^m*. Interestingly, the corresponding active participle, *mu'atṭil*, technically means 'one who denies God all attributes' (cf. WEHR 728^a). The Latin translation attributes the hypothetical character of idleness to the «organic limbs» rather than to their creator: «profecto essent supervacua» (MUCKLE 1933: 76.23-24). This might have some doctrinal ground, but it is however grammatically unacceptable given the masculine singular *mu'atṭal^m*.

THE BEAK | Arabic *minqār*, Latin *rostrum*. It is quite significant, for the sake of the teleological argument here expounded, that the Arabic name for «beak» is precisely a noun of instrument deriving from the verb 'to pierce' [*naqara*].

WITH WHICH IT [COULD] PIERCE THE EGG | Given the morphology of *minqār* as a deverbal noun of the root *n-q-r*, I choose here A's reading *allādī yanquru min-hu al-bayḍ^a* for Duniyā's *yanfaliqū* ('to burst

out' from), which would miss the connection between the noun of instrument and the action it is meant to perform. Cf. the Latin translation: «quo percuciendo egreditur de ovo» (MUCKLE 1933: 76.24-25).

IF THEN HE DID NOT GUIDE | Arabic *lam yahdi-hi*. For this second occurrence of the Qur'ānic verb, coherently employed by al-Ġazālī to anticipate the quotations that will follow, the Latin translation has a different rendition: «Si enim non animadverteret» (MUCKLE 1933: 76.25).

TO PUT [IT] AT USE [...] PICKING UP [OF FOOD] | Arabic *ilā l-isti'māl wa-ištağala fi l-ḥāl bi-l-iltiqāf*, Latin *modum utendi rostro, et colligendi cibum de terra*.

THE PROVIDENCE [...] AFTER THE CREATION | The «providence» [Arabic *'ināya*, Latin *cura*] depends on the «perfection of the good» [Arabic *tamām al-ḥayr*, Latin *cum compleccione bonitatis*], and the perfection of the good depends, in turn, on the «guidance after the creation» [Arabic *hidāya ba'd al-ḥalq*, Latin *cum recognitione utendi instrumentis post creacionem* (a third different rendition for the root *hdy*)]. Thus, the providence of God, due to His perpetual acting for the best, needs a continuous action of guidance of the world, which could otherwise be led astray. This conception has something in common with that of continuous creation, whose denial had been strongly rebutted *supra*, *Metaphysics* I.8, §§171-175.

«[HE] WHO GAVE EACH THING ITS CREATION AND THEN GUIDED [IT]» | See *Qur'ān* 20.50: «He said: "Our Lord is He who gave each thing its form and then guided [it]"». The same Qur'ānic line will be quoted again also *infra*, *Metaphysics* III.b.9, §225; it appears moreover in *Physics* V.10, §453, at the very end of the *MF*, in that occasion together with the third quotation here reported (but without the second one). JANSSENS 2019: 107 notices as «most significant» the quotation of these Qur'ānic verses, although he remarks that they are already present in the chapter of the *DN* devoted to God's wisdom (*DN*, ed. MO'IN 1952: 100.3-9; ACHENA-MASSÉ: 165.29-166.2). Despite parallel as for this usage, that passage – which is interesting also for the promise Avicenna makes there of writing a book on the subject of God's necessity – is however not entirely corresponding to the present one in the *MF*. From the point of view of al-Ġazālī's doctrinal stance, it is remarkable that the terminology employed in the paragraph up to this point precisely mirrors that of these Qur'ānic lines, with the frequent use, in particular, of the two verbs *ḥalaqa* ('to create') and *hadā* ('to lead on the right way', 'to guide'). This coherent lexical choice has the effect – also on a rhetorical level of the argumentation – to immediately conjoin the philosophical reasoning to the quotations of the *Qur'ān* brought about to corroborate it, thus showcasing the perfect concurrence of philosophy and revelation on the point of God's active providence.

«[HE] WHO CREATED ME, HE [ALSO] GUIDES ME» | See *Qur'ān* 26.77-78: «Indeed, they are enemies to me, except the Lord of the worlds, / Who created me, and He [it is who] guides me». Unlike the other two quotations, these lines do not occur again at the end of the *Physics*, but are only quoted here (they are however present in the *DN*, as the third and last of the Qur'ānic quotations there employed; cf. ACHENA-MASSÉ: 166.1-2).

«[HE] WHO DESTINED AND GUIDED» | See *Qur'ān* 87.1-3: «Exalt the name of your Lord, the Most High, Who created and proportioned, and Who destined and [then] guided». The same Qur'ānic line is quoted also *infra*, *MF*, *Physics* V.10, §453, together with the first one appearing here. All the Qur'ānic quotations are omitted in the Latin translation (cf. Introduction, §).

AS IT WAS SAID BEFORE | Cf. *supra*, *Metaphysics* III.b.2, §§201-202.

[§221] D239.3-14

The conclusive paragraph of the lengthy seventh allegation (started back at §214) answers an objection by reaffirming the impossibility of an intent, or a goal, for God's provident action, since any intent would entail an impossible defectiveness in His essence.

AS FOR THE FACT [...] IT IS NOT SUCH | The opening line rejects the contradiction that could be thought to be occurring between the two predicates of ‘having a goal’ and ‘not having knowledge’: while there is no will without knowledge (cf. *supra*, §214), there can be knowledge (and thus will) without a goal. This makes clear since the beginning the theoretical framework of the answer to the subsequent objection.

WHICH UNLIKELYHOOD | Arabic *ayy^u bu‘dⁱⁿ*, Latin *quid miri*. The objection aims at presenting as natural the attribution of an «intent» to the First Principle, purportedly avoiding considering its implications in terms of the imperfection of the agent.

INTENT | Arabic *qaṣd*, Latin *proponi* (as in ‘propose to’).

EFFUSION | Arabic *ifāda*, Latin *profluere* (in the first occurrence, applied to God); *emanare* (in the second occurrence, applied to man).

NOT FOR THE SAKE OF HIMSELF | Arabic *lā li-aḡlⁱ nafsⁱ-hi*, Latin *non propter se ipsum*. The objector tries again to sneak in the notion of a totally selfless intent, but this will be shown in the answer to be impossible: every intent, and consequently every goal, entails the consideration of a betterment of condition for the agent, which necessarily involves, in turn, a previously imperfect state on his or her part.

A DROWNING PERSON | Arabic *ḡarīq*, Latin *submersum in aqua*. Logically, «drowning» gives a better sense, although WEHR 786^a only gives the passive ‘drowned’ as meaning of *ḡarīq*. Since the attempt at saving an already drowned person would make poor sense, if *ḡarīq* itself cannot mean ‘drowning’ it might be advisable to emend it in the active participle *ḡāriq* (although the Latin translation also appears to attest a passive meaning with its perfect participle *submersum*).

THAT MAKES [ONE] UNDERSTAND [...] DEFECTIVENESS | For the connection between «goal» [*ḡaraḡ*] and «defectiveness» [*naqṣ*] cf. *supra*, *Metaphysics* I.5, §159; for two further reaffirmations of it see also *Metaphysics* III.b.7, §§217-218. Cf. Latin: «Intencio autem significat inperfeccionem» (MUCKLE 1933: 77.6).

MAKES [ONE] UNDERSTAND | Arabic *yuš‘iru*, Latin *facit percipi*.

WE ACQUIRE THE DISPOSITION OF THE VIRTUE | Arabic *an naksib^a ḡulq^a l-faḡīlatⁱ fī anfusⁱ-nā*, Latin *bone consuetudinis*. Among the possible goals of every human action there is also the acquisition of virtue, so that even the most virtuous of the actions are shown to have an intent – *i.e.* virtue itself. A totally selfless, unselfish action is impossible to man.

TANTAMOUNT TO ONE ANOTHER FOR US | Arabic *bi-maḡābatⁱⁿ wāḡīdatⁱⁿ*, Latin *pro eodem [esset] nobis*.

CONVENIENT | Arabic *muwāfiq*, Latin *conveniens*. Cf. *supra*, *Metaphysics* III.b.7, §217.

IF, THEN, THIS WAS NOT [...] AN UNDERSTANDABLE [CONTENT] | The paragraph is concluded by a typically Ḡazālīan lexical observation, which counterposes *lafṣ maḡḡ* as ‘sheer lexical expression’ to *maḡḡūm* as ‘intelligible semantic content’, to the effect that having an «intent» [*qaṣd*] must mean to have a «goal» [*ḡaraḡ*] – and thus to be defective –, or else lack a meaning at all.

[§222] D239.15-240.7

(b.8) The eighth allegation concerns God’s power. For comparison with a more theological Ḡazālīan discussion of the same attribute, also concerned with matters like God’s knowledge of the particular future events (for which cf. *supra*, *Metaphysics* III.b.5-6, §§210-213), see the translation of the relevant chapter of the *Iqtisād al-I’tiqād* [*Moderation in Belief*] in MARMURA 1994.

«POWERFUL» | Arabic *al-qādir*, Latin. The epithet *al-Qādir* is the sixty-ninth of God’s Beautiful Names:

it is treated together with its cognate *al-Muqtadir* in al-Ġazālī, *al-Maqṣad al-Asnà*, ed. SHEHADI 1971: 63.15 (mention); 145.1-12 (discussion); and for further translations cf. STADE 1970 *apud* MCCARTHY 1980: 353: «He Who Acts, or Does Not Act, as He Pleases»; ASÍN PALACIOS 1929: *Appendix III, apud* MCCARTHY 1980: 354: «Libre y Poderoso».

HE WHO ACTS IF HE WANTS [SO], AND DOES NOT ACT IF HE WANTS [SO] | Arabic *man fa'ala in šā'a, wa-lam yaʿfal in šā'a*. D-Alt has the reading: «he who, if he wants, acts, and if he does not want, does not act» [*man in šā'a fa'ala, wa-in lam yašā' lam yaʿfal*], which is in all likelihood the same text at the basis of the Latin translation: «ut faciat cum voluerit, et non faciat cum noluerit» (MUCKLE 1933: 77.17-18). The reading with the symmetrical negation of will and action is however slightly trivializing with respect to the double-sided will – to acting and to not-acting – of Dunyā's printed text, which I have thus chosen to translate (and cf. also the McCarthy's rendition of *al-Qādir* given *supra*). The condition *in šā'a* is of course the same occurring in the ubiquitous Islamic formula *in šā'a Allāh* (cf. *Qur'ān* 37.102 and 18.23-24), used precisely to express the power of God's will on every (future) event. Given the heavily theological context of this definition of «powerful», this Qur'ānic echo is likely not fortuitous.

HIS VOLITION IS HIS KNOWLEDGE | Arabic *an mašī'at^a-hu 'ilm^u-hu*, Latin *voluntas eius est sciencia eius*. For the identification of will and knowledge cf. *supra*, *Metaphysics* III.b.7, §214 (where however the term referring to 'will' was consistently *irāda* rather than *mašī'a*).

THESE | Arabic *ha'ulā'i*. The Latin translation glosses *ha'ulā'i*, as it happens more frequently with *qawm* ('group'), with a reference to the 'philosophers': «cum secundum philosophos ipse non possit destruere celos et terram» (MUCKLE 1933: 77.22-23). The *ha'ulā'i* would maintain that it is impossible for God to destroy [*ifnā'*] «the heavens and the earth» [*al-samawāt wa-l-arḍ*] (a Qur'ānic – and biblical – expression for the universe itself). A discussion on God's ordained (and not absolute) potency was already partially present *supra*, *Logic* IV, §66 and §75, where however God's omnipotency was only deemed to be limited by the boundaries of logical possibility. The denial of the possibility of destroying the world would rather entail a far greater limitation to His power, extended well beyond the scope of logic. The answer given by al-Ġazālī to this objection is simply that God *can* destroy the universe, even if He does not want so, just as a man *can* kill himself, even if he does not want so. Interestingly, the corresponding passage of the *DN* (cf. ACHENA-MASSÉ 1955 (I): 164) does not seem to contain the example of the destruction of the world, but only a less radical one (namely, God's possibility of committing injustice). Avicenna himself might then be envisaged among the *ha'ulā'i*, since his Aristotelian account of an eternal world would seem *prima facie* at odds with the possible annihilation of the universe on the part of God. The *Qur'ān* rather appears to maintain this possibility: cf. *Qur'ān* 28.88 («All things will perish, except His face») and 55.26.

HIS ETERNAL VOLITION [...] AND THE RUIN. | Despite the usage of a different terminology, the reference must be to the preceding discussion on God's will, linked to His knowledge of His being a cause for the flowing of the existence: cf. *Metaphysics* III.b.7, esp. §§214-217. In §214, in particular, the idea that we can call «will» God's knowledge without hatred of the flowing of the existence from Him is expressed very clearly. JANSSENS 2019: 107 remarks that the «insistence...that the object of God's eternal will is the existence, not the annihilation of the Universe» is Ġazālīan, although he attributes it to an attempt «to present in a more understandable way what is rather technically expressed in the *Daneshname*».

HIS ETERNAL VOLITION | Arabic *mašī'at^a-hu al-azaliyya*, Latin *eterna voluntas eius*. In the translation of the *TF*, Marmura distinguishes between *azalī* as 'pre-eternal'.

DESTRUCTION | Arabic *fanā'*, Latin *non esse*.

RUIN | Arabic *halāk*, Latin *destrui*.

THAT IT IS INEVITABLE FOR HIM TO WANT. | *Prima facie*, it would seem more natural to have here the verb 'to act', rather than 'to want', as it is also suggested by the Latin translation: «non quod semper faciet necessario» (MUCKLE 1933: 77.27-28). Given the tight association of wanting and acting just affirmed, however, Dunyā's reading might in any case be the correct one.

IN THE POSSIBILITY [OF THE POWERFUL] | Arabic *maqḍūr*, Latin *subest potencie*. Lacking an equivalent past participle in English, I am forced to render *maqḍūr* with a periphrasis (just as the Latin translators do).

HE IS POWERFUL OVER EVERY POSSIBLE | Cf. *supra*, *Logic* IV, §66 and §75.

[§223] D240.8-22

The paragraph concludes the discussion on God's power by means of a logical analysis of the truth-values of the conditional definition that has been given (§222) of His being powerful, *i.e.* the hypothetical clause «If He wanted, He would act». The conclusion is a restatement of that definition, to the effect that God's power consists in the necessary realization into existence of that which He necessarily (and eternally) wants to be, without any change in His essence.

«IF HE WANTED, HE WOULD ACT» | Arabic *law arāda la-fa'ala*, Latin *si vellet faceret*. The conditional particle used in Arabic is the *law* of irreal conditions.

A CONJUNCTIVE HYPOTHETICAL [CLAUSE] | Arabic *ṣarī mutṭaṣil*. Cf. *supra*, *MF*, *Logic* III, §§23-24, for the logical discussion of this kind of proposition. Given the semantics of the particle «if» in the conjunctive hypothetical, only the truth of the antecedent and the falsity of the consequent entail the falsity of the entire clause. Thus, the hypothetical is true even if God does not act, simply meaning that He did not want that action, and, conversely, if He acts, we are certain that He did want that action. This is at the basis of the reformulation of the conditional, which emphasises the (eternal) necessity of God's will of the things that are, and His (eternal) negative volition – or unwillingness – of the things that are not.

LETS NOTICE | Arabic *yuš'iru*, Latin *videtur dare intelligi*.

THAT [HIS] WILL OF A [CERTAIN] THING HAS A BEGINNING | Arabic *an yasta'nifa irādatu šay'in*, Latin *quod adventura est sibi voluntas de aliqua re*.

THIS IS THEN THE MEANING [...] TO HIS ESSENCE | The end of the paragraph represents a concise summary of the seventh and eighth allegations, with reference to the preceding ones: God's «power» [*qudra*] (b.8, §§222-223) and His «will» [*irāda*] (b.7, §§214-221) are both explained on the basis of His knowledge, which is in turn explained on the basis of His unchanging essence (cf. allegations b.1-b.6, all in various ways devoted to the analysis of the First's being knowing, and especially b.4, §§204-209, for the unity of God's knowledge).

[§224] D240.23-241.11

(b.9) The Ninth allegation is about the wisdom of the First Principle. The present paragraph distinguishes between a theoretical and a practical kind of wisdom, respectively represented by verified and certain knowledges (a), and by perfect and well-arranged acts (b). Accordingly, the First will be wise if it can be demonstrated that He enjoys a perfect knowledge and a perfect agency. To show the utmost nobility of the knowledge of the First, the text presents in this paragraph a classification of human knowledge, which is distinguished into that which grounds the existence of its object (a.i), and that which conversely is grounded by the existence of its object (a.ii). The affirmation of the priority of (a.i) over (a.ii) opens the way to the acknowledgment of the first, noblest kind in the First, Who creates everything by means of His knowledge.

WISE | Arabic *ḥakīm*, Latin *sapiens*. The epithet *al-Ḥakīm* is the forty-seventh of God's Beautiful Names: cf. al-Ġazālī, *al-Maḥṣad al-Asnà*, ed. SHEHADI 1971: 63.12 (mention); 130.9-132.5 (discussion); and for further translations cf. STADE 1970 *apud* MCCARTHY 1980: 353: «The Ultimately Wise One»; ASÍN PALACIOS 1929: *Appendix III, apud* MCCARTHY 1980: 354: «Sabio».

«WISDOM» | Arabic *ḥikma*, Latin *sapientia*. Two meanings of wisdom are given: (a) knowledge or science [*ʿilm*], which is explained in the logical terms of conception and judgment (of assent), both under the sign of the utmost degree of certainty and verification; (b) act or product [*fiʿl*], when it is endowed with every perfection. In other words, the concept of wisdom is said to be applicable to both the theoretical and the practical domain, so that both a knowledge and an action, when perfect in their respective realm, can be said to be «wise». This is in keeping with the description of philosophy as *ʿilm ḥikmī*, later subdivided in «theoretical» [*naẓarī*] and «practical» [*ʿamalī*] at the beginning of *Metaphysics*, First Premise, §93. Indeed, one could even surmise that the two dimensions of theory and practice, common and substantial to both wisdom and philosophy, are precisely one of the reasons why the Greek *falsafa* can receive in Arabic – and in particular in Avicenna's elaboration – also the name, and the status, of *ḥikma*. That *ḥikma* comes to replace the Greek calque *falsafa* as the main term to designate the philosophical enterprise in 12th century Islamic philosophy is one of the main theses advanced by GRIFFEL 2021.

CONCEPTION | Arabic *taṣawwur*, Latin *conprehensio*.

BY MEANS OF THE VERIFICATION OF THE QUIDDITY AND THE DEFINITION | Arabic *bi-taḥaqquq l-māhiyyat wal-ḥadd*, Latin *cum certitudine quidditatis eius quod est* (double translation?), *et diffinitionis eius*.

JUDGMENT | Arabic *taṣdīq*, Latin *credulitas*. For the couple *taṣawwur / taṣdīq* cf. *supra*, *Logic*, Preface, §2.

BY MEANS OF THE PURE, VERIFIED CERTAINTY | Arabic *bi-l-yaqīn al-maḥḍ al-muḥaqqaq*, Latin *de re vera pura certissima*.

WELL-ORDERED [AND] WISELY GATHERING | Arabic *murattab^{an} muḥkam^{an} ḡāmi^{an}*, Latin *ordinata sapienter continens*.

COMPLETENESS | Arabic *kamāl*, Latin *perfectionem*.

ADORNMENT | Arabic *zīna*, Latin *decorem*.

OUR KNOWLEDGE SUBDIVIDES ITSELF [...] A PREVIOUS EXAMPLE. | Just like the subdivision of *ḥikma* into a theoretical and a practical wisdom (see here *supra*) recalls the analogous subdivision of philosophy as 'science of wisdom', expounded at the beginning of *Metaphysics* (§93), the present passage reprises the classification of beings offered in the same context (§92) between things that depend on us (subject-matter of practical philosophy), and things that do not depend on us (subject-matter of theoretical philosophy). That fundamental ontological distinction, which grounded the epistemological distinction at the basis of the classification of the sciences, is reworked here within the all-theoretical framework of a subdivision of *ʿilm*, thus bringing the focus on the active, or respectively passive, role of our knowledge with respect to the existing object. If our knowledge grounds the existence of its object, it is nobler; if rather it is the existence of the object that grounds our knowledge, that knowledge is less noble. This hierarchy is expressed later on in the paragraph by means of the opposition between the knowledge that «benefits» [*yufidu*] the existence (establishing it), and the knowledge that «derives benefit» [*mustafād*] from the existence (being established by it).

THE KNOWLEDGE THAT THE ARTIST HAS OF THE FORM OF THE ARTWORK | In *Metaphysics*, First premise, §92, the examples of things depending on us were of social and political, rather than artistic, nature, due to the difference of focus between the two passages (cf. *supra* in the commentary). I have translated in the most generic way the terms *naqqāš* and *naqš*, whose trilateral root has elsewhere the more narrow sense of 'impress' or 'paint', because the context imposes here a broad meaning, capable of ensuring the general application of the argument to every artistic and creative activity performed by mankind, and not just to some specific sorts of action. Cf. instead the Latin translation: «cum per

scienciam sculptoris provenit forma sculpture» (MUCKLE 1933: 78.33-34). It is important to notice that the mention of this creative kind of human activity, absent in the *DN*, is Ġazālian: see JANSSENS 2019: 107.

WHICH HE SPONTANEOUSLY INVENTS | Arabic *allāti yaḥtari‘u min tilqā’i nafsi-hi*, Latin *quam adinvenit ex se ipso*.

THE KNOWLEDGE THAT THE FIRST [...] BEFORE | Having shown that the creative, productive kind of knowledge is nobler for man, the analogously creative (but at the highest ontological degree) knowledge of the First is demonstrated to be the noblest of knowledges. For the productive power of God’s knowledge cf. *supra*, *Metaphysics* II.12, §195; *Metaphysics* III.b.7, §214 and §217.

[§225] D241.12-21

The paragraph addresses the second, practical aspect of wisdom (b), by showing – with a reference to the attribute of providence treated *supra*, §§219-220 – that the productive acts of the First are at the highest degree of wise arrangement. Enjoying at the utmost degree both the theoretical (§224) and the practical side of wisdom, God can rightly be said to be perfectly wise.

THE RULING OF HIS ACTS | Arabic *nizām af’āl-hā*, Latin *opera vero illius a primo usque ad ultimum*. The Latin translation emphasises the idea of ordering of beings implicit in the Arabic *nizām*.

AT THE UTMOST DEGREE OF WISE EXACTNESS | Arabic *fī ḡayat l-iḥkāmī*, Latin *omnino sapienter facta sunt*. HE GAVE EACH THING ITS CREATION AND THEN HE GUIDED [IT] | Cf. *Qur’ān* 20.50, quoted *verbatim* also *supra*, *Metaphysics* III.b.7, §220 (and the other two Qur’ānic quotations to the same effect there cited); and cf. *infra*. While in §220 all three quotations from the *Qur’ān* were not translated in Latin, in this case the Latin version has an attempt of rendition: «quoniam attributa est unicuique eorum creatio sua, et deinde recognicio» (MUCKLE 1933: 79.9-10). The Latin *recognicio* is an incongruous translation for the Arabic *hadā* («guided»), a Qur’ānic verb with which Gundissalinus also struggled in §220 (in two occurrences outside the proper citations from the *Qur’ān*).

HE BESTOWED UPON IT [...] TO THE REALM OF NEED | The passage points out three levels of the providential action of God for His creation, *i.e.* His providing (i) what is «necessary» to it [Arabic *ḍarūrī*, Latin *necessarium*]; (ii) what the creation «needs» [Arabic *muḥtāḡ ilay-hi*, Latin *opus est ei*]; (iii) what is «adornment and complement» [Arabic *zīna wa-takmila*, Latin *quicquid est perfectionis, et decoris*]. This last level is the one that guarantees that God’s providence (already described in §§219-220 *supra*) is also wise – and it is not by chance, then, that almost the same couple of terms was precisely employed *supra*, §224, in order to qualify the wisdom of the «act»: cf. the occurrence there of the same term for «adornment», *zīna*, and moreover the term *kamāl*, used for «completeness», which shares the root *kml* with the word «complement», *takmila*, here employed (the Latin translation even uses the same term, *perfeccio*, for both *takmila* and *kamāl*).

HE BESTOWED UPON IT | Arabic *an’ama ‘alay-hi*. The Latin translation appears to presuppose a longer Arabic text: «Et fuit largissimus circa unumquodque in dando ei [...]» (MUCKLE 1933: 79.10-11), which seems to anticipate the beginning of the next allegation (cf. *infra*, §226).

THE BOW OF THE EYEBROWS | Arabic *taqwīs al-ḥāḡibayni*, Latin *curvitas superciliorum*. A partially parallel passage on the adorning function of eyebrows can be found in Abū Bišr Mattā’s *Commentary on Aristotle’s Physics*, ad II 7, 198^a14 ff., ed. BADAŪI 1964-1965: 139: «It may be [for example] that hair is not made for the sake of the form, as in the case of whiskers, but instead is for the sake of being embellished by them, and the same holds in the case of eyebrows, whereas pubic hair is necessary through a cause of necessity, namely, because it provides covering» (transl. in MCGINNIS-REISMAN 2007: 123).

THE CONCAVITY OF THE PLANTAR VAULT | Arabic *taqīr aḥmaṣ al-qadamayni*, Latin *concauitas pedum*.
 THE GERMINATION OF THE BEARD WHICH HIDES THE WITHERING OF THE SKIN IN THE OLD AGE | Arabic *inbāt al-liḥyat al-sātirat li-tašannuḡ l-bašarat fi l-kabr*, Latin *barba que tegit rugositatem faciei in senectute*.
 A partially parallel passage on the growing of the beard, although embedded in an entirely different context, may be found in al-Ġazālī's *Mi'yār al-ʿilm*, ed. ŠAMS AL-DĪN 1990: 244-245 (English translation of the relevant excerpt in MCGINNIS-REISMAN 2007: 239). The addition of all these examples is Ġazālīan: see JANSSENS 2019: 107 (who calls them «second perfections», probably meaning rather 'secondary' perfections). A partially parallel passage for this kind of not indispensable, but still useful, perfections is to be found in the *Ilāhiyyāt* of Avicenna's *K. al-Šifā'*, although the emphasis on the teleological and providential approach is far greater in the *MF* (X.2, transl. MARMURA 2005: 365.5-9, with corrections in italics):

Thus, with respect to the survival and actual existence of the human species, the need of this person is greater than the need for such benefits as the growing of hair on *the palpebral margins* and on the eyebrows [*inbāt al-ša'r 'alā l-ašfār wa-l-ḥāḡibayni*], the concave shaping of the arches of the feet [*taqīr aḥmaṣ al-qadamayni*], and many others that are not necessary for survival but are, at best, useful for it.

This same quotation, together with another passage which appears shortly before in the text of Avicenna's *Ilāhiyyāt* (X.1, transl. MARMURA 2005: 362.13-14: «contemplate the state of the usefulness of the organs in animals and plants and how each has been created»), is also to be found in the «scrapbook» of Avicennan quotations contained in ms. London, British Library, Oriental 3126, fol. 238a, as reported and discussed by EL SHAMSY 2015: 99 and fn. 29; 102 (for an overall study of the important text contained in the London manuscript and its attribution to al-Ġazālī see GRIFFEL 2006). Focusing in particular on a little-studied work by al-Ġazālī, i.e. his *al-Ḥikma fi maḥlūqāt Allāh* [*The Wisdom in God's Creations*], El Shamsy is able to connect al-Ġazālī's teleological arguments, which also have a crucial role in his theory of law and in his overall thought, to his knowledge of Galen's *De usu partium*, where such a finalistic method – built on the consideration of human anatomical features – is prominently featured (cf. for instance, for eyebrows and eyelashes, GALEN 1968 (II): 532-533). Teleological reasonings based on considerations of anatomy also appear in al-Ġazālī's *al-Maqṣad al-Asnā*, ed. SHEHADI 1971: 152, and in his *Iḥyā' ulūm al-dīn*, in a chapter called *Bayān kayfiyya al-tafakkur fi ḥalq Allāh* [*Clarification of the Modality of Reflection on God's Creation*]; cf EL SHAMSY 2015: 93-95 for the relevant passages and an accurate general discussion.

OTHER SUBTLETIES THAT ARE BEYOND COMPREHENSION | Arabic *ilā jayr dālīka min laṭā'ifm taḥruḡu 'ar' l-ḥaṣr*, Latin *multa alia subtilia [...] que comprehendere non possunt*.

[§226] D241.22-242.11

(b.10) The Tenth allegation concerns the generosity of the First Principle. The bestowal of the good can either produce a utility for the bestower, or not; but every bestowal of good done for a utility is a transaction, rather than an act of magnanimity. Thus, the good bestowed by the First is

HE IS MAGNANIMOUS | Arabic *anna-hu ḡawād^m*, Latin *quod primus largissimus est*.

THE BENEFACTION AND THE BESTOWAL OF THE GOOD | Arabic *ifāda al-ḥayr wa-l-in'ām bi-hi*. The Latin translation probably presupposes the misreading *afāda* for *ifāda*: «a quo emanat omne bonum» (MUCKLE 1933: 79.19-20). Such mistakes likely presuppose a phonetic, rather than a graphic, misunderstanding.

SUBDIVIDE THEMSELVES [...] THAT WHICH IS NOT SUCH | The Latin translation continues to be based on the substitution of the root *f-y-d* to the root *f-y-d*, and is at least partially *ad sensum*: «Bonum autem multis modis emanat ab aliquo scilicet, vel ut propter hoc aliqua fiat ei retribucio alicuius emolumentum, vel ut nulla, sed quia oportet illud eum fieri sine aliqua retribucione sibi facienda» (MUCKLE 1933: 79.20-23).

A UTILITY | Arabic *fā'ida*, Latin *retribucio* [*alicuius emolumentum*].

A GOAL | Arabic *ğarađ*.

THE BENEFITTER | Arabic *al-mufid*.

THE OFFERED [THING] | Arabic *al-mabdūl*, Latin *pro dato*. The kind of utility in which the reward is similar to the offered thing is exemplified by means of a basic economical transaction, the «compensation of money with money» [Arabic *muqābala al-māl bi-l-māl*, Latin *cum datur pecunia pro pecunia*].

HE WHO GIVES MONEY [...] BY MEANS OF IT | The passage considers the case in which the bestowal of a good is not immediately compensated with something similar to the bestowed item, but with something different, and especially with something immaterial. This circumstance is exemplified with ethical terms such as the «hope» [*rađā'*] for the «reward» [*tawāb*] – a technical term of Islamic law, which specifically designates the ‘reward (for good deeds)’, or else the ‘merit, credit (arising from a pious deed)’, cf. WEHR 130^a –, the «commendable act» [*maḥmada*], the «acquisition of the attribute of the virtue» [*iktisāb šifat l-fađilat*], or the «research of perfection» [*talab al-kamāl*]. The moral high standard of this kinds of rewards, and the technical character of their formulation, are functional to the creation of an effect of surprise, when these too are reduced to a «transaction», just like the money exchanges described *supra*. Cf. the Latin translation: «cum datur pecunia spe vite eterne, vel laudis, vel acquirendi bonam consuetudinem faciendi bonum, et consequendi perfeccionem» (MUCKLE 1933: 79.25-28).

A COMMUTATIVE CONTRACT AND A TRANSACTION | Arabic *mu'āwađa wa-mu'āmala*, Latin *hoc aut commercium, et commutacio, et negociacio est*. The *mu'āwađa* is a specific institute of the Islamic Law, a ‘commutative contract on the basis of the *do ut des*’ (WEHR 770^b). Al-Ġazālī emphasizes, by this token, the juridical aspect of this kind of transactions, which do not deserve the name of generosity or magnanimity (although the «common people» [Arabic *al-awāmm*, Latin *vulgus*] call them so). For the implicit *do-ut-des* character of every human action, which cannot be without an intent and a goal, cf. *supra*, *Metaphysics* III.b.7, §221.

MAGNANIMITY [...] WITHOUT A FURTHER GOAL | This further clarification on the concept of «magnanimity» or generosity [*ğūd*] is absent as such in the *DN*, but JANSSENS 2019: 108 and fn. 99 says that it is «clearly based on the *Ishārāt*» (159.6-15).

IS NOT A [GENEROUS] BESTOWER | Arabic *laysa bi-mun'im*^m, Latin *non dicitur largus*.

THE EXISTENCE | Arabic *al-wuđūd*^e, Latin *habundanciam* (clearly presupposing the misreading ^{*}*al-ğūd*^e for *al-wuđūd*^e).

WITHOUT SPARING | Arabic *min ġayr iddiḥār*, Latin *sine retencione alicuius*.

AS FOR NECESSITY, NEED, AND ADORNMENT | Cf. *supra*, *Metaphysics* III.b.9, §225, for a wider explanation of this same triad as constituting the bulk of God’s providential action on the world.

[§227] D242.12-18

(b.11) The Eleventh allegation deals with the joy of the First Principle and its ineffability. The present paragraph introduces the topic and its relevant terminology, also anticipating the theme of the angelical joy, which will be treated *infra* in §236. In the following §§228-233 six principles, which help to understand the gladness and delight enjoyed by the First, are presented. This discussion represents altogether the longest insertion of ethical matters – and thus of practical philosophy – within an otherwise almost entirely theoretical work, and only finds some parallel *infra*, in *Physics*

V.3-4 (cf. esp. §§428-429). The ethical matter is however built on a psychological basis – for which cf. *Physics* IV –, so that the treatment of pleasure and pain also represents one of the clearest cases of necessary anticipation in *Metaphysics* of topics of natural philosophy (cf. on this issue the prologue of Avicenna's *DN*, not translated as such in the *MF*: see *supra*, Introduction, §1.4.2, Text 5). A much more condensed parallel passage, which contains however *in nuce* the main core of the argument, including its ethical/psychological premises, and is thus useful as a summary of §§227-234 of the *MF*, is AVICENNA, *K. al-Šifā'*, *Ilāhiyyāt* VIII.7, ed. QANAWATĪ-ZĀYID 1960: 369, transl. MARMURA 2005^a: 297.25-30 (with the modifications of ARNZEN 2010: 321 n. 631):

For pleasure is nothing other than the apprehension of the suitable inasmuch as it is suitable. Thus, sensory pleasure is the sensing of the suitable, and the intellectual [pleasure] is the intellectual apprehension of the suitable. Similarly, the First is, hence, the best apprehender through the best apprehension of the best object of apprehension.

GLAD | Arabic *mubtahiğ*, Latin *primus delectatur in seipso*.

TO THE MATCHING OF HIM | Arabic *'an naẓīr^h-hi*, Latin *apud eum*.

PLEASURE | Arabic *lağda*, Latin *iocunditas*. But cf. *infra*, §228, for a better translation of *lağda* as *delectatio*.

DELIGHT | Arabic *ṭarab*, Latin *suavitas*.

GLEE | Arabic *farah*, Latin *gaudium*.

JOY | Arabic *surūr*, Latin *leticia*.

DUE TO THE BEAUTY OF HIS ESSENCE AND TO HIS PERFECTION | Arabic *bi-ğamāl^h dāt^h-hi wa-kamāl^h-hi*, Latin *propter pulcritudinem essencie sue, et perfeccionem*.

WHICH DO NOT FALL UNDER ANY POSSIBLE DESCRIPTION | Arabic *mā lā yadḥulu taḥta waṣf^h wāṣif^h*, Latin *que ineffabilia sunt*.

AND THAT [ALSO] THE ANGELS CLOSE [TO HIM] | Arabic *anna l-malā'ika al-muqarrabīna*, Latin *quia angeli qui sunt proximi*. The topic of the angelical joy will be dealt with *infra*, §236. For the «demonstration» [*burhān*] of the existence of the angels, a partial classification of them, and their identification with the moving intellects of the spheres and their souls, cf. *infra*, *Metaphysics* IV, §245, §293 (for the equation angels-intellects); *Metaphysics* IV.b.3.1, esp. §282 (for their proper *itbāt*).

FROM THE GLADNESS AND THE PLEASURE | Arabic *min^a l-ibtihāğ^h wa-l-lağdat^h*, Latin *delectacionem habent ineffabilem*. As opposed to the Arabic text, which reserves the highest degree of unspeakable joy to God alone, the Latin translation attributes here ineffability to the angelical pleasures, as well.

BY VIRTUE OF [THEIR] ACQUAINTANCE WITH THE BEAUTY OF THE SOVEREIGN PRESENCE | Arabic *bi-muṭāla'at^h ġamāl^h l-ḥağrat^h l-rubūbiyyat^h*, Latin *in contemplacione pulcritudinis presencie divine*. The angelical pleasure derives not only by their contemplation of themselves, but more fully by their contemplation of God, Who is indicated here with a periphrasis characterized by a strong mystical value. For the concept of 'lordly' or «sovereign presence» (or even 'presence of the Lordship', with annexation [*ḥağrat^h l-rubūbiyyat^h*]) in šūfi traditions, cf. WAUGH 2016. For his part, JANSSENS 2019: 108 remarks that this passage «summarizes a passage of the later part of DN c. 37, i.e. DN 108,10 – 109,7, but finds also support in the *Ishārāt*» (cf. JANSSENS 2019: 108 fn. 100, where Janssens references AVICENNA, *Išārāt*, ed. FORGET 1892: 197.4-5 and 14-15). For *'ilm al-rubūbiyya* as one of the names of the metaphysical science cf. *supra*, *Metaphysics*, Second premise, §100.

FAMILIARIZATION | Arabic *ta'arruf*, Latin *sciri*.

PREMISING | Arabic *taqđim*, Latin *que preponuntur iam*. As noticed by JANSSENS 2019: 108, the content of the following material (§§228-233) is indeed present in the *DN*, although its arrangement in six principles is Ġazālīan.

[§228] D242.19-243.21

(i) The first of the six principles formulated in order to explain the joy of God is about the general meaning of the notions of pleasure and pain. These are defined as perceptions, respectively of what is suitable and of what is incompatible with the essence (and not as something additional with respect to the perception). An extensive usage of the Latin translation of this section on the nature of pleasures, with particular reference to the pleasure of sexual intercourse and reproduction, is made by Peter of Spain in his *Quaestiones super libro De animalibus Aristotelis*, ed. NAVARRO SÁNCHEZ 2015: 199.71-72 and 200.113-115 (*Liber VI*); 263.35-36 (*Liber X*); 363.95-96 (*Liber XVIII*); less to the point the further two quotations of Algazel in *Liber XVIII*, 403.240-241 and 403.253.255.

THE MEANING OF PLEASURE AND PAIN | Arabic *al-ma'na l-laddat' wa-l-alam'*, Latin *intencio delectacionis et doloris*. In §227 *supra*, however, the terms *delectatio* / *delectare* were reserved in the Latin translation to the Arabic *ibtihāḡ*, while the first occurrence of *ladda*, 'pleasure', was partially mistranslated as *iocunditas*. The rendition of *ladda* as *delectatio* is however certainly the most accurate one.

IF, INDEED, THEY ARE TRACED BACK [...] UNDOUBTEDLY ESTABLISHED. | The initial passage clarifies the framework of the conceptual analysis of pleasure and pain developed in the remainder of the paragraph. The attribution of pleasure to the First Principle is only possible if the pleasure is not something additional with respect to the «perception» [Arabic *idrāk*, Latin *perceptionem*] (because this would entail an impossible multiplicity in God). If rather what we call pleasure is not but the perception itself, it will be possible to attribute it to God without contradiction.

PLEASURE AND PAIN [...] NEITHER PLEASURE, NOR PAIN. | Starting the analysis, the conclusion that is immediately achieved is that perception is a necessary condition for pleasure and pain. This however is not yet a demonstration that pleasure and pain are reduced, or reducible, to the perception.

THE PERCEPTION HAS TWO SPECIES [...] INTELLECTUAL AND ESTIMATIVE. | Perception subdivides itself into «exterior» [Arabic *zāhir*, Latin *manifesta*], *i.e.* «sensible» [Arabic *ḥissī*, Latin *sensibilis*] (with the meaning of being dependent on the five senses), and «interior» [Arabic *bāṭinī*, Latin *occulta*], which can be either «intellectual» [Arabic *'aqlī*, Latin *intelligibilis*] or «estimative» [Arabic *wahmī*, Latin *estimativa*]. The terminology partially reproduces that of the distinction between external and internal senses, for which cf. *infra*, *Physics* IV, §§381-382 (the five external senses are discussed at §§383-393; the internal ones at §§394-400). In particular, the internal sense of «estimation» [*wahm*] or «estimative [faculty]» [*wahmīyya*] is presented at *Physics* IV, §396. The internal perceptions, however, are more extended in scope than the internal senses, since they also include the perception of the purely immaterial and immortal part of the human soul, *i.e.* the intellect (cf. again *Physics* IV, esp. §§410-411).

EACH ONE OF THESE PERCEPTIONS [...] NOR «PLEASURE». | The germinal subdivision in sensible and non-sensible perceptions just advanced is set aside for the time being, because all the perceptions can be classified on the basis of their object. (a) The perception, either sensible or intellectual, of what is «suitable» [Arabic *mulā'im*] and «convenient» [Arabic *muwāfiq*, Latin *conveniens*] to the «perceptive faculty» [Arabic *al-quwwa al-mudrika*, Latin *virtute percipienti*] is called «pleasure». (b) The perception, either sensible or intellectual, of what is «incompatible» [Arabic *munāft*, Latin *nocumentī; nocens*] for the perceptive faculty is called «pain». (c) The perception, either sensible or intellectual, of what is neither suitable nor incompatible is neither pleasure nor pain (this admits the existence of neutral perceptions, neither positive nor negative for the perceiver). What is crucial here is the idea, restated again also in the conclusion of the paragraph, that pleasure and pain are immediately identifiable with their respective perceptions, without anything added.

UNLESS THE NAME OF «PAIN» TURNS OUT TO BE TRUE AND ITS NOTION IS VERIFIED | Interestingly, this is

another case in which al-Ġazālī underlines the necessary convergence of signifier (here *ism*, ‘name’) and signified [*maʿnā*].

A COMMON NAME | Arabic *ism ʿāmm*, Latin *nomen commune*. (a) Pleasure, (b) pain, and (c) the neutral state enjoyed by perceptions that are neither pleasant nor painful are all kinds of perception, distinguished on the basis of the compatibility, incompatibility or neutrality of its object (the perceived) with respect to its subject (the perceiver). Thus, they do not add anything with respect to the perception itself, which was the *demonstrandum*.

[§229] D243.22-244.4

(ii) The second principle explains that the natural act of each faculty (or potency) is suitable for that faculty. Thus, every faculty (or potency) finds pleasure in the perception of its actuality.

FACULTY | Arabic *quwwa*, Latin *virtuti*. It is clear from the context, committed to the analysis of the psychological notions of pleasure and pain, that the best translation for the Arabic *quwwa* is «faculty», as the clearest occurrences of *quwwa* with the meaning of ‘faculty’ are indeed, as a matter of fact, of psychological nature: cf. *infra*, *Physics* IV, e.g. §376-378 (on the faculties of the vegetative soul), and *passim* throughout the treatise. However, the meaning of ‘potency’ remains of course present in the Arabic, and it is particularly apparent in the contrast, displayed just *infra*, between the faculty/potency and the «act» [*fiʿl*] that proceeds from it. On the opposition *fiʿl* / *quwwa* cf. *supra*, *Metaphysics* I.7, §§166-168.

[THAT WHICH] IS REQUIRED BY ITS NATURE WITHOUT HARM | Arabic *muqtaḍā ṭabʿ-hā min ġayr ʿāfatⁱⁿ*, Latin *que est sibi naturalis sine impedimento*. The actuality of the potency/faculty consists in what is suitable to it, i.e. that which naturally proceeds from the faculty without harm. Thus, every act is pleasant to the faculty from which it derives.

THE IRASCIBLE FACULTY | Arabic *al-quwwat al-ġaḍabiyyat^t*, Latin *virtutis irascibilis*. Since the irascible faculty naturally seeks «victory» [*ġalaba*] and «the research of the vengeance» [*ṭalab al-intiqām*], the perception of those is its pleasure. Cf. *infra*, *Physics* IV, §380, for a different description of the «irascible faculty», rather characterized in terms of «repulsion» of what is incompatible with respect to the essence. However, the victory and the vengeance here mentioned might be considered as the result of the successful action of repulsion performed by the irascible faculty, thus avoiding any contradiction.

LONGING | Arabic *al-šahwat^t*, Latin [*natura*] *concupiscibilis*. The Latin *concupiscibilis* is here a genitive connected to the implicit *virtutis* (cf. *supra* for the irascible faculty); this might entail the reading *al-šahwāniyyat^t* (with an implicit *al-quwwat^t*) instead of *al-šahwat^t*. Otherwise, the Latin translators might have uniformed the text to the preceding case, also in keeping with the aforementioned psychological passage of *Physics* IV, §380, where a «desiderative faculty» [*quwwa šahwāniyya*] is also mentioned. The act (and thus the pleasure) of the faculty of longing is identified here with the «tasting» [Arabic *dawq*, Latin *gustare*], maybe to be intended in a broad sense (since *infra*, §380, the aim of the desiderative faculty is said to be not only the «nourishment», but also the «sexual intercourse»).

THE IMAGINATION AND THE ESTIMATION | Arabic *al-ḥayāl wa-l-wahm^t*, Latin *estimacionis, et imaginacionis* (with an inversion with respect to the Arabic). The act (and thus the pleasure) of these faculties (two different internal senses, for which cf. respectively *Physics* IV, §398 and *ivi*, §396) is identified with «hope» [Arabic *raġāʿ*, Latin *spes*]. For a denial of hope directed to the future in animals cf. Avicenna, *K. al-Nafs*, ed. RAHMAN 1959: 205. In the *DN*, the psychological state of ‘hope’ is classified as the act of the «dream» (cf. Achena-Massé I: 167.24: «au rêve, l’espoir»).

[§230] D244.5-16

(iii) The third principle argues that perfect intelligence implies a distaste for the bodily pleasures, as opposed to the intellectual pleasures. An interesting, very close parallel passage to this one is to be found in al-Ġazālī's *Iḥyā'* XXXVI (Book of Love), ch. 4, English transl. ORMSBY 2016: 47:

In those endowed with perfection the inner senses are dominant over mere outer pleasures. If a man were to choose between the pleasure of a plump chicken and an almond pastry [*lawzīnaġ*], on the one side, and the pleasure of ruling and conquering enemies and attainment of some degree of political mastery, on the other, and he were a man of coarse aspirations, dead of heart and ruled by bestial tendencies, he would choose the meat and the pastry; however, if he possessed lofty aspirations and a perfected intelligence, he would choose governing, and hunger, even if endured for many days, would seem a trifle. His choice shows that he considers governing more pleasurable than good food. Indeed, he who has not cultivated his inner senses is defective, like a young boy or someone whose inner strengths have been exhausted, an imbecile; for such as these to choose the pleasure of food over that of governance is far from improbable.

For a previous scholarly discussion of this passage of the *Iḥyā'* in its possible connection to Maimonides' work, without however any reference to the parallel treatment of the same issue in the *MF*, cf. ERAN 2001: 152.

PERFECT INTELLIGENT | Arabic *al-āqil al-kāmil*, Latin *in perfecte intelligente*.

REGARDS AS CONTEMPTIBLE | Arabic *yastahqaru*, Latin *viliores fiunt in eo*.

IF ONE WERE MADE CHOOSE [...] THE SWEETNESS OVER [THAT] | With respect to the *DN*, which presents a continuous hierarchy of progressively higher goods (cf. ACHENA-MASSÉ I: 167.31-32: «Veux-tu un aliment sucré, une dignité, les grandeurs, le prestige, la victoire sur l'ennemi?»), al-Ġazālī emphasizes the gap between the lowest sensible pleasure – the eating of a «greasy sweet» [Arabic *al-ḥalw al-dasim*, Latin *dulce unctuosum*] chosen by the vile man –, and the highest intellectual pleasure of being superior and victorious over the enemies (their «seizure» [*istilā'*]). As opposed to the *DN*, it is worth noticing that the same emphasis placed by the *MF* on the disparity between these two opposite modes of enjoyment of pleasure is rather to be found in the passage from *Iḥyā'* XXXVI.4 quoted *supra* in the introduction to this paragraph, which appears thus globally closer to al-Ġazālī's text than Avicenna's one. Like in the *Iḥyā'*, moreover, also in the *MF* the man who would prefer the low sensible pleasure, and the man who would rather prefer the high intellectual one, are contrasted on the basis of their «ambition» [*himma*], and of the strength and sharpness of their faculties. The lowest man is «vile» [Arabic *sāqit* (*al-himmat*'), Latin *demissi* (*animi*)], while the other is «elevated» [Arabic *aliyy*' (*al-himmat*'), Latin *magnanimus*]; the lowest is «dead of heart» [Arabic *mayt al-qalb*] and «dull» [*ḥāmid*] as for the interior faculties (cf. Latin: «et extincte fuerint in eo virtutes occulte», MUCKLE 1933: 81.26-27), while the other is «composed of intellect» [Arabic *razīn al-ʿaql*, Latin *maturi sensus* (!)].

ONE | Arabic *al-mar'*, Latin *homini*.

WERE MADE CHOOSE | Arabic *ḥuyyira*, Latin *dicitur ut eligat*.

HE WHO IS MADE CHOOSE^{1,2} | Arabic *al-muḥayyar*, Latin *ille¹, elector ille²*.

THE OBTAINMENT OF THE CAUSES OF SUPREMACY AND LOFTINESS | Arabic *nayl asbābⁱ l-riyāsatⁱ wa-l-ʿalā*, Latin *et assequi regnum, et altitudines seculi*.

SWEET PASTRY | Arabic *harīsa*, Latin *dulce unctuosum*.

THE SAVOURED [THING] | Arabic *maṭʿūm*, Latin *cibi*.

WHOSE LIFE IS NOT YET COMPLETE | Arabic *lam yatimm baʿd^a ḥayyāt^a-hā*, Latin *vel nondum est complecta* (*sic*) *perfeccio earum*. The relative «whose» refers to the aforementioned «interior faculties» [Arabic

quwā-hu al-bāṭina, Latin *virtutes occulte*], in keeping with the metaphorical language of the «death» of those faculties in the vile man. However, the following example of the «youth» [*al-ṣabī*] suggests also the idea that the «life» of man is complete in adulthood, when all his faculties are actualized. This notion as well as a parallel in psychology, in particular as for the progressive actualization of intellect: cf. *Physics* IV, §411.

[§231] D244.17-245.15

(iv) The fourth principle concerns the possible reasons for the variation in degree of the pleasures, explaining that this may happen for the variation in strength: (iv.a) of the perceptions themselves (process of perceiving); (iv.b) of the perceptive faculties (subject of perceiving); or (iv.c) of the perceived notions (object of perceiving).

EVERY POTENCY HAS THE PLEASURE [...] CONVENIENT TO IT | Every potency, or faculty, perceives its own act with pleasure: cf. *supra*, *Metaphysics* III.b.11, §229 (Second principle).

THE REASONS THAT TRIGGER THE VARIATION OF THE PLEASURES | Arabic *maṭārāt li-taḥawwūt l-laddāt*. For *maṭārāt* cf. also *supra*, *Logic* II, §20; *Logic* IV, §74. The Latin translation («hec igitur tria sunt exempla varietatum delectacionum», MUCKLE 1933: 82.4-5) presupposes the reading *maṭālāt*, which is however surely the *lectio facilior*.

THE FIRST TRIGGERING REASON IS THE VARIATION OF THE PERCEPTIVE FACULTIES | (iv.b) The first *maṭār* of variation of the pleasures (mentioned in the preceding list as second) concerns the perceiving subject, i.e. the perceptive faculties [Arabic *al-quwā al-mudrika*, Latin *virtutis apprehendentis*]: the «stronger» [*aqwā*] and «nobler» [*ašraf*] the faculty, the «more perfect» [*atamm*] its perception, and hence – *iuxta* the immediate identification of pleasure and perception of the suitable demonstrated *supra*, §228 – also the pleasure.

THE PLEASURE OF FOOD [...] [DEPENDS ON THE FACULTY OF DESIRING IT] | As noticed by JANSSENS 2019: 108, these concrete examples are added here by al-Ġazālī. However, they recall the example of the desiderative faculty given *supra*, §229, adding to the desire for nutrition there mentioned (cf. here «food» [*taʿām*]) also the sexual intercourse, for which see *infra*, *Physics* IV, §380. For the notion that even the strongest pleasures might not be desired if not properly experienced (or if the person is not yet predisposed to them), with the recurrence of the example of sexual intercourse, cf. also *infra*, *Physics* V.3, §429. In that case, as well, the example is ultimately functional to the demonstration of the highest character of the intellectual pleasures. For a significant parallel passage on this see al-Ġazālī's *Ihyā'* XXXVI (Book of Love), ch. 4, English transl. ORMSBY 2016: 49:

To assert to young boys that the pleasures of sexual intercourse are superior to those of playing with a polo stick is impossible, just as it is to assert to the impotent that sexual pleasure is superior to the pleasure of sniffing violets; the impotent man has lost the ability by which he could perceive this pleasure. But he who is unimpaired by impotence and who possesses an intact sense of smell perceives the difference between the two pleasures. On this there remains nothing but to say: He who has tasted knows [*man dāka ʿarafa*].

For a discussion of this passage and another English translation cf. ERAN 2001: 149-150; for some parallel texts in Avicenna and Maimonides cf. also *ivi*: 141. For a further parallel in the *TF* see ERAN 2001: 144 and *TF*, Discussion 20, MARMURA 2000: 210:

This is just [such an instance] as when we wish to explain to the boy or to the impotent man the pleasure of sexual intercourse [and] we are unable to do so except by examples – in the case of the

boy, with [the example of] play, which is the most pleasurable thing to him; and [in the case] of the impotent man, with [the example of] the pleasure of eating good food after being very hungry, so that [each] would believe the principle that there is pleasure [in this], after which [each] is apprised that what he understood by the example does not convey the reality of the pleasure of sexual intercourse and that this is only apprehended through direct experience.

THE PLEASURE OF THE INTELLIGIBLE [THINGS] [...] SENSIBLE ONES. | The passage repeats the contents of the third principle (iii), for which cf. *supra*, §230.

THE SECOND [REASON] IS THE VARIATION OF THE PERCEPTIONS. | (iv.a) The second *maṭār* of variation of the pleasures (mentioned in the preceding list as first) concerns the perceiving process, *i.e.* the perceptions themselves [Arabic *al-idrakāt*, Latin *apprehensionis*]. The example given regards the sense of sight, as it concerns the contemplation of a «beautiful face» [Arabic *al-waġh al-ġamīl*, Latin *pulcram faciem*] performed «closely, and in a bright place» [Arabic *‘alà qurbⁱⁿ wa-ḥi mawḍi‘ⁱⁿ muḍtⁱⁿ*, Latin *cominus in loco luminoso*] rather than «from far away» [Arabic *min bu‘dⁱⁿ*, Latin *eminus*]. For the example of the lovely face of the beloved as source of pleasure – greater or lesser depending on the beauty of the person, cf. *infra* (iv.c) – see also al-Ġazālī, *Ihyā’* XXXVI.4, English transl. ORMSBY 2016: 46: «Or it is like the difference between the pleasure of gazing on a lovely face of surpassing beauty and that of looking upon a face inferior to it in loveliness». Even more to the point, compare this passage from al-Ġazālī’s *Mizān al-‘amal*, ed. DUNYĀ 1964: 184.10-13, also quoted with an English translation (here modified) in ERAN 2001: 152:

The relation between them [*i.e.* the pleasures in this world] to the pleasures in the other world is like the relation of the smell [*rā’iḥa*] of food to its taste [*ilā dawq[’]-hi*], or like the relation between the thought [*nazar*; maybe also ‘observation’] about the face of the beloved one to lying and having sexual intercourse with her [*ilā muḍāġa‘at[’]-hi wa-muġāma‘at[’]-hi*]. Rather, it is increased many times.

For the sexual intercourse cf. also *supra* (iv.b) in this paragraph, and see also *infra*, *Physics* V.3, §429. THE THIRD [REASON] IS THE VARIATION OF THE PERCEIVED | (iv.c) The third *maṭār* of variation of the pleasures concerns the object of the perceptions, *i.e.* the perceived [Arabic *al-mudrak*, Latin *apprehensi*]. The suitability, or conversely the incompatibility, of the perceived object with the with the perceiver has an influence on the perception (as already apparent from the classification of the perceptions as pleasures and pains in §228 *supra*). Following the visual example given *supra* (second reason), in this case as well the increase of the pleasure due to the greater ‘strength’ of the perceived object is exemplified with a case of «beauty» [Arabic *ḥusn*, Latin *pulcritudine*] and «ugliness» [Arabic *qubḥ*, Latin *turpitudine*] (or, in a more moral sense, still compatible with the semantics of the Arabic terms, of ‘goodness’ or ‘excellence’ and ‘infamy’ or ‘shamefulness’).

[§232] D245.16-246.19

(v) The fifth principle, drawing the conclusion of the aforementioned statements, shows that in mankind the intellectual pleasure is stronger and worthier than the sensible pleasures. To do so, the paragraph heavily draws from the psychological treatment of the difference between the intellect and the sensible faculties within the human soul: cf. *infra*, *Physics* IV (and see here the commentary for specific references).

WE WILL CLARIFY IN THE BOOK OF THE SOUL | Arabic *sa-nubayyinu ḥi kitāb[’] l-nafs[’]*, Latin *Ostendemus enim cum loquemur de anima*. For the idea that the sensible faculties have necessarily material (bodily) organs, as opposed to the immateriality of intellect, cf. the demonstration of the latter in *Physics* IV,

§412-420. For the notion that the sensible faculties can be damaged by too strong a perception, cf. *Physics* IV, §413, numbers (5)-(6).

THE PLEASURE OF THE EYE [...] [SOUND] LATER. | Examples of harm occurring to the organs of sight and hearing due to an excessively intense perception (brightness or sound) are also given in *Physics* IV, §413.

CLEAR INTELLIGIBLE PERCEIVED | Arabic *al-mudrakāt al-‘aqlīyya al-ġalīyya*, Latin *apprehensa vero intelligibilia, quanto fuerit* [sic pro *fuerint*] *manifestiora et forciora*.

ADD LIGHT TO IT | Arabic *tazīdu-hu nūr^{am}*, Latin *reddunt eam clariorem* (probably implying the misreading **taruddu-hu* for *tazīdu-hu*, well explainable by the similarity of the *rasm*).

IT IS NOT SUSCEPTIBLE OF CHANGE NOR MUTATION | Arabic *lā taqbalu al-taġayyur^a wa-l-istiġālat^a*, Latin *non recipiens varietatem, et corruptionem*. For the incorruptibility of the intellect, its self-subsistence, and its permanence cf. *infra*, *Physics* IV, §411, and the demonstration at §§421-422.

THE CLOSEST OF THE EARTHILY EXISTENTS [...] AS IT WILL BE EXPLAINED | For the greatest perfection of the blend capable of receiving the human soul, and the greatest perfection of the human soul among all the forms bestowed upon the sublunary world by the Giver of Forms, cf. in particular *infra*, *Physics* IV, §402.

THE EARTHILY EXISTENTS | Arabic *al-mawġūdāt al-arḍīyya*, Latin *que terrena sunt*.

THE SENSE [...] EXTRANEOUS TO THE ESSENCE OF THE COLOUR | A likely reference to the doctrine of the common sensibles, for which cf. *infra*, *Physics* IV, §393 (the conjunction of all sensory perceptions in Avicennan psychology is provided by the common sense, for which see also §394).

THE INTELLECT PERCEIVES [...] EXTRANEOUS CONNECTIONS | For the abstract perception of the intellect cf. *infra*, *Physics* IV, §§408-410.

ABSTRACT | Arabic *muġarrada*, Latin *res nudas*.

FROM THEIR EXTRANEOUS CONNECTIONS | Arabic *‘an qarā’inⁱ-hā* (sg. *qarīna*) *al-ġaribatⁱ*, Latin *a sibi coniunctis aliis sibi extraneis*.

AND AGAIN, THE PERCEPTION OF THE SENSE [...] DOES NOT VARY | For the specific case of the error in scale produced by the sense of sight cf. *infra*, *Physics* IV, §389 and Figure 9.

THE VILE CHANGING ACCIDENTS | Arabic *al-a’rāḍ al-ḥasīsa al-mutaġayyira*, Latin *accidentia que sunt vilia et variabilia*.

THE [THING] PERCEIVED BY THE INTELLECT | *Dunyā* reads *mudrakāt al-‘aql*, in the plural, which is unacceptable given the single item listed *infra*, i.e. the «eternal universal quiddity» [*al-māhiyya al-kullīyya al-azalīyya*] (the tension between plural and singular is also confirmed in the Latin translation: «apprehensa vero ab intelligencia est quidditas universalis eterna», cf. MUCKLE 1933: 83.26-27, although in Latin the identity of singular feminine and neutral plural conceals in part the anacoluthon). I thus propose to emend the text in *mudrak al-‘aql*, in the singular.

EVERY BEAUTY AND MAGNIFICENCE | Arabic *kull^a ġamālⁱⁿ wa-bahāⁱⁿ*, Latin *omnis pulcritudo et decor*. The characterization of the essence of the «First True» in terms of the proceeding of beauty from it is functional to the general argument of theological philosophy addressed in this eleventh allegation, i.e. the attribution of joy to the First, which will be precisely explained on the basis of His contemplation of His own beauty. For the regaining of this main argument, after the long insertion of psychological material of §§228-233, cf. *infra*, §234.

[§233] D246.20-247.21

(vi) The sixth principle deals with various pathological and non-pathological conditions that may prevent man from perceiving the pleasure following the act of one of his faculties, despite the act being realized. In this context, Avicenna’s medical culture is put to use, with examples – reproduced by al-Ġazālī – concerning food disorders such as pica and bulimiy. The interaction between medicine and philosophy in the case of a well-known polymath such as Avicenna is both theoretically and

historically relevant, and would deserve more precise analysis (for the same issue cf. also *infra*, *Physics* IV, §412). This role of medicine notwithstanding, the main reference of the present discussion steadily remains philosophical psychology, with an anticipation of topics dealt with not only in the main treatise devoted to it (*Physics* IV), but interestingly also in the last, ethical/eschatological treatise of the *MF* (cf. *Physics* V.4-5 and *infra* in the commentary).

LIKE THE ONE WHO FEELS PLEASURE IN EATING CLAY, OR SOMETHING ACID | Following Avicenna, al-Ġazālī seems to be referring here to various forms of pica or allotriophagy, a disorder consisting in an unnatural desire for abnormal (non-nutritional) foods. On geophagy (a specific form of pica that consists in ingesting earth or soil-like materials) as a practice of ethno-anthropological relevance for the people of ancient Persia cf. the still useful MASSÉ 1938: 32 fn. 2, also quoted in ACHENA-MASSÉ I: 234 fn. 51. For a much wider reappraisal of geophagy as a cultural practice see now HENRY-CRING 2013. For a brief history of the medical understanding of pica, with some (cursory) information also on Avicenna's treatment of it, cf. HIGGINS 1993 (esp. 929).

HE WHO IS ILL OF BULIMY | Reading *būlimūs* (as direct transliteration of the Greek βούλιμος, alternative form of βουλιμία, literally 'ox hunger') for *yūlimūs* printed by Dunyā (and by Biḡū). The correction is guaranteed by both the Latin translation (MUCKLE 1933: 84.7: «infirmatē bolismi», a sort of transcription which attests the initial /b/ sound), and Avicenna's *DN* (cf. ACHENA-MASSÉ I: 171.15, «boulimie»). It is clear from what follows that the disease in question is a kind of food disorder, albeit the «bulimy» that is here at stake is very different from the illness that we call like this today. The notion of *būlimūs* appears, translated as «ravenous hunger» on the basis of the Greek (cf. LIDDELL-SCOTT: 325), in a fragment that Abū Bakr Muḥammad ibn Zakariyyā al-Rāzī (d. 930) attributes to the Greek physician Rufus of Ephesus (1st-2nd century AD), for which cf. ROSENTHAL 2003: 200. On the Arabic explanation of *būlimūs* as a form of syncope or swoon, based on Galen's *Therapeutics to Glaucōn*, cf. the testimony of Marwān Ibn Ḡanāḥ (Rabbi Jonah, 10th-11th century) as reported in BOS-KĀS 2016: 175 and fn. 84 (and see now the relevant passage also in the edition of Ibn Ḡanāḥ's *Kitāb al-Talḥīs*, in BOS-KĀS 2020 (I): 365 n. 175 *sub voce* «būlimūs»). Avicenna's account of bulimy in the *DN*, followed in this passage of the *MF* by al-Ġazālī, is however quite far from those ones, being rather reminiscent of Avicenna's own original medical treatment of this kind of pathological hunger in his *Canon of Medicine* [*al-Qanūn fī l-ṭibb*], kitāb 3, fann 13, maqāla 2, faṣl 7, ed. AL-ḌANNĀWĪ 1999: 447 ff., quoted with an Italian translation in CARUSI 2015: 2954:

La bulimia è [la malattia] conosciuta come 'la fame bovina'. Nella maggior parte dei casi la precede una fame canina, dopo di che il desiderio [del cibo] si abbatte; se non si verifica dopo di essa, il desiderio [del cibo] si abbatte all'inizio. È la fame degli organi che si accompagna alla sazietà dello stomaco, sì che gli organi sono molto affamati e desiderosi del cibo, mentre lo stomaco gli fa ostacolo. E a volte la cosa giunge fino allo svenimento, e i vasi sanguigni diventano vuoti; ma lo stomaco fa ostacolo al cibo, che gli ripugna.

It is especially relevant, for what concerns us here, that bulimy is described in the *Canon* as a distress of the «stomach» [*ma'ida*] that can make one refuse the food, despite the necessity of nourishment of his or her body. Thus, the reference to the «physicians» made by Avicenna in the *DN* while introducing the illness called bulimy can be intended as a self-reference to his own *Canon*, in a fruitful and interesting exchange of exemplifying materials from medicine to philosophy. The same use of the pathological condition called *būlimūs* as a paradigmatic instance of the possible disjunction between the existence of an in principle desirable object, and the actual presence of the desire for it, is to be found in Avicenna's *Uyūn al-ḥikma* (ed. BADAŪĪ 1954: 60) and in his *Kitāb al-Hidāya* (*Metaphysics* VI, ed. 'ABDUH 1974: 302 = MICHOT 1988: 141; cf. the transliteration *būlimūs* in the

Italian translation by LIZZINI 1995: 419); cf. on the point MICHOT 1988: 141-142 fn. 13.

IF IT FACES A BRIGHTNESS | Cf. *supra*, §232. The reiterated occurrence of this kind of notion and imagery in a metaphysical context can also remind one of the visual lexicon employed by Aristotle in the famous simile of the eyes of the bats and the sunlight in *Metaphysics* α [II] 1, which concerns our intellects' capability to know the highest metaphysical notions. There as well, as a matter of fact, the idea that what is brightest and noblest in itself can harm our imperfect faculties is crucial.

WITH REGARD TO THE UNIMPAIRED NATURE | Reading *ilā l-ṭab^a al-salīmⁱ*, as in BĪĠŪ 2000: 128.19, for Dunyā's polar error *al-saqīmⁱ* («sick»). The point of the passage is indeed that the light is pleasant to the healthy, unhurt sight, while a weak sight suffers from the excessive intensity of even a conformable perceived object. The Latin translators read the correct text: «quamvis sit conveniens, et delectabilis quantum ad naturam sanam» (cf. MUCKLE 1933: 84.14-15).

IS REFUTED | Reading *yudfa'u* for *yandaft'u* printed by Dunyā (which would not admit of the negative meaning of 'refuting', 'disproving': cf. WEHR 329^b). Cf. the Latin translation: «igitur per hoc repelli potest oppositio eius qui dicit» (MUCKLE 1933: 84.15-16).

MEAN HABITS | Reading *al-'ādāt al-radī'a*, as in BĪĠŪ 2000: 128.21, for Dunyā's ردية . Cf. Latin «propter parvos usus» (MUCKLE 1933: 84.21), where *parvos*, in keeping with the Arabic, should be emended in *pravos* as conveying the moral connotation of 'bad' habits (rather than of meaningless 'small' ones). For the correction cf. already SALMAN 1935-1936: 123 fn. 3.

LONGINGS | Arabic *ṣahwāt*, Latin *voluptates*.

NUMBNESS IN THE LIMB | Arabic *ḥadar*, Latin *paralysis*. The experiential datum of the numbness of the physical organs is also used as a metaphor for an analogous lack of receptivity, which can occur in the psychic faculties due to «the obstacles of the body» [Arabic *'awāriḍ al-badan*, Latin *accidencia corporis*]. The Latin *accidencia* is a partial mistranslation, since «obstacles» gives here a better sense. However, also *'awāriḍ* as a plural of *'arīḍ*, and not only *a'rād* as plural of *'arad*, can have the meaning of 'accidents', 'accidentals' (WEHR 707^b).

INDEED, WHEN THE SOUL [...] SHARP-WITTED BY NATURE. | This short passage anticipates *in nuce* the contents later expounded in *Physics* V.3-4, two subsections respectively devoted to the happiness, and to the misery of the soul detached from the body; cf. *infra*, §§428-432.

SHARP-WITTED | Arabic *dakī*, Latin *subtilis nature*.

[§234] D247.22-248.15

After the lengthy digression of ethical and psychological character concerning the nature of pleasure and pain in ourselves (§§228-233), the present paragraph puts to use the results achieved by the preceding discussion, applying its conclusions to God Himself and thus demonstrating that He enjoys the most perfect intellectual pleasure. The second part of the paragraph discusses the pleasure that man enjoys in being man, in order to introduce in the following §235 the comparison between that pleasure and God's pleasure.

WE RETURN THEN TO THE INTENT | Arabic *maṣṣūd*, Latin *id de quo intendimus*. The «intent» of the eleventh allegation (started back at §227) is the demonstration of the joy and the pleasure experienced by the First.

THE PRINCIPLE OF EVERY BEAUTY AND MAGNIFICENCE | Arabic *mabda^a kullī ḡamāl^m wa-bahā^{zn}*, Latin *principium omnis pulcritudinis* (probably to be integrated of the expression **et decoris*, as a translation of *wa-bahā^{zn}*). The expression reprises the end of §232 *supra*, emphasizing the role of principle and origin of every beauty enjoyed by God.

THE SOURCE OF EVERY GOODNESS AND RULING | Arabic *manba^a kullī ḥusnⁱⁿ wa-nizāmⁱⁿ*, Latin *emanacionis*

tocius ordinis et venustatis (with an inversion in order and a partial misunderstanding of *manba*). The expression is perfectly parallel to the preceding one, and just like that it underlines God's being the spring and the starting point of beauty, order and goodness in the world. The same argument from emanative causality, that concludes for God's possession of an attribute on the basis of God's bestowal of that attribute on other beings, was used also *supra* as for the demonstration of God's knowledge: cf. e.g. *Metaphysics* III.b.3, §203, and the example of the king at *Metaphysics* III.b.4, §208. *Supra*, *Metaphysics* II.12, §194 and *Metaphysics* III.b.3, §203, God was defined as the «spring» [*yanbū*] of existence, with the same root of the word *manba* used here (the choice of the noun of place being motivated here by the parallelism with *mabda*, «principle», in the preceding and specular sentence). IF WE CONTEMPLATE [...] AS FOR MAJESTY AND GLORY. | The three elements of every knowledge – i.e. the subject, the object and the process itself –, which coincide in every act of knowledge (cf. *supra*, *Metaphysics* III.b.1, §199 and ff.) are in God the highest of their kind. Coinciding in the essence of the Necessary Existent, the perceiver, the perceived and the perception are the noblest and most perfect of all, so that the pleasure experienced by the First (which coincides, *iuxta* §228) is the highest of all possible pleasures.

THE MOST GLORIOUS AND HIGHEST OF [ALL] THINGS | Arabic *ağall^u l-ašyā^š wa-a'lā-hā*. I have interpreted this as a description of the object of knowledge, i.e. the «perceived» [*mudrak*], both because of the specification «of [all] things» (which applies also to the rest of the superlatives, but is mentioned here in the first place), and because of what seems to be the most natural flow of the argument. The Arabic participle could however be vocalized also in the active, as *mudrik*, thus transforming this into a reference to the subject of knowledge, the «perceiver». This is the interpretation of the Latin translation: «Si autem inspexerimus comprehensorem, ipse est subtilissimus» (MUCKLE 1933: 85.2-3), which seems however to have a different text than Duniyā.

THE NOBLEST AND THE MOST PERFECT | Arabic *ašraf^u-hā wa-atamm^u-hā*, Latin *habundancior, et perfeccior*. This description applies to the «perception» [*idrāk*] of the essence of God by God himself. The Latin translation is once again not entirely accurate, and might presuppose a faulty Arabic text.

HE IS LIKEWISE | Reading *fa-huwa ka-dālīka*, as in D-Alt, instead of *li-dālīka* printed by Duniyā. In keeping with my vocalization of the previous participle as passive [*mudrak*], I have interpreted this to be a description of the «perceiver» [*mudrik*], while the Latin translators, who have made the opposite choice, write here: «Si vero comprehensum, ipsum est similiter» (MUCKLE 1933: 85.5-6). Be that as it may, the passage ultimately demonstrates the highest perfection of knower, known and knowledge, which by the way have already been demonstrated to be perfectly coincident (§199), so that the respective vocalization of the two participles can, with fair approximation, be considered to be indifferent.

BY VIRTUE OF WHAT HE HAS GOT AS FOR MAJESTY AND GLORY | The lexicon of «majesty» [*ʿazama*] and «glory» [*ğalāl*] is typical of the highest eulogies used for God in the *MF*, cf. for instance the similar expressions used in the conclusion of the entire work: cf. *Physics* V.10, §.

LET INDEED THE MAN CONTEMPLATE [...] AND ENSOULLED SUBSTANCES. | The «joy» [*surūr*] of man derives from his awareness («when he is fully conscious» [*idā istašʿara*]) of his twofold «supremacy» [*istiʿlā*]: ontological, on the universe (i.e. on all the other created beings) thanks to his knowledge, and political, on earth, thanks to his dominion. The example also presupposes the addition of other perfections, such as health, beauty, and obedience. All this leads to «the utmost degree of pleasure» [Arabic *fī ġāyatⁱ l-ladḍatⁱ*, Latin *quam maxima delectacio*], although all the perfections enjoyed by man are «borrowed from another» [*mustaʿār min^a l-ğayrⁱ*], ephemeral («exposed to ceasing» [*muʿarrad li-l-zawālⁱ*]), and in any case partial in scope and extension.

THE BEAUTY OF THE FORM | I translate, in agreement with the Latin text (MUCKLE 1933: 85.12: «et pulcritudine forme») also the further specification *wa-ğamāl al-šūra*, expunged by Duniyā but present in *A*.

HAVE NO PROPORTION TO THE BODIES OF THE WORLD | The final part of the paragraph is a sort of *meditatio* on the smallness of man, whose possible dominion is incommensurably narrow (it has no

«proportion» [*nīsba*]) with respect to the size of the creation, even in its merely physical dimension («the bodies of the world» [*aḡsām al-‘ālam*]), and much more so if one also considers the «intellectual» [*‘aqlīyya*] and the psychich or «ensouled» [*naḡsiyya*] substances, on which man has no control at all.

[§235] D248.16-24

Drawing from the description of the pleasure of man at the end of the preceding §234, the present paragraph makes a comparison between the pleasure of the First and our pleasure, in order to hint at the disproportion between the one and the other. To do so, the text proposes an explicit *verbatim* quotation of Aristotle, whose stance as a theological (and not only metaphysical) author is thus endorsed. This quotation, which is also present in Avicenna’s Persian text (cf. *DN*, ed.: 111.4-11, Achena-Massé: 173), is under many respects exceptional, and would deserve further scholarly attention. A detailed comparison between Aristotle’s, Avicenna’s and al-Ġazālī’s texts is provided in Table 10 in the Introduction, §1.6.1. *Explicit Nominal Quotations*.

IF THE LIKE OF THIS CONDITION WERE ESTABLISHED FOR US | The «condition» [*ḡāla*] here mentioned refers to the situation of utmost human perfection described at the end of §234 *supra*. Even that highest degree of human supremacy, however, has intrinsic limitations of time (it is not eternal) and space (it is not extended over the entire creation), while the supremacy enjoyed by God is, by contrast, both eternal and limitless (since everything that exists exists because of Him). In the «proportion» or analogy [*qiyās*] that can be drawn between us and God, it stands to reason that a greater perfection must correspond to a greater pleasure. Since God is most perfect, His pleasure is thus greatest.

ARISTOTLE HAS ALREADY SAID | Arabic *wa-ḡad ḡāla Aristūḡālīs*, Latin *Jam autem dixit aristotiles*. The nominal explicit mention of Aristotle is followed by a lengthy quotation, also present in Avicenna’s *DN* but somewhat altered by al-Ġazālī. The first of the changes occurs in the introductory formula, which is much plainer in the *MF* with respect to the high register of praise adopted in the *DN*: «Comme il a bien dit, le chef des sages, le guide et le maître des philosophes, Aristote, au sujet de cette félicité que l’Être nécessaire a en Lui-même et de celle des êtres qui leur vient de Lui et par Lui [...]» (cf. ACHENA-MASSÉ (1) 1955: 173.14-16, MO‘IN 1952: 111.2-4). The extremely laudatory and commendatory tone reserved to Aristotle in this passage is somewhat in contrast with the late dating presupposed for the *DN*, if one is to accept Gutas’ hypothesis of a progressive liberation of Avicenna’s thought with respect to the more faithful allegiance that he would have devoted to Aristotle in the early stages of his philosophical career; or else, it might be seen as contrasting with Gutas’ hypothesis in itself, if the mature composition of the *DN* is rather – as it indeed seems likely – to be confirmed. Gutas is well-aware of the partial tension of the praise tributed to Aristotle in this place of the *DN* with his own more general account of the terminological evolution of Avicenna’s attitude toward the Philosopher, as he writes: «This perception of Aristotle by Avicenna [...] enables Avicenna on the one hand to have a reverential but critical attitude toward Aristotle, and on the other to claim for his own discoveries a new stage in the serial acquisition of Knowledge. Thus Avicenna may both state in the *Philosophy for ‘Alā’ ad-Dawla* that Aristotle “is the leader of the wise and the guide and teacher of philosophers,” and criticize him on specific details in the roughly contemporary *Fair Judgment*» (GUTAS 2014^a: 325; see also fnn. 14-15).

«EVEN IF HE DID NOT HAVE [...] [ANY OTHER] PLEASURE». | The closest passage in Aristotle is *Metaphysics* Λ [XII] 7, 1072^b24-26, enriched however with assumptions and terminology found throughout the passage in which the excerpt is embedded (1072^b14-31). Aristotle’s passage is a crucial section of Book *Lambda*, which globally deals with the intellectual rejoicing of the god, in comparison with human

intellectual pleasure. However, Avicenna's (and consequently al-Ġazālī's) purportedly *verbatim* quotation already bends Aristotle's passage towards a distinctly religious and monotheistic interpretation, since the highest pleasure conceded to man is immediately said to be the contemplation of God (as opposed to the exercise of thought itself, as in D-Altristotle's original text). From this shift, which represents the most relevant innovation of the passage, and which is present in both Avicenna and al-Ġazālī, the greater (and indeed greatest) state of pleasure enjoyed by God is derived: since our greatest pleasure is in contemplating God, albeit we are imperfect and defective contemplators, it is certain that God – as a perfect knower – will draw a much greater pleasure than ours from His own activity of self-contemplation. Drawing from the tripartite model of subject, object and act of perception (cf. esp. §234), and from the fact that the intensity of the pleasure is influenced by the strength of each of these three factors (cf. §231), one could also interpret the comparison between us and the First Principle in the following terms: man and God can both contemplate the highest of the possible objects of perception (God himself), but while man, as an imperfect perceiver, is condemned to a weaker perception of that sublime perceived, God is not only the perfect perceived, but also a perfect perceiver, so that His perception of His own essence is strongest, and His pleasure consequently most intense. In Aristotle's passage, only the activity of thinking is an object of comparison between God and man, and Aristotle accordingly emphasizes two reasons why God's contemplation is «wondrous» [θαυμαστόν]: (i) the first and foremost is that God is «always» [ἀεί] in the state of intellectual bliss in which we are just «sometimes» [ποτέ]; (ii) the second is that this state might even be «better» or greater [μᾶλλον] in God, which adds up to the increase in pleasure already caused by reason (i). In Avicenna and in al-Ġazālī, the second reason (ii) – *i.e.* the greater intensity of God's pleasure – receives the lion's share of the philosophical attention, while the first one (i) is much more marginal. However, Avicenna's Persian text is more faithful to Aristotle's *Metaphysics*, inasmuch as it reproduces the opposition between the temporariness of our pleasure («à une heure donnée» [Persian *ān sā'ate*], cf. Introduction, §1.6.1, Table 10) and the perpetuity of God's one («perpétuellement» [Persian *hamiša*]). In the *MF*, by contrast, the only hint at the aspect of eternity is not relative to the perpetuity of the contemplation enjoyed by God (and thus of the pleasure deriving from it), but rather to the perpetuity and immutability of those predicates that demonstrate God's perfect supremacy on all creation, such as the proceeding of all things from Him and their obedience to Him. In other words, al-Ġazālī's attention does not seem to be ever focused on the eternity of God's act of perception (emphasized by Aristotle, and at least mentioned by Avicenna), but rather always on the greater perfection of that perception, due to the greater perfection of the perceiver (also confirmed, but merely as a side-thought, by His eternity and the eternity of His status). The difference in 'ontological' degree between God and man seems thus to be enough to fully absorb in itself any possible difference due to 'chronological' extension (eternity vs. time). Having noted the same passage of Aristotle's *Metaphysics* as a source for this passage of the *MF*, JANSSENS 2019: 108 qualifies al-Ġazālī's text as «a slightly reworded version of the same quotation at DN 111,4-9», and further notices that «the idea of the most perfect man as being limited compared to God is absent from the *Daneshname*, but might constitute a personal reworking by al-Ghazālī of DN 109,2-3». While taking the matter from another perspective, this is also in keeping with my reading of al-Ġazālī's willingness to put emphasis on the gap between man and God as perceivers, rather than on the gulf between a temporal and an eternal pleasure. A further, crucial source for the analysis of the reworking of Aristotle's quotation in both the *DN* and the *MF* is moreover represented by Avicenna's *Commentary on Book Lambda* of Aristotle's *Metaphysics* [Šarḥ maqāla al-Lām...], the sole extant part of his so-called *Book of Fair Judgment* [K. al-Inšāf]: for the most relevant passage of chapter 7, *ad* 1072^b24-26, cf. GEOFFROY-JANSSENS-SEBTI 2014: 58.35-60.10 (French); 59.166-61.173 (Arabic) (for the text, see Introduction, §1.6.1, Table 10). Despite the different nuances in tone and emphasis, it is striking that al-Ġazālī's Arabic formulation of the purported quotation has exactly the same negative hypothetical structure (*law lam yakun li-l-awwal* [la-hu MF] [...] *min* [...] *dāt*-*hi illā* [...] *la-nā* [...]; cf. Table 10 in the Introduction

for detailed comparison) of Avicenna's commentary, rather than of Aristotle's quoted lemma. On the contrary, the hypothetical clause employed in the Persian of the *DN* is an affirmative one, thus being closer to Aristotle's original formulation than to Avicenna's reworking of it in the commented portion of his *Šarḥ*. In contrast with the formal aspect represented by the grammatical structure of the sentence, it is worth noticing, from the point of view of content, that the terminology of «pleasure» [*ladḍa*], which is consistently employed by al-Ġazālī throughout the quotation, is not used by Avicenna in his commentary on 1072^b24-26 – being replaced there by the term *igtibāṭ* («rejoicing»), which glosses the generic «state» [*ḥāl*] appearing in the lemma –, while it does appear in a previously cited lemma of the Arabic version of Aristotle's text (1072^b16: *fa-inma l-ladḍat^a fi^{am} li-dālika*, cf. GEOFFROY-JANSSENS-SEBTI 2014: 59.155). The term *ladḍa* is in any case plainly applied to the case of God and His self-perception in the *Metaphysics* of the *K. al-Šifā'*: cf. *Ilāhiyyāt* VIII.7, esp. §4 in BERTOLACCI 2007: 683-685, ed. Cairo: 368.16-370 (see in particular 369.3 [*iltidād*]; 369.6 [*ladḍa*], and *passim*).

HIS MAJESTY | Arabic *‘aẓama-hu*, Latin *eius magnitudinem et magestatem* (sic pro *maiestatem*).

THEIR OBEDIENCE TO HIM | Arabic *inqiyād^l-hā*. The reference of the feminine pronoun is to the preceding *al-kull*, with a concordance *ad sensum* likely due to the plural meaning of «all [things]» assumed here by it. Grammatically, however, it would have been legitimate to expect a masculine pronoun.

SUBJUGATION | Arabic *tashīr*, Latin *et quod omnia ex necessitate obediunt ei*.

EPITOMIZED, INSIGNIFICANT MATTERS | Arabic *umūr^{am} muġmalat^{am} yasīrat^{am}*, Latin *universalia* [!], *et hec paucissima*. In keeping with the twist, occurring in the purportedly *verbatim* quotation, from the more 'temporal' understanding of the gap that separates the divine and human pleasure to a more 'ontological' account, here as well al-Ġazālī's emphasis is on the smallness and insignificance of what we, as human beings, can know of God's essence, rather than on the brevity of our moments of pleasurable knowledge. By contrast, many Avicennan texts precisely underline the temporariness of our attainment of God's knowledge (and hence also the temporariness of the related pleasure, or «happiness» [*sa'āda*]): cf. again the *Commentary on Book Lambda*, GEOFFROY-JANSSENS-SEBTI 2014: 59.151-153; but see also *K. al-Šifā'*, *K. al-Nafs*, V.6, ed. RAHMAN 1959: 218.16-17; *K. al-Naġāt*, ed. FAKHRY 1985: 282.18-20 (ed. DANIŠPÄZÜH 1985); *Aḍḥawīyya*, ed. 'ĀSĪ 1984: 150.8-14; *Išārāt* II.9.9, ed. FORGET 1892: 360.13-15 (for all these passages, and a discussion of Avicenna's non-mystical concept of «moment» [*waqt*], cf. RAPOPORT 2019: 166-167 and fn. 71).

[§236] D248.25-249.4

The paragraph deals with the pleasure of the angels, which derives from the perpetual contemplation of God and – in minor measure – from the self-perception of the angels themselves as servants of God. A parallel text for this and in particular for the following §237 is to be found in the *TF*, Discussion 20, in a passage which is globally very important for the *MF*, given that its material appears also elsewhere (cf. in particular *infra*, *Physics* V.3, §429); see MARMURA 2000: 210:

One is that the state of angels is nobler than the state of such beasts as ferocious animals and pigs, since [these angels] have no sensual pleasures by way of copulation and eating [*min al-ġimā' wa-l-akl*]. They only have the pleasure of being aware of their own perfection and beauty that specifically belong to them through knowing the true nature of things and of being close to the Lord of the Worlds in [terms of] attributes, not space, and in rank of existence. For existents have come to be from God in an order and through intermediaries. Thus, the intermediary closer [to God] is necessarily higher [in rank].

The passage is also quoted in ERAN 2001: 144, to which I refer for further discussion (although she

does not mention the parallel text of the *MF* in relation to it).

IN ACQUAINTANCE | Arabic *fī muṭālaʿa*, Latin *in contemplacione*.

ACCORDING TO THAT WHOSE CLARIFICATION WILL FOLLOW | Cf. *infra*, *Metaphysics* IV, esp. §286 (where the explanation of the love of the angelical intellects for their Prime Mover is given).

THEIR PLEASURE [...] OF THE FIRST | The eternity of the pleasure of the angels is not enough to make it equivalent to God's own pleasure, despite the identity of object between the two perceptions (God Himself). As a matter of fact, the angels (despite being more perfect than men) are imperfect perceivers with respect to God. Therefore, their perception of Him – which is immediately their pleasure, *iuxta* §228 – is inferior to His perception/pleasure of Himself.

AS SERVANTS, SUBJUGATED TO HIM | Arabic *'abīd^{an} la-hu musahharīna*, Latin *se servos illius, et implentes mandata illius*. The Arabic participle *musahhar* comes from the same verb that gives the verbal noun *tashīr*, «subjugation», used *supra* at §235 to describe the subordination of all creatures to God (while that occurrence of the root *sh-r* had not been translated into Latin, *musahharīna* is rendered here with a long periphrasis, which emphasizes the ministerial and announcing role of the angels). Such subordination of all creation to the First was said there to add to God's pleasure and joy. Conversely, the pleasure of the angels is deemed here to be caused also by their self-perception as «servants» of God, *i.e.* as beings «subjugated» to Him. As aptly noticed by JANSSENS 2019: 108-109 and fn. 101, this notion is absent in the *DN*. At fn. 101, Janssens recognizes moreover that the addition likely «results from a conscious decision of al-Ghazālī himself», this being one of the clearest acknowledgments of al-Ghazālī's autonomy of thought that Janssens is willing to provide in an article more generally very fond of reducing the variations of the *MF* with respect to the *DN* to a plethora of other Avicennan sources (not always persuasive). The circumstance is significant, because it contributes to show how angelology is one of the philosophical grounds on which al-Ghazālī is unmistakably more active, and more willing to add his own thoughts to Avicenna's reported ones: on the issue cf. also the Introduction, §1.7.2.

[§237] D249.5-11

The joy experienced by the angels in the service of the First is exemplified with the joy of the servant of a king, in agreement with the running metaphor of God as sovereign of the universe that was already employed *supra*, *Metaphysics* III.b.4, §208. More generally, the degree of the closeness of the creature to God is the criterion for establishing that creature's degree of joy and pleasure. For the idea of acquaintance with a king (and more generally with people of power) as source of pleasure compare this passage of al-Ghazālī's *Ihyā'* XXXVI (Book of Love), ch. 4, English transl. ORMSBY 2016: 44-45:

The pleasure of knowledge is in proportion to the nobility of that knowledge; the distinction of knowledge itself is in proportion to the distinction of the thing to be known. This is so true that he who has some knowledge about the inmost thoughts of people's minds and recounts it finds a pleasure in so doing whereas the very nature of an ignorant man spurs him to seek such knowledge out. To know the inner musings of the local governor and his administrative secrets in governing is far more pleasurable than any knowledge of the inner ruminations of a peasant or a weaver. Moreover, to gain information about the secrets of the vizier and of what he has resolved to do in his vizierate is more desirable as well as more pleasurable than any knowledge one might glean of some local governor's secrets. Still better, to become privy to the inmost cogitations of the king and sultan, who has been vouchsafed power over the vizier, is more excellent as well as more pleasurable than any awareness one might have of a mere vizier's secrets; a man's satisfaction in that knowledge

together with his hot pursuit to unearth it are far more intense, just as his love for it is greater because the pleasure he takes in it is even more tremendous.

HIS BRAGGING, HIS REJOICING AND HIS BOASTING | Arabic *tabağğuh^a-hu wa-ibtihāğğ^a-hu wa-tafāhur^a-hu*, Latin *gloria eius et exaltatio cordis sui*.

GREATER THAN HIS BRAGGING [...] OF HIS LINEAGE | Personal merits such as the «body» [*bi-ğismⁱ-hi*], the «strength» [*quwwatⁱ-hi*], the «father» [*abi-hi*], and the «lineage» [Arabic *nasabⁱ-hi*, Latin *de genere suo*] of the servant disappear in the face of the reflected glory he takes from the merits of his master. Likewise, the happiness of the angels derives more from God as their 'king' than from the angelical essences in themselves.

MORE COMPLETE | Arabic *akmal*, Latin *perfeccius*.

THANT THE JOY OF THE BEASTS | Arabic *min surūrⁱ l-bahā'im* (sg. *bahīma*), Latin *gaudio brutorum*. The analogy that can be drawn from the passage is the following: 'angels : men = men : beasts'.

VARIATION | Arabic *tafāwut*.

IN THE STRENGTH AND IN THE INTELLECT | Dunyā reads *bi-l-quwwatⁱ wa-l-'aqlⁱ*, while *A* has the more regular couple *bi-l-quwwatⁱ wa-l-fi'lⁱ* («in the potency and in the act»). The Latin translation witnesses a third possibility, namely that of a construct state between *quwwa* and *'aql*: «in virtute intelligencie» (MUCKLE 1933: 86.19) (presupposing the Arabic *bi-quwwatⁱ l-'aqlⁱ*). While the Latin reading appears *prima facie* the most reasonable, Dunyā's text is the most suitable to explain both the

FOR THE BALANCING OF THE NATURAL DISPOSITION | Arabic *i'tidālⁱ l-ħilqatⁱ*, Latin *inequalitate* (sic pro *in aequalitate*) *creacionis*. For the notion that only the most perfect «balance» of the elements is capable of receiving the human soul – also as a sign establishing the greater perfection of men over the animals – cf. *infra*, *Physics* IV, §402 (where exactly the same term, *i'tidāl*, is used).

DESPITE THEY DO NOT HAVE THE DESIRE OF THE STOMACH AND OF THE FEMALE SEX | Cf. *supra* the passage of the *TF* quoted in the introduction to §236 for exactly the same affirmation concerning angels.

BECAUSE OF THEIR CLOSENESS TO THE LORD OF THE WORLDS | Arabic *li-qurbⁱ-him min rabbⁱ l-'ālamīna*, Latin *propter propinquitatem suam ad dominum deum seculorum*. The expression «Lord of the worlds» is a well-known Qur'ānic epithet, occurring since the very beginning of the sacred book at *Qur'an* 1.2 («Praise be to God, the Lord of the worlds»); and cf. also, among the forty-two further occurrences of the expression, *Qur'an* 26.77, already quoted *supra* in §220. For an analysis of the word *'ālamīna* – an 'irregular' sound plural *pro* the regular broken form *'awālim*, moreover never found in the nominative **'ālamūna* – in the Qur'ānic context cf. CALDERINI 1994 (also with different renditions of the formula in Western languages, see esp. 52). The expression occurs again *infra*, *Metaphysics* IV.b.3.1, §288; IV.b.3.4, §293. The notion of «closeness» [*qurb*] to God is the decisive parameter in establishing the degrees of the pleasure respectively enjoyed by created beings (cf. also *infra*, §238, and see the same notion as expressed in the parallel passage of *TF*, Discussion 20 quoted in the introduction to §236, where the phrase 'Lord of the worlds' also appears). Likewise, at a more general level, it determines the ontological hierarchy of all realities in *Physics* V.10, §453, at the very end of the *MF*.

AND BECAUSE OF THEIR SURENESS [...] FOREVER | Namely, the angels' sureness that the state in which they are will not ever change. The Latin translation proves here very useful for explanation: «propter securitatem de numquam perdendo quod habent» (MUCKLE 1933: 86.22-23).

[§238] D249.12-end of page

JANSSENS 2019: 109 remarks that this whole passage (corresponding in particular to Dunyā 249.12-21) is inspired by *DN*, ed. MO'IN 1952: 110.5-6, «but in a much more developed way». The passage is also

to be seen in strict connection with the treatment of the happiness of the soul after her detachment from the body, for which cf. *infra*, *Physics* V.3, §§428-429.

AN ETERNAL HAPPINESS | Arabic *sa'ādat^{an} abadiyyat^{an}*, Latin *felicitatem eternam*. The concept of the *sa'āda abadiyya* as attainable to man was already mentioned *supra*, *Logic*, Preface, §3, on the utility of logic; it will moreover receive a thorough treatment *infra*, *Physics* V.3, §§428-429.

WITH A [CERTAIN] APPEARANCE | Arabic *bi-hay'a*.

FROM BEING ACQUAINTED WITH [THESE THINGS] | Arabic *min al-iṭlā'^a 'alay-hā*, Latin *ex contemplacione eorum*.

WHEN THEN HE WILL BE SEPARATED [...] WILL PERSIST FOREVER. | The point of the passage is that the pleasure that derives from the contemplation of the intellectual beings in this life is veiled and attenuated by the bodily bounds. The characterization of the body as an obstacle for the perfect exercise of the soul's intellectual faculty is indeed a crucial aspect of the discussion of the eternal happiness of the soul in *Physics* V.3; see esp. §428 *infra*.

THE LOFTY CONGREGATION | Arabic *al-mala' al-a'lā*. The Latin translation has the misunderstanding «et acquiret vastitatem altissimam» (MUCKLE 1933: 86.34), in all likelihood because of a misreading of *mala'* (from the root *m-l-'*) as the very similar *mal^{am}* (from *m-l-w*), which precisely means 'open tract of land' (WEHR 1083^b). The Arabic expression *al-mala' al-a'lā*, which could also be rendered with 'celestial rank', 'heavenly host', 'chiefs on high' or 'Sublime/Exalted Assembly' (cf. *Qur'an* 38.69), designates altogether the angelical hierarchies. It reappears also in psychological context *infra*, *Physics* IV, §405 (where it indicates the source of the intellectual knowledge of the human soul); *Physics* V.4, §431 (where it indicates the higher side to which the soul of the intelligent man, and yet slave of passions, is drawn, as opposed to the lower side of the material bounds).

THE COMPANION OF THE ANGELS | Arabic *rafiq al-malā'ika*, Latin *socius angelorum*.

CLOSENESS OF ATTRIBUTE, NOT OF PLACE | Arabic *qurb^{am} bi-l-ṣifatⁱ lā bi-l-makānⁱ*, Latin *in propinquitate sui [ad primum verum] affectione, non loco*.

GOD KNOWS WHAT IS RIGHT. | Arabic *wa-Allāh a'lam bi-l-ṣawābⁱ*. The final eulogy is omitted by the Latin translation and by A.

[§239] D250

The «Epilogue of the speech on the attributes» starts by recalling the general principle of the philosophical theology expounded in the third treatise of the *Metaphysics* of the *MF*, i.e. the inescapable human necessity of getting to know the unknown starting from what man presently witnesses. This translates in the prescription to describe God starting from man himself, lest one loses the possibility to speak about His attributes at all. Accordingly, the preceding eleven allegations are briefly retraced, time by time showing the human attribute or characteristic that has been taken as an explanatory model for the corresponding description predicated of God. Large space is given in particular to God's knowledge, explicitly central at least in the first six allegations, and actually relevant up to the end of the eleventh one (since pleasure is immediately identified with a perception, hence with a knowledge).

EPILOGUE OF THE SPEECH ON THE ATTRIBUTES | Arabic *ḥātima l-qawlⁱ fi l-ṣifāt*, Latin *Capitulum de assignandis perfecte proprietatibus primi*. The Latin translation of the title of this last section of *Metaphysics* III appears to be based on a different Arabic text. An «epilogue» [*ḥātima*] also concludes

the fourth treatise of *Logic*, devoted to syllogism: cf. *supra*, *Logic* IV, §§74-76.

IT ALREADY APPEARED [...] DIRECT WITNESS. | The general principle of Aristotelian gnoseology, according to which the unknown can only be known starting from what is previously manifest, had already been clearly formulated *supra*, in *Logic* IV, §34.

THE MEANING OF THAT [...] BY MEANS OF THE INTELLECT. | For the specific application of the aforementioned epistemological principle to the case of the human knowledge of God – necessarily based on what is closer to man, *i.e.* man himself – cf. *supra*, *Metaphysics* III.a, §196; *Metaphysics* III.b.2, §201.

YOUR UNEQUIVOCAL ANSWER | Arabic *ġawāb^u-ka al-šāfi*, Latin *sufficienter respondebis*. This adverbial rendition of the adjective *šāfiⁿ* is semantically interesting, as it corresponds both to the analogous choice adopted in the – still anonymous (HASSE-BÜTTNER 2018: 356) – Latin translation of the *Prologue* of the *MF* (cf. *supra*, §1, *sermonem sufficientem* for *kalām^{an} šāfi^{an}*, «unequivocal speech»), and to the well-known, and still somewhat mysterious, rendition *Sufficiencia* for Avicenna's *Šifā'*. In this sense, the term *šifā'* would have been interpreted as 'that which is sufficient to satisfy', and thus, with some stretch, «sufficiency». For a defense, with other arguments, of the Latin title cf. SALIBA 2017, who seems however too keen on arguing that the Latin one is actually the best translation for Avicenna's complex, and certainly also involved with medicine, choice.

«AS YOU KNOW YOURSELF» | For God's self-knowledge see *supra*, explicitly *Metaphysics* III.b.2, §§201-202, but also *Metaphysics* III.b.1, §§199-200 (under the epithet of «life»).

«AS YOU KNOW THAT WHICH IS OTHER THAN YOU» | God's knowledge of other things is comprehensively treated in allegations 3-6 *supra*; given what follows, the specific reference of this passage seems however to be to *Metaphysics* III.b.3, §203 (on God's universal knowledge of all species and genera).

«AS YOU KNOW THE ANSWER [...] WITH THE MINUTE ANALYSIS» | For the unity and simplicity of God's knowledge of the manifold things, cf. *supra*, *Metaphysics* III.b.4, §§204-209; for the various kinds of human knowledge, and the identification of the most suitable for God, cf. esp. §§205-207.

«AS YOUR ESTIMATION [...] PRINCIPLE OF THE FALL» | For God's productive and creative knowledge – which also entails its unity, despite the multiplicity of its objects/effects – cf. the heavily gnoseological treatment on God's will in *Metaphysics* III.b.7, §§214-221. For the example here reprised of the fall caused by its mere «estimation» cf. in particular *ivi*, §216.

«HE KNOWS THEM [...] OF THE CAUSES OF THE HEAT» | For God's causal knowledge of the possible particulars and the future contingents cf. *supra*, *Metaphysics* III.b.5-6, §§210-213. The choice of the example – the heating of the air in summer rather than the eclipse – suggests that the main reference is *Metaphysics* III.b.5, §§210-211; and cf. esp. §211 for the occurrence of the example.

IN THE COMING SUMMER | *Dunyā* incongruously separates *šayf* and its adjective *qābil* with a comma.

«AS YOU REJOICE OF IT [...] AWARE OF THAT PERFECTION» | For God's joy and pleasure cf. *supra*, *Metaphysics* III.b.11, §§227-238. Globally, the quick summary of God's attributes *sub specie hominis* touches in some ways almost all the preceding allegations, only leaving aside an explicit mention of God's power, wisdom and generosity (see *supra*, *Metaphysics* III.b.8-10, §§222-226).

PERFECTION | Here: *kamāl*.

[§240] D251.1-17

The paragraph continues the reasoning on the modality of the human knowledge of God, treating the specular case of divine characteristics that have no matching in the human nature, and cannot therefore be properly known. The main of such characteristics is the identity of quiddity and concrete existence in God, which is not instantiated in anything but the Necessary Existent Himself, and which cannot then be approximated any further by means of a comparison with different, already known features.

THE INTENDED [THING] | Arabic *maqṣūd*, Latin *hoc solum intendimus*.

BY WAY OF THE COMPARISON | Arabic *bi-l-muqāyasaṭ*, Latin *nisi secundum aliquid quod est in te*. For the verbal noun of the III stem *muqāyasa*, see the usage of the more common *qiyās*, with the same root, in the context of the analogy between man and God: cf. *supra*, *Metaphysics* III.b.11, §235.

IN THE PERFECTION AND THE IMPERFECTION | Arabic *fī l-kamāl wa-l-nuqṣān*, Latin *secundum perfectionem, et imperfectionem, magna, et parva* (the two last predicates – ‘big and small’ – do not have correspondence in Dunyā’s Arabic text).

NOBLER AND LOFTIER | Arabic *ašraf wa-a’lā*, Latin *nobilius, et sublimius*. Within the comparison between man and God, the observation of man’s finitude and imperfection leads to the acknowledgment of God’s necessary superiority. Thus, to the compared human attribute one should always add, in the case of God, some «increase» [Arabic *zīyāda*, Latin *amplius*] of intensity, which has no matching in man himself.

IN SUM | Arabic *muğmal^{an}*, Latin *omnino*.

FAITH IN THE UNKNOWN | Arabic *īmān^{an} bi-l-ğaybⁱ*, Latin *credulitas de re absentī*. What is meant is that, having acknowledged the presence in God of some attributes that are also in man, the «increase» in ontological degree that separates those divine attributes from their human explanatory models is in principle unknowable (given that, as such, the increase has no model whatsoever in man). Thus, it pertains to the *ğayb*, and is therefore an article of «faith» [*īmān*] rather than of intellectual knowledge. God Himself, and God alone, was indeed said to possess the «keys of the unknown» [*mafātīh^u l-ğaybⁱ*] in §208 *supra*.

THEREFORE, IF IN THE FIRST [...] AND HIS QUIDDITY ARE ONE. | The second part of the paragraph explains at length how the identity of quiddity and existence in the First is a «proper characteristic» [Arabic *ḥāṣṣiyya*, Latin *de proprietate* (with a partial syntactical misunderstanding)] which has no «matching» [*naẓīr*] outside Him. Thus, man cannot properly know this feature of God, which transcends everything that man knows. For the coincidence of *māhiyya* and *annīyya* in the Necessary Existent cf. esp. *supra*, *Metaphysics* II.4, §179.

THE SOURCE OF EVERY EXISTENCE | Arabic *manba^a kullⁱ wuğūd^{an}*, Latin *fons omnis esse*. For the concept of *manba^a*, and its correlate of the same root *yanbū^a*, as applied to God cf. also *supra*, *Metaphysics* II.12, §194; *Metaphysics* III.b.3, §203; III.b.11, §234.

WE CANNOT APPLY FOR YOU AN EXAMPLE [TAKEN] FROM YOURSELF | Arabic *lā yumkinu-nā an nadrib^a la-ka miṭl^{an} min nafsⁱ-ka*, Latin *non potest tibi dari exemplum*. The Latin translation probably presupposes the reading of *A, fa-lā yumkinu-ka* (for Dunyā’s *lā-yumkinu-nā*).

THE TRUE NATURE OF THE ESSENCE OF THE FIRST | Arabic *ḥaqīqat^a dātⁱ l-awwalⁱ*, Latin *certitudo autem de essentia primi et veri*. The Latin translation might presuppose the addition of the Arabic *(*wa-*)-*ḥaqqⁱ* after Dunyā’s printed reading. The formula is interesting inasmuch as it involves two non-technical expressions to designate the ‘essence’ of the First, while the term *māhiyya* is technically kept free to designate the sole concept of «quiddity» in proper philosophical sense.

HE IS NEITHER A SUBSTANCE, NOR AN ACCIDENT | For the denial of God’s accidentality see *Metaphysics* II.1, §176; for the denial of His substantiality, *Metaphysics* II.11, §§188-189.

[§241] D251.18-end of page

Not even the angels escape the state, proper of all existing beings but the Necessary Existent, of having a quiddity distinct from their existence. Having denied any possible knowable model for God’s being an existence without quiddity, the text asks then what is it that we know when we utter that definition. The only truly knowable thing in that description of God is that He is an existence, because that is the only aspect of the description which has a counterpart in ourselves.

SUBSTANCES WHOSE EXISTENCE IS OTHER THAN THEIR QUIDDITY | Arabic *ġawāhir wuġūd^u-hā ġayr^u māhiyyatⁱ-hā*, Latin *substancie, quarum esse aliud est ab eo quod respondetur de eis ad quid sunt*.

NO ONE KNOWS GOD BUT GOD [HIMSELF] | Arabic *lā yaʿrifu Allāh^a illā Allāh^u*, Latin *non cognoscit deum nisi deus*. The formula is construed in a similar way to the Islamic *šahāda* (*lā ilāh^a illā Allāh*, «there is no god but God»).

A COMMON THING | Arabic *amr^{um} ʿamm^{um}*, Latin. The idea of existence as the most common [*aʿamm*] notion was already explained *supra*, *Logic* II, §16. As such, it is instantiated in both God and in all other beings, and thus it can be known by man, as well.

[§242] D252.1-7

In contrast with the preceding underlining of the aspect of «existence» as common to God and all the other beings, the present paragraph deals with the reciprocal reduction, and convergence, of quiddity and existence in the case of God as the unknowable aspect of His essence. A germinal negative theology thus emerges, which denies any similarity and correspondence between God and the other beings, rather than building its statements on the comparison between the creatures and their creator.

«[HIS EXISTENCE] IS NOT OTHER THAN THE QUIDDITY» | Arabic *inna-hu laysa ġayr al-māhiyyatⁱ*, Latin *est ens absque eo quod respondetur ad quid est*. The Spanish translation by ALONSO 1963: 175: «Decir que no tiene esencia» is misleading.

HE IS NOT LIKE YOU | Arabic *anna-hu laysa miṭl^u-ka*, Latin *non est talis qualis tu*.

IT IS KNOWLEDGE OF THE NEGATION OF THE SIMILARITY | Reading *ʿilm^{um} bi-nafyⁱ l-mumāṭalatⁱ* instead of *Dunyā ʿilm^{um} yanfi* [sic] *l-mumāṭalat^a*. The correction – very economical due to the graphical identity of initial undotted *ب* and *ف* – imposes itself for the parallel construction of the sentence, whose second part is again construed with the *bi-* of the object of the action of ‘knowing’ («not of the true nature above the similarity» [*lā bi-l-ḥaqīqatⁱ al-munazzahatⁱ ʿanⁱ l-mumāṭalatⁱ*]). Cf. also the Latin translation of the passage, which confirms the emended reading: «Scire autem rem per remotionem talitatis, non per certitudinem immunem a talitate» (MUCKLE 1933: 88.29-30). For the notion of *mumāṭala*, there rendered as «correspondence», cf. *supra*, *Metaphysics* I.3, §150; *Metaphysics* II.10, §187.

NEITHER A GOLDSMITH NOR A CARPENTER | Arabic *laysa bi-šāʿigⁱⁿ wa-lā naġġārⁱⁿ*, Latin *non est magister (!) nec carpentarius*.

TECHNIQUE | Arabic *šinaʿa*, Latin *magisterium* (hence the idiosyncratic translation of *šāʿig* just *supra*, perhaps due to a misreading of *šāʿig* as **šāniʿ*).

YOUR KNOWLEDGE ABOUT HIS WILL, HIS POWER AND HIS WISDOM | For God’s will cf. *supra*, *Metaphysics* III.b.7, §§214-221; for His power, cf. *Metaphysics* III.b.8, §§222-223; for His wisdom, *Metaphysics* III.b.9, §§224-225. The text underlines here explicitly the heavily gnoseological and intellectual character of the explanations given *supra* for each of these divine attributes.

YOUR KNOWLEDGE [...] CONCOMITANTS OF HIS ESSENCE | Since all divine attributes are lastly traced back to the attribute of knowledge, and more precisely of divine self-knowledge, knowing that God is self-knowing is like having a knowledge of a «concomitant» [*lāzim*] of His essence, which sums up or gathers in itself («summing-up», [*muġmil*]) all the other aspects. However, this is not direct knowledge of the «truth» or ‘true nature’ [*ḥaqīqa*] of God’s essence, since that truth can only be

expressed by saying that «He is the pure existence, without an additional quiddity» [Arabic *huwa l-wuġūd al-mahḍ, bi-lā māhiyyat^m zā'idat^m*, Latin *ipse est purum esse absque eo quod respondetur ad quid est*].

[§243] D252.8-16

The paragraph further, and more radically, elaborates on the notion of negative theology introduced in the preceding sections, clearly stating that the only truly attainable knowledge about God is the knowledge of the impossibility of truly knowing Him. This is because God truly is existence without quiddity, but no other being is like this; hence, no being except God Himself can know God (cf. the anticipated formulation of this idea *supra*, §241).

KNOWLEDGE | Arabic *ma'rifa*, Latin *cognitionem*. To distinguish it from the more common terminology of *'ilm* [Latin *scientia*] one could translate *ma'rifa* as 'knowledge by acquaintance', thus underlining the aspect of familiarity implicit in the root *'rf* as opposed to *'lm*. A distinction similar to the one that separates *ma'rifa* and *'ilm* in their common usages is the one at work between the German 'kennen' and 'wissen', the French 'connaître' and 'savoir', the Italian 'conoscere' and 'sapere'. Imposing on the usage of the two terms in Avicennan context a sharper distinction between a 'philosophical', discursive and rationalistic kind of knowledge [*'ilm*], on the one hand, and a rather mystical or 'gnostic' knowledge [*ma'rifa*] on the other hand, is however completely unwarranted: cf. at least, for the most recent discussion related to Avicenna's *Išārāt*, RAPOPORT 2019: 149-156, and esp. 150 fn. 17. For the «soft» distinction between the terms *ma'rifa* and *'ilm* and their «virtually interchangeable» use in al-Ġazālī cf. TREIGER 2012: 33-34.

BY DEMONSTRATION | Arabic *bi-l-burhān*, Latin *per demonstrationem*. The occurrence of the technical Aristotelian terminology of apodictic demonstration in this highly theological context is remarkable, and all the more so because it is applied to a *prima facie* non-knowledge, *i.e.* the apophatic knowledge of the impossibility to know God.

HIS OUTPOURING EXISTENCE | Arabic *wuġūd^e-hu al-mursil^e*, Latin *eum esse simpliciter*. The Latin translation either read a different Arabic text, or it is based on an interpretation *ad sensum* of the difficult *mursil*. I have vocalized the participle of the IV form in the active, intending it as designating the action of transmission of God's existence, seen as the principle from which all other existence flows. Reading *mursal*, in the passive, would have led to the translation «His outpoured (or: transmitted) existence»: this would however be in some contrast with the predicate of unknowability that the passage applies to all the mentioned items, since the existence of the creatures is indeed knowable to man, while only God's existence remains transcendent and unattainable.

SO THAT HE CAN COMPARE HIMSELF TO HIM | Arabic *ḥattā taqūs^a-hu bi-hi*. The Latin translation is vitiated by a misunderstanding: «nisi cum consideratur secundum comparacionem» (MUCKLE 1933: 89.10-11).

NO ONE KNOWS HIM SAVE HIM | Arabic *fa-lā ya'rifu-hu sawā-hu*, Latin *nichil aliud preter se cognoscit eum*. Cf. *supra*, §241.

[§244] D252.17-end of page

This paragraph, which brings to conclusion the Third treatise of *Metaphysics* (started back at §196), provides two quotations taken from the tradition of the *aḥādīṭ*, and more generally of the Islamic *Sunna*, in order to corroborate the apophatic theological position expressed in the preceding section.

The quotation attributed to the Prophet Muḥammad declares the human impossibility of praising God, since God alone is able to praise Himself. The *dictum* attributed to the companion of the Prophet Abū Bakr al-Ṣiddīq is a clear statement of the motive of *docta ignorantia*, as it deems the notion of the impossibility to know as a kind of knowledge. The two sayings, taken together, reinforce the philosophical argument on negative theology just expounded, confirming – by means of religious tools – the prior declaration of the impossibility of attaining a complete knowledge of God.

THE LORD OF MEN AND DEMONS | Arabic *sayyid al-ins wa-l-ǧinn*. Epithet for the Prophet Muḥammad (cf. ALONSO 1963: 176).

«YOU ARE AS YOU HAVE PRAISED YOURSELF, I DO NOT ENUMERATE A PRAISE OF YOU» | Arabic *anta ka-mā aṭnayta ‘alā nafsī-ka, lā uḥṣī tanā^{an} ‘alay-ka*. JANSSENS 2019: 109, fn. 102 quotes for this *dictum* Abū Muslim, *al-Ṣaḥīḥ, Kitāb al-ṣalāh*, n. 222 (end); but cf. also its numerous occurrences in *Sunan al-Nasā’ī*, e.g. *K. al-Taḥāra* [«Book of Purification»], vol. 1, book 1, *ḥadīṭ* 169 (English); book 1, *ḥadīṭ* 170 (Arabic); *K. al-Taṭbīq* [«Book of the Clapping of Hands»], n. 1100, vol. 2, book 12, *ḥadīṭ* 1101 (English); book 12, *ḥadīṭ* 72 (Arabic) = n. 1130, vol. 2, book 12, *ḥadīṭ* 1131 (English); book 12, *ḥadīṭ* 102 (Arabic). See also for the same *ḥadīṭ* the occurrence in *Sunan Abī Dawūd, K. al-ṣalāh*, n. 879, book 2, *ḥadīṭ* 878 (English); book 2, *ḥadīṭ* 489 (Arabic) (cf. ABŪ DA’ŪD 1998); and in *Ġāmi‘ al-Tirmidī* n. 3493, vol. 6, book 45, *ḥadīṭ* 3493 (English); book 48, *ḥadīṭ* 124 (Arabic) (cf. AL-TIRMIDĪ 1992). In all the latter cases, the *dictum* is quoted with an inversion of its two parts with respect to the text of the *MF*, i.e. in the form «I do not enumerate a praise [or: praises] of You, You are as You have praised Yourself». (I base all this information on the searchable catalogue of *aḥādīṭ* available online at <https://sunnah.com>). This quotation is omitted by the Latin translators.

THE GREATEST COMPANION | Arabic *al-ṣadiq al-akbar*. Epithet for Abū Bakr (al-Ṣiddīq), companion of the Prophet. ALONSO 1963: 176 erroneously identifies the bearer of this epithet with ‘Alī.

«THE WEAKNESS IN THE ATTAINMENT OF THE PERCEPTION IS A PERCEPTION» | Arabic *al-‘aǧz ‘an darakⁱ l-idrākⁱ idrāk^{an}*, Latin *deficere a comprehendendo comprehensionem, comprehendere est* (with ‘etymological’ rendition of *darak* as *comprehendendo*, in keeping with the translation of *idrāk*). The saying is a famous *dictum* attributed to Abū Bakr, which concerns the notion of learned ignorance (*docta ignorantia*, in a commonly used Latin formula), but whose soundness was rejected for instance by Ibn Taymiyya (cf. *Maǧmū‘āt al-Rasā’il wa-l-Masā’il*, pt. IV: 55, quoted in ELMORE 1999: 336 fn. 81). It is reported by HECK 2014: 111, 119, and translated there as «the inability to comprehend is a kind of comprehension» (*ivi*: 149 fn. 6, Heck references his forthcoming HECK 2020 for further information). ALONSO 1963: 176 fn. 13 references, for the history of this idea in Islam, GOLDZIHNER 1907: 12, which I was not able to consult. JANSSENS 2019: 109, fn. 102 remarks about this saying that he was not able to «locate it in any of the great hadith-collections but it reminds one of a saying, present in several ancient sufi treatises, as e.g. al-Qushayrī’s *Al-Risāla*, al-Makkī’s *Qūṭ al-qulūb* or al-Sarrāj’s *Al-Luma’*, and which runs as follows: “(Abū Bakr has said:) Glory to Him Who has not given His creatures any way to know Him unles (*sic*) through an incapacity to know Him”, but instead of *idrāk* one finds as terminus technicus *ma’rifā*, and this saying is also absent in the great hadith-collections». Despite the difficulty in locating the specific source, Janssens very aptly notices that «the same two sayings [*i.e.* this one by Abū Bakr and the preceding one] are also quoted in al-Ghazālī’s *Maqṣad* in the framework of his answering the question: ‘which is the limit of the knowledge (*ma’rifā*) of those who know God?». Cf. indeed SHEHADI 1971: 54.13-16 and the English translation of the relevant passage in MCCARTHY 1980: 344 (n. 83): «Abū Bakr alluded to this when he said: “Powerlessness to attain perception is a perception”; and this is what Muḥammad meant by his assertion: “I reckon no praise of You like Your own praise of Yourself». The circumstance of the parallel usage of exactly the same couple of sayings in two works as far apart as the *Maqṣad al-asnā* and the *MF* is extremely significant, because it shows how the same network of religious references could be relevant for al-Ġazālī in both

contexts, although the *MF* presents itself as a heavily Avicennan text of philosophy. It is all the more interesting, then, that the same couple of traditionist sources also appears in the *Kitāb al-tawhīd wa-l-tawakkul*, the XXXV book of al-Ġazālī's theological masterpiece *Ihyā' 'ulūm al-dīn* [*Revival of the Religious Sciences*] (English transl. in BURRELL 2001; French one in BOUTALEB 2002): cf. *Ihyā'*, ed. Laġna, vol. IV: 2498.7 (for the *ḥadīṭ* of the praise); 2498.10-11 (for the *dictum* attributed to Abū Bakr). This is a relevant point against the reduction of the *MF* to the rank of a purely philosophical, and maybe juvenile, work of al-Ġazālī's, and calls for a more nuanced understanding of its cultural and doctrinal stance within al-Ġazālī's literary production (cf. on the issue the Introduction, §1.2, and for the religious references §1.9). It is moreover worth noticing, in conclusion, that the fortune of the saying expressing the idea of *docta ignorantia* in the Islamic milieu does not end with al-Ġazālī, but has an important aftermath in ṣūfī thought. As a matter of fact, it is quoted by Ibn al-'Arabī in his *Fuṣūs al-Ḥikam* (*Bezels of Wisdom*, as ELMORE 1999: 145 translates the title), ed. 'AFĪFĪ, vol. 1: 62; see ELMORE 1999: 146 fn. 86, and the English translation of the relevant passage in ELMORE 1999: 605 (see also *ivi* fn. 110, on the depreciation of this kind of *docta ignorantia* in the *Fuṣūs al-Ḥikam*, in contrast with al-Ġazālī's highly appreciative understanding of it). The *dictum* also occurs, once more in close connection with the *ḥadīṭ* on the praise of God (and this time with approval) in IBN AL-'ARABĪ, *Kitāb 'Anqā' muġrib*, transl. ELMORE 1999: 336 (and see *ivi* fnn. 77 and 81 for commentary).

ALL MEN ARE WEAK AS FOR HIS PERCEPTION | Arabic *al-nās kull^h-hum 'aġīzūna 'an idrāk^h-hi*, Latin *omnes homines infirmi sunt ad comprehendendum eum*. The statement on the human *infirmitas* with respect to the knowledge of God repeats the general conclusion already achieved in §243 *supra*. In agreement with the saying concerning learned ignorance just quoted, however, al-Ġazālī traces within this framework a new, paradoxical distinction between the one who, recognizing his weakness and ignorance, is actually «knowing and perceiving» [Arabic *'arīf^m mudrik^m*, Latin *cognitor et apprehensor*] at the highest degree attainable to man, and the one who, being rather unaware of the necessity and unavoidability of his weakness, ends up being truly «ignorant» of anything divine [Arabic *ġāhil^m*, Latin *ignorans deum*].

THE FRIENDS OF GOD, OF THE PROPHETS AND OF THE KNOWING [MEN] | Arabic *al-awliyā' wa-l-anbiyā' wa-l-'ulamā'*, Latin *dignis, et prophetis, et sapientibus*. All men are in the state of ignorance proper of those who do not recognize the necessity of their own ignorance, with the sole exception of these three categories. For the notion of *walī* or 'friend of God' cf. also *infra*, *Physics* V.9, §§449-450, that focus on the analysis of the notion of prophecy (for which cf. also §451, and *infra*, *Physics* V.10, §§452-453). In particular, a hierarchy of people involving both the «prophets» [*anbiyā'*] and the «knowing [men]» [*'ulamā'*], is propounded *infra*, §453, at the culminating point of the entire work.

Treatise IV

[§245] D253.1-15

The paragraph introduces the subject-matter of both the Fourth and the Fifth treatises of *Metaphysics*, which are thus presented in close connection to each other. Concerning the present fourth treatise, the text subdivides its broadly cosmological topic in a Premise (A), in turn articulated in three small subdivisions (§§246-248), and three «Pillars» (B). (B.1) The first pillar deals with the sublunary beings (§§249-268); (B.2) the second with the supralunary bodies, *i.e.* the heavens (§§269-281); (B.3) the third with the souls and the intellects of those celestial bodies (§§282-293).

THE MENTION OF HIS ACTS [...] OF ALL THE EXISTENTS | God's «acts» [*af'āl*] – here clearly also in the productive sense of what God 'makes' – are identified with «the divisions of all the existents» [*aqṣām^a ġamī^d l-mawġūdāt*].

WE WILL MENTION IN THE FIFTH TREATISE [...] THE CAUSER OF THE CAUSES | After having summarized the subject-matter of the fourth treatise as a thorough *divisio entis*, the text goes on to anticipate the topics that will be dealt with in the subsequent fifth treatise: cf. *infra*, *Metaphysics* V, §§294-314. The formulations adopted here precisely mirror those contained in the first part of the long title-summary of *Metaphysics* V: see *infra*, §294.

THE CAUSER OF THE CAUSES | Arabic *musabbib al-asbāb*, Latin *causa causarum*. Richard Frank (see in particular FRANK 1992: 18 and fn. 18, which gives further details with respect to FRANK 1987: 277, and FRANK 1992: 36-37) emphasizes the importance of this expression – rendered in English as «the one who makes the causes to function as causes» (FRANK 1987: 277 = FRANK 1994: 37) – in al-Ġazālī's construction of a 'philosophical' cosmology. According to Frank, «al-Ghazālī describes the universe as an integrated system of entities and events bound together in an interlocking order of causes and intermediaries (*asbāb* and *wasā'it*)», this being «[i]n sharp contrast to the occasionalism of classical Ash'arism» (FRANK 1992: 18). The expression *musabbib al-asbāb* in its application to God would thus represent the cornerstone of a fundamental – although somehow cloaked – departure of al-Ġazālī from the preceding Aš'arite doctrines (and thus also from a specifically theological understanding of cosmology). This rests in particular on Frank's persuasion that the sense of the expression under al-Ġazālī's pen is the same occurring in AVICENNA, *K. al-Šifā', Ilāhiyyāt* I.1, ed.: 4.16. However, BERTOLACCI 2007^a: 114 (and cf. also the translation *ivi*: 141: «Hai appreso anche che la [scienza] divina è quella in cui si indagano le cause prime dell'esistenza naturale, [dell'esistenza] matematica e di ciò che dipende da queste, e la Causa delle cause ed il Principio dei principi, cioè la divinità») has proposed to emend *musabbib al-asbāb* in *sabab al-asbāb*, according to the principle of the *lectio brevior*. The correction is further commented upon in BERTOLACCI 2008: 75 and fnn. 87-90, where the hypothesis is also advanced that the variant reading *musabbib* may have substituted *sabab* precisely due to a Ġazālīan influence: «it can be regarded as a reading inserted in Avicenna's original text by a scribe familiar with al-Ghazālī's writings». FRANK 1992: 18 fn. 18 also references Avicenna's *Risāla al-'Aršīyya* (ed. Hyderabad, 1353/1934, but see now HILĀL 1980) for the occurrence of the expression *musabbib al-asbāb*, in connection however with a long list of Ġazālīan passages in which the same terminology is employed. For what concerns us here, it is particularly important to notice that al-Ġazālī makes use of the expression also in the *TF*, Discussion 6. Remarkably, this does not happen in the context of a mere *reportatio* of the doctrines of the philosophers, but rather in that of a harsh critique to their theoretical shortcomings: «A rational person would indeed be astonished by a party that claims to delve deeply into [the world of] the intelligibles but whose reflection in the end leads to [the

conclusion] that the Lord of Lords and the Cause of Causes [*musabbib al-asbāb*] has basically no knowledge of what occurs in the world» (cf. MARMURA 2000: 107); see FRANK 1992: 18 fn. 18 for these and further references. Albeit convinced of the Avicennan origin of the Ġazālīan usage of the expression, FRANK 1994: 37 and 117 fn. 11 also remarks that *musabbib al-asbāb* recurs in earlier šūfī thought, and references in particular al-Ġazālī's contemporary al-Sulamī (d. 1021) for his *Ṭabaqāt al-šūfiyya*, ed. ŠURAYBA 1953: 294, 353, 422 f., 449. The most recent acquisitions concerning the critical text of Avicenna's *Ilāhiyyāt* give new strength to the hypothesis of a possible šūfī origin of the expression, crossreferenced by al-Ġazālī with his own semi-philosophical understanding of cosmology, heavily influenced by Avicenna. Finally, it is important to remark that the Latin translations of both the *Ilāhiyyāt* and the *MF* are not entirely helpful in order to solve the dilemma *musabbib* vs *sabab*, since the Latin *causa causarum* (which would appear to be a perfect rendition of the *lectio brevior*) is actually employed in the version of the *MF* as a translation of *musabbib al-asbāb*. Cf. again in this regard BERTOLACCI 2007: 75 and n. 89 (with reference to the further occurrence of *musabbib al-asbāb* in the *MF*, for which cf. *infra*, *Metaphysics* V, §294, and not to the present one).
 IN THE CONCAVE OF THE SPHERE OF THE MOON | Arabic *fī muqa'arī falakī l-qamarī*, Latin *intra ambitum circuli lune*. The same Arabic expression occurring here, which precisely designates the sublunary world, is better translated as *concauum orbis lune* by Michael Scot in his version of Averroes' *Middle Commentary* on Aristotle's *De generatione et corruptione*, 173th52; cf. the Latin text in FOBES-KURLAND 1956 and the Arabic one in EICHNER 2005: 125.11 (cf. the *Arabic and Latin Glossary*, edited by Dag Nikolaus Hasse, *sub voce*).

«SPIRITUAL CELESTIAL ANGELS» | Arabic *al-malā'ika al-ruḥāniyya al-samāwiyya*. This and the subsequent expression are very important because they represent an attempt at translating in a religious lexicon concepts proper of the Avicennan *falsafa*, such as those of the heavenly souls and intellects. The occurrence of this angelical lexicon in the *MF* has only little parallelism in the *DN*, while the specific double identification of the celestial souls and intellects with two kinds of angelical entities – albeit with a partially different terminology – is to be found in the *Metaphysics* of the *K. al-Šifā'*: «The first of these is the rank of the spiritual angels denuded [of matter] [*al-malā'ika al-ruḥāniyya al-muğarrada*] that are called “intellects,” then the ranks of the spiritual angels [*al-malā'ika al-ruḥāniyya*] called “souls” – namely, the active angels» (cf. AVICENNA, *Ilāhiyyāt* X.1, ed. QANAWATĪ-ZĀYID 1960: 435, transl. MARMURA 2005: 358.10-13). Remarkably, the same issue of ‘translation’ of philosophical terms into the lexicon of revelation appears at the end of al-Mas'ūdī's unedited commentary on Avicenna's *Glistering Homily* [*al-Ḥuṭba al-ğarrā'*], which proposes exactly the same distinction between cherubim/celestial intellects and celestial angels/celestial souls which is here at stake. GRIFFEL 2021: 462 provides a useful paraphrase and partial translation of the relevant passage of al-Mas'ūdī's *Šarḥ al-Ḥuṭba al-ğarrā'* based on ms. Istanbul, Süleymaniye Yazma Eser Kütüphanesi, H. Hüsnü Paşa 1243, fol. 54^b. While Griffel does not notice the Ġazālīan origin of this passage of al-Mas'ūdī's *Šarḥ*, the identification of the source in two interconnected Ġazālīan texts (cf. *infra* the cross-reference to the *TF*) substantiates Griffel's thesis that the *MF*, and more generally al-Ġazālī's thought, are to be seen as the starting point of the later tradition of *ḥikma* as theologically oriented philosophy. On the issue of the angelical jargon, relevant for the understanding of the broader theoretical stance of al-Ġazālī in the *MF*, cf. *supra*, Introduction, §1.7.2, *Angels and Intellects*. The identification of angels with souls and intellects, that is, with immaterial substances, is at odds with the classical kalāmī understanding of the angels as bodies, as documented for instance in SHIHADDEH 2012^b.

«CHERUBIM» | Arabic *al-karubiyyīna*, Latin *cherubin*. In the parallel passage of al-Mas'ūdī's *Šarḥ al-Ḥuṭba al-ğarrā'*, the chosen expression is «cherubic angels» [*malā'ika karūbiyya*] (according to the transcription provided in GRIFFEL 2021: 462). BIĞŪ 2000: 133 fn. 1 glosses the expression *karubiyyīna* as ‘lords of the angels’ [*sāda al-malā'ika*], further mentioning Gabriel [Ġibrīl], Michael [Mikā'il] and Aziraphel [Isrāfīl] as members of the category. Cherubim as such are however never mentioned in the Qur'ān, and are sometimes tentatively identified by later traditionists – such as al-Suyūṭī (d. 1505)

– with the «Bearers of the Throne» [*ḥamala al-‘arṣ*] of *Qur’ān* 40.7 and 69.17 (cf. BURGE 2012). In the *TF*, Discussion 16, al-Ġazālī has a passage perfectly parallel to the present one (cf. MARMURA 2000: 153):

They claim that the heavenly angels [*al-malā’ika al-samāwīyya*] are the celestial souls and that the cherubim that are drawn close [to God] [*al-malā’ika al-karūbiyyūna al-muqarrabīna*] are the pure intelligences that are self-subsisting substances that do not occupy space and do not administer bodies.

This important parallel text also helps to solve a possible ambiguity of the text of the *MF*, from which alone it would not be entirely clear whether «spiritual celestial angels» and «cherubim» are to be considered as alternative expressions to designate both the celestial souls and the moving intellects of the skies, or rather as formulations separately devoted to the one and the other class of entities. The *TF* clarifies that the correct solution is the latter: *malā’ika* would then be an alternative name for the «souls» [*nufūs*], while *karūbiyyūna* would specifically designate the celestial «intellects» [*‘uqūl*]. In the *DN* there is no trace of this distinction.

Strikingly as for this issue, the Latin translation has a longer text with respect to Dunyā’s edition, which clearly formulates the distinction in accordance with the *TF* (but not with the extant Arabic text of the *MF*): «Tercia est diccio de animabus quas dicunt esse angelos spirituales, celestes, et de causa motus eorum, et de intelligenciis quas dicunt esse angelos proximos, et cherubin» (MUCKLE 1933: 90.16-17). Apart from the clear-cut formulation of the terminological distinction (much less defined in the extant Arabic text), the Latin version also adds the mention of the cause of the movement of the souls (*causa motus eorum*, maybe a repetition due to the analogous formulation concerning the movement of the skies in the second pillar (B.2), cf. *supra*), and, most conspicuously, the alternative expression *angelos proximos*, occurring together with *cherubin* (which clearly is the direct translation of *karūbiyyūna*). The formula *angelos proximos* presupposes in all likelihood the Arabic **al-malā’ika al-muqarrabīna*, which is exactly the same expression occurring in the *TF* to further describe the cherubim. The same phrase has already occurred in the text of the *MF*, as well: cf. *supra*, *Metaphysics* III.b.11, §227. With a variation, moreover, it will also recur *infra*, in the conclusion of *Metaphysics* IV, §293, which expresses more clearly the identification – here left undetermined – between ‘celestial angels’ and souls on the one hand, and ‘angels close [to God]’ and intellects on the other hand. Despite the presence of these possible hints within the text itself of the *MF*, it is very unlikely that the unambiguous formulation here adopted by the Latin translators is the fruit of their own conjectural reworking of an Arabic text corresponding to Dunyā’s one, while it is much more plausible that they read in this case a different, and more complete, Arabic antigraph. Dunyā’s germinal apparatus does not report however any variant here, and more importantly ms. *Y* – the oldest and probably the best of the known Arabic *codices* – has the same reading as the edition. If the Latin reading should prove to be the best one – as it seems to be the case also in consideration of the parallel passage of the *TF* – the Latin translation would be confirmed to be the witness of a very relevant version of the text, as far as I know unattested in the extant Arabic manuscripts. Thus, its importance in the history of the tradition of the *MF* would be greatly increased, and its necessary role in the making of any future edition of the Arabic text even more apparent.

[§246] D253.16-254.15

The present paragraph deals with the first subdivision (A.1) of the Premise announced *supra* in §245. A threefold classification of beings is presented, on the basis of the influence (or ‘impression’) they exert, or conversely they receive. Intellects, souls, and bodies are thus distinguished, and an ontological hierarchy of the three is drawn. JANSSENS 2019: 109 comments in general on the topics

dealt with in the Premise, saying that it is «heavily indebted to DN c. 39 (but omitting its beginning and modifying the order of presentation), 40 and 42 (adding a few concrete examples)».

BEING INFLUENCED | Arabic *ta'attur*.

INFLUENCE | Arabic *ta'tīr*. The Latin translators likely read *ta'tīr* twice, because they render: «secundum consideracionem impressionis; et impressio [...] dividitur» (MUCKLE 1933: 90.19-21). In keeping with the presentation of the two verbal nouns *ta'attur* and *ta'tīr* as the basis and criterion of the classification, the following tripartite subdivision of beings will be conducted using various forms of the verb *ta'attara*, in the V form, and *attara*, in the II. Strictly speaking, a classification based on all the possible combinations of two features should rather be fourfold, but the case of things which are neither influenced nor influence is not considered. This might be due to the fact that such completely inert items would be entirely unknowable, and thus are plainly excluded from existence. THAT WHICH INFLUENCES WITHOUT BEING INFLUENCED | Arabic *mu'attir^m lā yata'attaru*, Latin *in impressorem qui imprimit et sibi nil imprimitur*. (A.1.i) The first class of beings of the subdivision is constituted by the «abstract intellects» [Arabic *al-'uqūl al-muğarrada*, Latin *intelligencias nudatas*]. This is presented as a «technical term» [*iṣṭilāḥ*], with al-Ġazālī typical insistence on the conventionality of the philosophical jargon. Cf. the Latin rendition: «et hunc consueverunt appellare [...]» (MUCKLE 1933: 90.22).

SUBSTANCES | For the notion of the intellect as belonging to the category of substance cf. the fourfold classification of the kinds of *ğawhar* expounded *supra*, *Metaphysics* I.1, §§104-105. For the parallel classification in the *K. al-Šifā'* see *Ilāhiyyāt* II.1, ed. QANAWATĪ-ZĀYID 1960: 60.

THAT WHICH IS INFLUENCED WITHOUT INFLUENCING | Arabic *muta'attir^m lā yu'attiru*, Latin *in eum cui imprimitur et nichil imprimit*. (A.1.ii) The second class of beings is constituted by «the space-occupying and divisible bodies» [Arabic *al-ağsām al-mutaḥayyiza al-munqasima*, Latin *corpora terminata divisibilia*]. The bodies are described shortly *infra* as the «vilest» [Arabic *aḡass*, Latin *vilius*] of the three classes, since they are «changeable and corruptible» [Arabic, Latin *corruptibilia, et mutabilia*].

THAT WHICH INFLUENCES WHILE BEING INFLUENCED | Arabic *mu'attir^m muta'attir^m*, Latin *in eum qui imprimit, et sibi imprimitur*. (A.1.iii) The third class of beings, intermediate between the other two, is constituted by the «souls» [Arabic *nufūs*, Latin *anime*], which can exert an influence on the bodies (A.1.ii), while the intellects (A.1.i) can influence them. The intermediate character of the souls between bodies and intellects is expressed shortly *infra* with the expression «medium» [*wāsiṭa*], a key-term of the hierarchical, emanative structure of the cosmos described in the *MF* (cf. also *infra*, *Metaphysics* V, §297 and Diagram 8). The predicates of not being space-occupying and not being a body associate however more tightly the souls to the aforementioned intellects (hence the expression «as well» [*ayḍ^m*]), so that classes (A.1.i) and (A.1.iii) are separated from class (A.1.ii) (of the bodies).

THEY POUR FORTH | Arabic *tafiḍu*, Latin *inferunt*.

A DEMONSTRATION | Arabic *burhān*, Latin *probacione*. The conclusion of the paragraph reiterates what had been said at the beginning, *i.e.* the logical character of this *divisio entis*. It remains then to prove the actual existence of the kinds of entities logically distinguished on the basis of the two predicates of influence and being influenced. The existence of the bodies (A.1.ii) is established «by virtue of the sense» [*bi-l-hiss*]; the existence of the souls (A.1.iii) is indicated by the «movements of the bodies» [*ḥarakāt al-ağsām*]; the existence of the intellects (A.1.i) is indicated by the souls. What is *per se* ontologically higher is thus farther removed from our knowledge (*quoad nos*), since we need what is ontologically lower for demonstrating its existence.

AS IT WILL BE EXPLAINED | Cf. in particular *infra*, *Metaphysics* IV.b.1.6, §265, and *Metaphysics* IV.b.3.1, esp. §282.

TABLE 35. *First divisio entis*

(A.1) <i>First classification of beings</i>		<i>TA'TIR</i>	
		INFLUENCING	NOT INFLUENCING
<i>TA'ATTUR</i>	BEING INFLUENCED	souls [<i>nufūs</i>]	bodies [<i>ağsām</i>]
	NOT BEING INFLUENCED	intellects [<i>'uqūl</i>]	---

[§247] D254.16-255.4

The present paragraph deals with the second subdivision (A.2) of the Premise announced *supra* in §245. A twofold (but ultimately fourfold, or perhaps even fivefold) classification of beings is presented, on the basis of their perfection (or completeness) and imperfection (or defectiveness): beings can be either (i) perfect or (ii) defective (or imperfect); and if defective, either (iii) self-sufficient or (iv) absolutely defective. Moreover, the state of God as being (v) 'above perfection' is reaffirmed (cf. *supra*, §194).

COMPLETENESS | Arabic *kamāl*, Latin *perfectionis*.

DEFECTIVENESS | Arabic *nuqṣān*, Latin *imperfectionis*.

«PERFECT» | Arabic *tāmm*^{an}, Latin *perfectum*. (A.2.i) = (i) What is *tāmm* has always already got all that it needs, coming from its own essence.

«DEFECTIVE» | Arabic *nāqīṣ*^{an}, Latin *imperfectum*. (A.2.ii) = (ii) What is *nāqīṣ* (also: 'imperfect') must search for what it lacks; when it has obtained its perfection, it becomes *tāmm*.

«SELF-SUFFICIENT» | Arabic *muktafiyy*^{an}, Latin *sufficiens*. (A.2.ii.1) = (iii) What is *muktafi* is a «defective» [*nāqīṣ*] that is able to recover what it lacks by means of its own essence, without need of anything external to itself. Under this respect, despite being imperfect, the self-sufficient is contiguous to the perfect.

«ABSOLUTE DEFECTIVE» | Arabic *al-nāqīṣ^a al-muṭlaq^a*, Latin *imperfectum absolute*. (A.2.ii.2) = (iv) By contrast, what is absolutely defective is that which, being imperfect, needs something else to fulfill its shortcomings.

ABOVE PERFECTION | Arabic *fawq^a al-tamāmⁱ*, Latin *perfeccius*. For the sources and the meaning of the expression *fawq^a al-tamāmⁱ* in Avicennan context cf. the details given *supra*, *Metaphysics* II.12, §194. (A.2.i.1) = (v) The explanation of *fawq^a al-tamāmⁱ* as expressing a productive and creative perfection given by WISNOVSKY 2003^a: 191 is particularly pertinent to the reasoning expounded in the present paragraph.

AS IF IT WAS ALREADY SUPERABUNDANT FOR WHAT IS OTHER THAN IT | Arabic *wa-ka-anna-hu faḍila min-hu li-ğayrⁱ-hi*, Latin *et quasi ex superabundancia eius, procedit bonum ad alia*.

TABLE 36. *Second divisio entis*

	(A.2) <i>Second classification of beings</i>	
(A.2.i.1) = (v)	above perfection [<i>fawq^a al-tamām^t</i>]	
(A.2.i) = (i)	↑ perfect [<i>tāmm</i>]	
(A.2.ii) = (ii)		defective [<i>nāqīš</i>]
(A.2.ii.1) = (iii)		↙ self-sufficient [<i>muktafī</i>] ↘
(A.2.ii.2) = (iv)		absolute defective [<i>nāqīš muṭlaq</i>]

[§248] D255.5-23

The present paragraph deals with the third subdivision (A.3) of the Premise announced *supra* in §245. As opposed to the preceding two divisions, this is not a comprehensive *divisio entis*, but rather an articulation of the bodies – which occurs, then, within point (A.1.ii) of the first subdivision, propounded in §246. The bodies can either be simple or composed; the simple, in turn, can either be susceptible of entering a composition, or entirely uncomposable.

THE VILEST OF THE DIVISIONS OF THE EXISTENTS | Cf. *supra*, *Metaphysics* IV.a.1, §246, where precisely the same expression («vilest» [*aḥass*]) occurs.

SIMPLE | Arabic *basīṭ*, Latin *simplex*. In the preceding, cursory occurrence of the distinction between simple and composite bodies (*Metaphysics* I.1, §132), the term employed for «simple» was *mufarrad* (or *muḥrad*) – also used in logical contexts for the ‘simple expressions’, see *Logic* I, §6 – rather than *basīṭ*.

COMPOSED | Arabic *murakkab*, Latin *compositum*.

I MEAN ACCORDING [...] LIKEWISE | Much like the first one of §246, also this «subdivision» [*inḡisām*] is explicitly presented in the first place as a logical articulation, having however an immediate ontological outcome.

UTILITY OF THE INK | For the same example concerning the ink and its composition from «gallnuts» [*‘afṣ*] and «vitriol» [*zāḡ*] cf. *supra*, *MF*, *Logic* V.3, §53, and *Metaphysics* II.2, §177. Cf. the Latin rendition: «sicut utilitas encaustri, que non est in gallis vel atramento» (MUCKLE 1933: 92.2-3).

ANTERIOR TO IT IN THE EXISTENCE, BY RANK AND BY TIME | For the two kinds of anteriority «by rank» [Arabic *bi-l-rutbat^t*, Latin *ordine*] and «by time» [Arabic *bi-l-zamān^t*, Latin *tempore*] cf. *supra*, *Metaphysics* I.4, §154, where however the expression «by degree» [*bi-l-martabat^t*] is used in the place of *bi-l-rutbat^t*. Given however the identical rendition of the Latin translation in the two cases, and the easiness of overlooking the initial *mīm* in the Arabic script, it would be reasonable to presuppose here as well the reading *martaba* for Dunyā’s *rutba*. For the parts of the compound as cause of the

compound cf. *supra*, *Metaphysics* I.5, §156; *Metaphysics* II.2, §176.

DUE TO THE COMPOSITION | I prefer the reading *bi-l-tarkīb* of A over Dunyā's chosen reading *fī-l-tarkīb*.

[§249] D255.24-256.12

Having concluded the treatment of the Premise (with its three subdivisions, §§246-248), the present paragraph introduces the first «pillar» (B.1), which regards what can be inferred from the existence of the moving bodies in the sublunary world. In particular, it concerns the inductive establishment of: (B.1.1) the rectilinear movement, from the acknowledgment of the existence of composite bodies; the existence of two distinct directions, from the rectilinear movement; the existence of a surrounding body, from the distinction of the two directions; (B.1.2) the circular movement, from the existence of the rectilinear movement; (B.1.3) the inclination, the moving nature and the time of the movement.

HAVE BEEN PUT IN CLEAR ORDER | Arabic *tamahhadat*, Latin *cum manifeste fuerint*.

THE SPEECH ABOUT THAT OF WHICH THE INFERIOR BODIES ARE SIGN | Arabic *al-qawl fī-mā yadullu 'alay-hi al-aḡsām^u l-sufliyyat^u*, Latin *diccio de eo quod significant corpora inferiora*.

THROUGH THE DIRECT TESTIMONY [OF THE SENSES] | Arabic *bi-l-mušāhadat^t*, Latin *sensibiliter*. Cf. *supra*, §246, for the usage of the expression «by virtue of the sense» [*bi-l-ḥiss*] to express the same concept. For the notion of *mušāhada* in Avicenna – there rendered with «Experience» (with capital E) as perceptual faculty – cf. GUTAS 2012^a: 428-429 (a very different, and to me less persuasive, reading of the same notion is to be found in SEBTI 2015).

THE RECTILINEAR MOVEMENT | Arabic *al-ḥaraka al-mustaqīma*, Latin *motum...rectum*.

WITH RESPECT TO ITS INTERVAL | Arabic *min ḥaytu masāfat^t-hā*, Latin *secundum spacium sui cursus*.

TWO DELIMITED DIRECTIONS, DIFFERENT BY NATURE | Arabic *ḡihatayni maḥdūdatayni muḥtalifatayni bi-l-ṭab^t*, Latin *duas partes terminatas diversas naturaliter*.

OF A BODY SURROUNDING THEM | Arabic *ḡismⁱⁿ muḥitⁱⁿ bi-hā* (sic pro *bi-himā?*), Latin *corpus circumdans eas*. This surrounding body is since the beginning identified with the «sky» [*samā^t*].

WITH RESPECT TO ITS ORIGIN | Arabic *min ḥaytu ḥudūt^t-hā*, Latin *secundum quod cepit esse*.

INDUCTIVE SIGNS | Arabic *dalālāt*, Latin *significacionum*.

CONCOMITANTS | Arabic *lawāzim*, Latin *que consequuntur eas*.

[§250] D256.13-257.17

(B.1.1) The first concomitant of the composition observed in the sublunary bodies is the rectilinear movement. The rectilinear movement, in turn, needs (and thus entails) the determination of two distinct directions. Since the movement is natural or violent, the two directions are different by nature. Moreover, the two directions are delimited, because the movement needs to stop somewhere and not go on *ad infinitum*. Commenting on this section, JANSSENS 2019: 110 notices as Ġazālīan additions «the explicit mention of the existence of two opposed directions, of the distinction between natural and violent motion, and of the existence of a natural inclination», while remarking however that «all this is evidently in line with Ibn Sinā's view on motion, as expressed in his major works».

A DOMAIN | Arabic *ḥayyīz*, Latin *ubi*.

DUST | Arabic *turāb*, Latin *terra*. Normally, the name of the element «earth» is *arḍ*, not *turāb* – hence the different translation –, but in the *MF* it often happens to read the one *pro* the other, so that it is reasonable to suppose that they were synonymous in al-Ġazālī’s usage.

IN THE *PHYSICS* | Cf. *infra*, *Physics* II. This prospective reference is a conspicuous case of the necessity of anticipating in *Metaphysics* matters proper of natural philosophy, due to the atypical ordering that the *MF* shares with the *DN*. Cf. *supra*, Introduction, §1.4.3.

WAS INSEPARABLE | Arabic *lāzama*, Latin *esset fixum*.

THEY WOULD REMAIN | Although the dot of the *bā’* is almost illegible in my copy of Dunyā’s edition, the correct reading is certainly *la-baqiyā* (cf. Latin *remanent*).

ADJACENT | Arabic *mutaġāwirīna*, Latin *vicina*.

THERE IS NEED, THEN, OF TWO DIRECTIONS, WHICH IS MANIFEST. | Throughout the passage, it is noteworthy that the necessity of the rectilinear movement, and of the two distinct directions, is presented as a logical necessity, rather than as an empirical statement. In this sense, the prospective reference to natural philosophy can appear as weakening the purely metaphysical argument on movement.

NATURAL OR VIOLENT | Arabic *ṭabīʿiyya aw qasriyya*, Latin *naturalis vel violentus*.

AS IT WILL BE EXPLAINED | Apart from the immediately subsequent short treatment, the notions of natural and violent movement will be discussed *infra*, *Physics* I.2, §§321-322.

WERE HOMOGENEOUS | Arabic *tušābihā*, Latin *uterque indifferens esset ei*.

TO FLEE | Arabic *an yahrub^a*, Latin *recedere*.

TO RESEARCH | Arabic *yatlub^a*, Latin *accedere*.

THE FLED DIRECTION IS DIFFERENT THAN THE INTENDED DIRECTION | The notion of a natural movement entails the necessity of two different directions because it presupposes the notion of a (natural, not voluntary) preference of a direction over another. If the two directions were not different by nature and «species» [*naw*], one could not be «intended» [*maqṣūda*], *i.e.* ‘wanted’, ‘researched’ while another is «fled» [*mahrūba*], but the two directions would rather be indifferent. Likewise, if the movement were violent two different directions would in any case be necessary, since the violence «is the consequence of» [*murattib ‘alā*] a nature, and the nature inevitably distinguishes the two directions.

THERE WAS IN IT A NATURAL INCLINATION | *i.e.* in the stone. For the notion of «natural inclination» [Arabic *al-mayl al-ṭabīʿī*, Latin *inclinatio naturalis*] cf. *infra*, *Metaphysics* IV.b.1.4, esp. §262.

IT HAS ALREADY BEEN CLARIFIED | Cf. *supra* in this same paragraph, and the brief hint in the table of contents of §249 *supra*.

A PURPOSE | Arabic *murād*. The use of a teleological terminology in the case of natural, unconscious and thus certainly non-voluntary movements may seem, at best, to be inaccurate, and at worst misleading. The best way to account for such a use is probably that of intending this «purpose» in the sense of a (not finalistic) ‘destination’, much like the Italian ‘meta’ can designate both a generic aim, and the destination of a journey. (The slight tension with a more psychological account – which would of course be out of place in the case of a stone – was however present also *supra* in this paragraph as for the terminology of the «intended direction», expressed by the root *qṣd*).

IT HALTS | Arabic *inqaṭaʿa*, Latin *retinetur*. Cf. also immediately afterwards the designation of the «halting [place]» of the stone with the participle of the same verb, rendered in Latin with the periphrasis *ubi retinetur*.

ITS LIMIT AND ITS END | Arabic *ḥadd^a-hu wa-nihāyat^a-hu*, Latin *terminus et finis eius*. Since the *demonstrandum* of this last part of the reasoning was the feature of being «delimited» of the two directions [*maḥdūdatānī*], the use of the term *ḥadd* – which shares the root with the participle *maḥdūd* – reveals also terminologically the achieved conclusion of the argument: the destination or ‘purpose’ of the movement is its limit, in both directions, so that both directions are limited (and not infinite).

[§251] D257.18-258.21

Three signs for the delimitation of the two directions – *i.e.* the finiteness of every rectilinear movement – are given. The conclusion of the argument is that the directions need a body delimiting them, which opens the way to the second allegation (*infra*, §§252-255).

THE INTELLECTUAL THING | Arabic *al-amr al-‘aqli*, Latin *Id...quod est intelligibile*.

IN A DIMENSION WHICH CAN BE UNDOUBTEDLY POINTED AT WITH THE HAND, WITH A SENSIBLE POINTING | Arabic *fi bu‘d^m lā maḥālat^o mušār^m ilay-hi bi-l-yad^o išārat^m ḥissīyyat^m*, Latin *in longitudine sine dubio eo quod potest manu designari designatione sensibili*. The phrase *mušār ilay-hi* – the ‘pointed at’ – is usually employed in the context of *falsafa* as the Arabic rendition of the Aristotelian Greek τóδε τι, which indicates a particular individual. The further specifications *bi-l-yad* («with the hand») and *išārat^m ḥissīyyat^m* («with a sensible pointing/designation») make it clear that the text is referring here to a rather concrete sensible pointing, although this somewhat concrete operation is actually presupposed to happen only intellectually, given the metaphysical and abstract nature of the overall argument. The three «signs» [*adilla*] here presented all make extended use of the terminology of ‘pointing’ [*išāra, ašāra ilā, mušār ilay-hi*], to the effect of globally expressing the necessity to be able to ‘designate’ a specific, sensible and finite direction of the movement. (i) In the first sign, the action of pointing clarifies the sensible and physical nature of the two directions; (ii) in the second, it shows that an infinite direction would be impossible (since it would be impossible to designate with a sensible pointer); (iii) in the third, it is applied to the higher (or respectively lower) «limit» [*ḥadd*] of the movement, showing the delimitation (and then again the necessary finiteness) of the two directions.

AN INFINITE DIMENSION IS IMPOSSIBLE | Cf. the two arguments against spatial infinity – and in particular against the infinity of distances – provided *supra*, *Metaphysics* I.6, §164. It is noteworthy that the text specifies here that the infinite must be denied independently from any presupposition concerning the «void» [*ḥalā’*] or the «plenum» [*malā’*], since it is impossible under both assumptions. For a refutation of void in the *MF* cf. *infra*, *Physics* I, esp. §§329-331.

A SPECIFIED LIMIT | Arabic *ḥadd^m muta‘ayyan^m*, Latin *ad terminum signatum*.

A PATH | Arabic *sulūk*. The Latin text avoids the translation of the term, by rendering: «Omnis autem pars ad quam motus pervenire non potest» (MUCKLE 1933: 94.3).

INFINITE | Arabic *jayr mutanāhⁿ*, Latin *infinita*.

THE LOWEST OF THE LOW [THINGS] | Arabic *asfal al-sāfilīna*, Latin *infimus omnium*. For the absolute notions of «down[ward]»/«low» [Arabic *al-safī, asfal*, Latin *deorsum*] and «up[wards]»/«high» [Arabic *al-‘abw, a’lā*, Latin *sursum*] cf. also *infra*, *Physics*, I.1, §323, and the summarizing Table 42.

WHICH ARE LOCATED | Arabic *al-wāqi‘a* (see WEHR 1276^b), Latin *que [deorsum] tendunt*.

NECESSARY THAT THAT DIRECTION | *i.e.* the downward direction.

HOMOGENEOUS | Arabic *mutašābiha*, Latin *consimiles*.

AS IT WILL BE EXPLAINED CONCERNING THE IMPOSSIBILITY OF THE VOID | The immediate reference is to the following point (B.1.2) of this first «pillar», §252, where the hypothesis of the void is advanced and immediately said to be absurd, but more particularly to *Physics* I.2, §§325-332, where a fuller treatment of the problem finds place; see esp. §§329-331 for a series of three arguments precisely addressed against the existence of the void.

[§252] D258.22-259.6

(B.1.2) The second allegation, which is said to immediately follow from the first one (§§250-251), deals

with the notion of a surrounding (spherical) body, which must be presupposed in order to be able to account for the differentiation by nature and species of the two aforementioned «directions». After having set the framework, this paragraph excludes the possibility that the difference of the directions may occur in the void. JANSSENS 2019: 110 deems *DN* 124.16-125.6 to be the source of this second allegation, although recognizing al-Ġazālī's changes to the order of the arguments, and his reformulation of some contents in a more concrete way.

THAT GIVES THE LIMIT | Arabic *muḥaddid*, Latin *quod facit terminari*.

THE DIFFERENCE OF THE TWO DIRECTIONS [...] IN SPECIES AND NATURE | The «difference» or 'differentiation' [*iḥtilāf*] of the two directions can only be conceived within a «surrounding» [Arabic *muḥīṭ*, Latin *circumdans*], which is the sphere of the sky (or heaven). This is because only such a structure can assure the «utmost degree» [*ġāya*] of the «distance» [*bu'd*] – represented by the «centre» [*markaz*] – and of the «closeness» [*qurb*] – represented by the «surrounding [surface]» [Arabic *muḥīṭ*, Latin *circumdans complectens* (double translation) / *complectens*] –, *i.e.* the «utmost degree of the difference in species and nature» [*ġāyat^u iḥtilāf^m bi-l-naw^a wa-l-ṭab^a*] between closeness and distance. The Arabic *muḥīṭ* can also mean 'circumference', but in the three-dimensional context of this cosmological explanation it is clear that what is meant is rather the (internal) surface of a sphere. For Avicenna's use (and understanding) of the notion of *muḥīṭ* in the physical treatment of the nature of place cf. the texts quoted in LAMMER 2018: 330-333 and the discussion thereby provided.

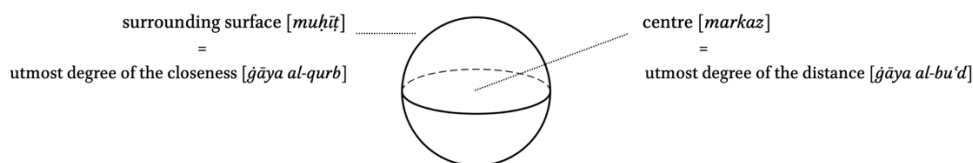
DIFFERENTIATED | Arabic *muḥāliḡ^m*, Latin. A «homogeneous» [*mutašābih*] entity, as the void must be if it is to be conceived at all, cannot have «differentiated» or distinct parts within itself; thus, it cannot sustain the (already shown to be necessary) distinction of the two directions.

SO THAT IT [MAY] SPECIFY | Reading *ḥattā yata'ayyana* (as in BİĠŪ 2000: 137.4) instead of Dunyā's misprint *bi-ta'ayyun*.

[§253] D259.7-22

After the exclusion (§252) of the possibility of the occurrence of the difference of the two directions in the void (i), the present paragraph takes into account the alternative, *i.e.* its occurring in the plenum (ii) – that is, in the body –, either internally (ii.1) or externally (ii.2) with respect to it. In the present paragraph, the case of the (ii.1) internal occurring of the differentiation of the two directions (*i.e.* its occurring within the body) is taken into account. Three possibilities for the establishment of two differentiated directions are considered: (a) the distinction between centre and surrounding surface (the correct one: cf. *supra*, §252); (b) the distinction of two points on the surrounding surface; (c) the distinction of two points on a diameter of the sphere. Cases (b) and (c) are excluded, and (a) is confirmed to be the right solution.

DIAGRAM 4. Structure of the surrounding body [muḥīṭ]



I MEAN IN A BODY | The «plenum» [*malā'*] is immediately identified with the «body» [*ġism*].

HOLLOW | Arabic *muġawwaf^m*, Latin *plenum* (!).

IT DOES NOT PASS BY THE CENTRE | Arabic *lā yamurru 'alā l-markaz'*, Latin *sic ut non transeat per centrum*. [THUS] BEING THE LINE THAT CUTS THE CIRCLE IN TWO DIFFERENT PARTS | Led astray by the reading – shared by *A* – *bi-niṣfayni* for Dunyā's *bi-qismayni mutafāwitayni*, and probably also by a misinterpretation of the referent of the initial explanatory *wa-huwa* («[thus] being», which must be referred to the «difference» [*iḥtilāf*] and not to the «centre» [*markaz*], the Latin version adds in this point a misleading gloss and translates: «Si vero ponatur diversitas partis a circundante ad circundantem sic ut non transeat per centrum scilicet non transeat per diametrum, scilicet, lineam que dividit circulum in duo media ita ut unus punctorum sit diversus ab alio, hoc eciam est inconveniens» (MUCKLE 1933: 95.10-15). Ms. *Y* has the text: «If [rather] the difference of the direction were presupposed from the surrounding [surface] to the surrounding [surface], inasmuch as that [difference of the direction] does not pass by the centre, but rather passes in the circle like the line which subdivides the circle in two distinct parts does, in order for one to [be able to] say, [then]: “One of the two points is different than the other” – [that] would be impossible», which, albeit different and longer with respect to Dunyā's one, basically conveys the same sense.

THE DIFFERENCE BY NUMBER | Arabic *iḥtilāf al-'adad*, Latin *diversitas...numero*.

TO THE HOMOGENEOUS SURROUNDING [SURFACE] | Arabic *min al-muḥīṭ al-mutašābih*, Latin *circundanti consimili*.

OVERSTEPPED | Arabic *ġāwaza*, Latin *transierit*.

[§254] D259.23-260.18

(ii.2) The case of the external occurring of the differentiation of the two direction (*i.e.* its occurring outside the body) is discussed in this and the following paragraph. Two sub-cases are considered, entailing respectively (ii.2.1) one and (ii.2.2) two bodies. (ii.2.1) In the first case, the considered body is taken as a centre, and the different directions are around it. This structure, however, cannot determine two delimited directions, because virtually infinitely many circles (or spheres) can be built on a given centre. (ii.2.2) In the second case, two bodies are presupposed, whose own place delimitation needs to be assessed. The two bodies can either be (ii.2.2.a) similar or homogeneous, or rather (ii.2.2.b) different. If they are similar, being close to one of the two should be the same as being close to the other. If they are different, they should be thought as floating in a homogeneous void (a void extension), which would not be able to account, in turn, for their presupposed difference, leading to a contradiction.

DOMAINS | Arabic *aḥyāz*, Latin *termini*.

THE DISTANCE ALONE [...] SPECIFIES BY NECESSITY ONE CENTRE | Having fixated one given point (here: one given body) as a centre, the choice of different radii – *i.e.* of different 'distances' [sg. *bu'd*] gives rise to infinitely many «distinct» [*mutafāwita*] circles (or spheres). By contrast, a given circumference (or a given sphere) only has one centre.

WE HAVE ALREADY CLARIFIED [...] HAS GOT THE LIMIT | Cf. *supra*, *Metaphysics* IV.b.1.1, §251 [(ii)].

THE INCLINATION OF THIS BODY | Reading *mayl* for Dunyā's *miṭl* (and cf. also KURDĪ 1913: 189), in accordance with the correction already proposed by ALONSO 1963: 183 n. 37. Cf. Latin: «declinacio corporis» (MUCKLE 1933: 96.10).

THE SPECIFICATION OF THE TWO DIRECTIONS | Arabic *ta'ayyun al-ġihatayni*, Latin *diversitatem duarum*

parcium.

THEIR DELIMITATION BY MEANS OF THE TWO | Arabic *taḥaddud^h-humā bi-himā*, Latin *terminare per illas*. think the two [bodies], but the expression *bi-himā* is absent in *A*, and it may be omitted without harm to the sense. The Latin *per illas* (referred to the «directions», Latin *partes*, cf. immediately *supra*) might be intended to translate either the suffix pronoun *-humā*, or the complement *bi-himā*.

BY VIRTUE OF THE DOMAIN | Reading *fi l-ḥayyiz* as in D-Alt instead of *bi-l-ḥayr* printed by Dunyā; cf. Latin: «pocius loco illi in quo est» (MUCKLE 1933: 96.16). The pericope *in quo est* is meant to translate the Arabic *iḥtaṣṣa bi-hi* («by which it is individualized»), in connection with the preceding *iḥtiṣāṣ* («individualization»), rendered as *apropriatum est*.

[§255] D260.19-261.10

Following up on the reasoning of the preceding paragraph, the text considers in this difficult passage two further conceivable cases, such as (i) the place exchange of the two bodies (*A* in the place of *B*, and *B* in the place of *A*) and (ii) the composition or (con)fusion of the two bodies (in a single resulting body *C*). In both cases, the differentiation of the direction would remain stable, from which one can infer that it does not depend on the differentiation occurring between the two considered bodies, but rather follows from the presence of a surrounding spherical body. The impossibility of the rectilinear movement of the surrounding sphere is then declared and discussed.

THE PLACE | Arabic *makān*, Latin *locus*.

REMAINING | Arabic *baqā⁷*.

WAS SUPPRESSED | Arabic *butṭila*.

IT IS INCUMBENT UPON IT | Arabic *yalzamu ‘alay-hi*.

«TEARING» | Arabic *inḥirāq*, Latin *declinacionis* (!). The tearing is defined as «the going of the parts in length and breadth rectilinearly». Cf. also *infra*, *Metaphysics* IV.b.2.3, §276.

FROM THE NECESSITY OF IT | *i.e.* of the difference of the two directions.

AS IT WAS SAID BEFORE | Cf. *supra*, *Metaphysics* IV.b.1.2, §252.

[§256] D261.11-19

(B.1.3) The third allegation deals with the concept of time. As already shown by JANSSENS 2019: 128.2, the Gazālīan discussion on time is based on *DN* 126.4, but with two relevant modifications: the example of the Companions of the cave (occurring in the present paragraph), and the notion of time as measure of the movement of the celestial sphere (for which cf. *infra*, §259). On Avicenna’s conception of time cf. at least MCGINNIS 1999, MAYER 2007, and most recently LAMMER 2018: 429-523 (chapter 6), fundamental for his exhaustive and extremely well-researched treatment of the entire question of time; for a quick overview on the issue, cf. also MCGINNIS 2020.

THE TIME IS THE MEASURE OF THE MOVEMENT | Arabic *al-zamān^h huwa miqdār^h l-ḥarakat^h*, Latin *tempus vero mensura motus est*.

THE COMPANIONS OF THE CAVE | Arabic *aṣḥāb al-kaḥf*, Latin *qui dicuntur dormisse multo tempore in spelunca*. The reference is to *Qur’ān* 18.9-26, which rewrites the tale – already present in the ancient Christian tradition – of the Seven Sleepers of Ephesus: seven youths (but in the *Qur’ān* their number

is indeterminate: cf. 18.22) who fell asleep in a cave, and emerged from it three-hundred years later (cf. 18.25), unaware of the elapsed time. JANSSENS 2019: 110 aptly remarks that the example of the 'People of the Cave' is added by al-Ġazālī, although he references Avicenna's *al-Samā' al-ṭabī'i*, ed. ZĀYID 1983: 152.8 for comparison. The Latin translation makes it explicit that the «Companions of the cave» are famous for having slept a long time in the «cave» [Arabic *kahf*, Latin *spelunca*] that gives them their name, while in the original Arabic the Qur'ānic reference was probably enough to allow every reader to immediately discern the relevance of the example for the treatment of the passage of time.

THE ELAPSING OF A TIME | Arabic *inqidā' zamānⁱⁿ*, Latin *tempus transisse*.

THE ONE WHO WAKES UP [...] MEASURES OF THE TIME | As witnessed as well by the usage of the verb 'to sense' («if the soul did not sense...» [*in lam taḥuss al-nafs*]) *supra*, this is globally a 'phenomenological' analysis of time, that must be read against the background of the Aristotelian one in *Physics* Δ [IV] 11, 218^b21-219^a1 (the qualification of «fenomenologica» is in CASTELLI 2012: 207). Such an analysis has the function, in Aristotle, of showing the inseparability of time and change (μεταβολή), even though the time does not coincide with change. The examples themselves employed here and in the Aristotelian hypotext are equivalent: cf. in particular *Physics* Δ [IV] 11, 218^b21-27. For a thorough historical discussion on the myth of the sleepers in Aristotle cf. CAVAGNARO 2002: 265-272, who reconstructs the origin of the myth of the sons of Heracles and the Thespiades (the fifty daughters of Thespis) arrived in Sardinia together with Iolaus. It remains however at least in part obscure why Aristotle uses «il mito come un esempio di mancanza assoluta di percezione (di movimento) e di tempo» (*ivi*: 271). Likely, however, Aristotle was referencing here different traditions with respect to the ones (mostly oneiromantic and oneirocritic) transmitted to us through other channels (e.g. TERTULLIAN, *De anima* 49: «Si enim et Aristoteles heroem quendam Sardiniae notat incubatores fani sui visionibus privantem...»). The scholarship on the myth of the seven sleepers is inaugurated by the ancient (but still very informative) study by KOCH 1883.

THE ONE WHO WAKES UP | Arabic *al-mutanabbih*, Latin *cum evigilat*.

CEASING OF THE SHIFTING FROM WEST TO EAST OF A SHADOW | Arabic *zawāl^a fay'atⁱ zillⁱⁿ*, Latin *remocionem umbre* (with the omission of the difficult *fay'a*, and a less accurate global meaning).

DUE TO THE HABIT OF THESE MATTERS | Arabic *bi-l-ādatⁱ min hādīhi l-umūrⁱ*. The Latin translation: «ex usu demonstracionis horum» (MUCKLE 1933: 97.21-22) presupposes the reading of A: *bi-l-ādatⁱ min dalālatⁱ hādīhi l-umūrⁱ*.

THE MEASURES OF THE TIME | Arabic *maqādīr^a l-zamānⁱ*, Latin *mensuras temporis*.

[§257] D261.20-262.14

On the basis of the notion of movement, both space and time – as measures of the movement – are defined. While the spatial movement is used merely as a specular example, the attention is focused on the notion of time as potential measure of the movement, or better as the measure of the movement *qua* possibility of traversing a given distance at a given speed.

AND ALTHOUGH THAT WOULD BE MORE APPROPRIATE IN THE *PHYSICS* | Arabic *wa-in kāna dālika bi-l-ṭabī'yyāt alyaq*, Latin *quamvis hoc magis pertineat ad naturalia*. It is very interesting that al-Ġazālī expresses here the idea of the greater appropriateness to the *Physics* of the discussion on time, despite treating it in *Metaphysics* (in agreement with Avicenna's choice in the *DN*). An analogous observation, with its Aristotelian flavour, is absent in the *DN*, and is then probably to be considered as a Ġazālīan addition. I have touched on the poin in the Introduction, §1.4.3.

WHICH PASSES THROUGH A SPECIFIED INTERVAL | Arabic *taqṭa'u masāfat^{an} mu'ayyanat^{an}*, Latin *quod*

pertranseat spacium designatum. For this meaning of the verb cf. also *supra*, *Metaphysics* I.1, §§115-116.

AT A SPECIFIED QUICKNESS, OR A SPECIFIED SLOWNESS | Arabic *bi-sur'at^m mu'ayyanat^m aw buṭ^m mu'ayyan^m*, Latin I translate *sur'ā* as «quickness», rather than with 'speed' or 'velocity', in order to maintain the connection with the adjective *sarī'*.

THAT BEGINS TOGETHER WITH IT | *i.e.* with the originally considered movement.

BETWEEN THE BEGINNING [...] OF THE COMPLETE MOVEMENT | The «possibility» [*imkān*] of a «complete» [*tamma*] movement, and the possibility of half that movement, are, likewise, one the half of the other. The *imkān* here mentioned is to be seen *prima facie* as the possibility of the motion – or better of the moving body – to traverse a certain distance or «interval» of space. A slower movement implies a greater quantity of this possibility, while a quicker movement requires lesser *imkān* to be completed. Cf. on all this MCGINNIS 2020 (section on time).

THESE DELIMITATIONS | Arabic *hādīhi l-tahdīdāt*, Latin *iste...determinaciones*.

DO NOT ANSWER BUT TO A MEASURE | Arabic *taruddu 'alā miqdār^m*, Latin *non fuerint nisi secundum (vel super) mensuram*. The double translation attests to the difficulties of the passage. This «measure» cannot be the movement itself – it does not coincide with «its essence» [*dāt^a-hā*] –, but is rather always «in the movement» [*fi l-ḥarakatⁱ*] and an «attribute» [*ṣifa*] for it.

[THE MEASURE] *QUA* INTERVAL | Arabic *min ḥaytu l-masāfa*, Latin *secundam [sic pro secundum] spacium*. Two kinds of measure, spatial and temporal, are distinguished on the basis of the motion.

«HE WALKS FOR A PARASANG» | For the parasang cf. *supra*, *Metaphysics* I.1, §115. In Latin the Persian measure of length is acclimated to a better known «league»: «unam leuguam» (MUCKLE 1933: 98.9).

[THE MEASURE] *QUA* THE POSSIBILITY THAT WE HAVE MENTIONED | Arabic *min ḥaytu l-imkān allādī dakarnā-hu*, Latin *secundum possibilitatem quam diximus*. Here the «possibility» is for the first time explicitly called «time» [*zamān^{am}*], which brings the «verification» [*taḥqīq*] of the aforementioned (§256) definition of time to its first conclusion. The definition of time will however be further elaborated, and completed *infra*, in §258.

«HE WALKS FOR AN HOUR» | There is perfect parallelism between the two kinds of measure, spatial and temporal, that are distinguished on the basis of the movement: just as the spatial measure is exemplified with a unit of length – the parasang – the temporal measure is exemplified with a unit of time – the hour. This corresponds to the consideration that ordinary language does naturally offer the possibility of completing a verb of motion with either a time complement, or a place one, but for the philosophical understanding of the parallelism between spatial and temporal magnitudes cf. also AVICENNA, *al-Samā' al-ṭabī'ī* II.11.3 (MCGINNIS 2009 (I): 157.5, quoted in LAMMER 2018: 461 fn. 108).

[§258] D262.15-263.6

The complete, Aristotelian definition of time as measure of the movement according to prior and posterior is given. (a) It is not the measure of the moving body, since different moving bodies traverse different distances in the same time; and (b) it does not have to do with quickness and slowness, as witnessed by the example of the motion of the sun in the sky from dawn to sunset, and from dawn to noon (where the quickness is assumed to be the same, but the time is of course different). The only remaining solution is that time is measure of the extension – or 'duration' – of the movement. The concepts of anteriority and posteriority are tightly linked with movement itself.

THIS MEASURED POSSIBILITY IS THE TIME | Arabic *hādā l-imkān^u l-muqaddar^u huwa l-zāmān^u*, Latin *hec igitur possibilitas mensurata est tempus*. Cf. already in §257 *supra* a preliminary identification of time with the measure of the possibility of the movement.

THE MEASURE OF THE MOVEMENT [...] INTO THE ANTERIOR AND THE POSTERIOR | Cf. ARISTOTLE, *Physics* Δ [IV] 11, 219^b1-2: τοῦτο γὰρ ἐστὶν ὁ χρόνος, ἀριθμὸς κινήσεως κατὰ τὸ πρότερον καὶ τὸ ὕστερον («Questo, infatti, è il tempo: numero del movimento secondo l'anteriore e posteriore», Italian transl. CASTELLI 2012: 103). While eliminating the explicit mention of a 'number', the Arabic text crucially adds the idea of a subdivided «extension» or 'magnitude' [*imtidād*], for which cf. *supra*, §257, the explanation on the divisibility of the «possibility» [*imkān*] of the movement. The Avicennan idea of time as a magnitude is indeed at odds with a purely Aristotelian account of time, albeit being warranted by some Aristotelian indications and some Peripatetic reworkings, first of all the one provided by Alexander of Aphrodisias: cf. LAMMER 2018: esp. 460. For the general notions of anterior and posterior – which also apply to non-temporal orderings – cf. also *supra*, *Metaphysics* I.4, §§154-155, and *infra* in this paragraph. The generality of these notions is crucial to counter any accusation of circularity historically opposed (for instance by Galen) to the Aristotelian definition of time: on Avicenna's attention to the issue cf. LAMMER 2018: 462-477 (ch. 6.2, *The Before and After*).

THE MOVEMENT OF THE ELEPHANT AND OF THE CHINCH | Arabic *ḥarakat^u l-filⁱ wa-l-baq^q*, Latin *motus cervi, et formice*. (a) Despite replacing both the Arabic animals with different species – the elephant with the 'deer' (or 'stag', *cervus*), and the chinch with the 'ant' (*formica*) –, the Latin rendition is able to convey the substance of the example, which means to counterpose a fast (and big) animal to a very small (and thus necessarily slower) one, in order to affirm that two movements which share their time (their «possibility» to traverse a spatial magnitude, cf. *supra*) do not necessarily share also the actually traversed space. This is made explicit, leaving aside the zoological examples, with the following reference to movements of respectively one and two parasangs which might be performed in the same amount of time. For the two examples, and the Latin variations on them, cf. the Introduction, §1.8.1.2.

SINCE THE TWO MOVEMENTS [...] IN THE TIME | (b) Conversely, when two movements are «concordant» [*muttafiqatāni*] in the quickness, they may still differ as for their time: for instance, the movement of the sun in the sky from «[sun]rise» [*tulū*] to «sunset» [*gurūb*] has of course the same speed of its movement from «dawn» [*šurūq*] to «noon» [*zawāl*] (*i.e.* of «the half of itself», as it is glossed immediately afterwards), but it is not performed in the same time. For Avicenna's denial of the possibility that time might be quicker or slower cf. *al-Samā' al-ṭabī'ī* II.10.8-9 (MCGINNIS 2009 (I): 152.1-17); for the Aristotelian hypotext cf. *Physics* Δ [IV] 10, 218^b9-20 (and see LAMMER 2018: 500 and fn. 235).

THE ABUNDANCE [...] PAUCITY OF IT | After having excluded the connotation of time in terms of (a) measure of the moving body and (b) quickness and slowness, the definition given at the beginning is reprised. Time is then said to be directly proportional to the «extension» [Arabic *imtidād*, Latin *distensionis*] of the movement, so that the «abundance» [Arabic *katra*, Latin *magnitudo*] and the «paucity» [Arabic *qilla*, Latin *parvitas*] of the one entail the abundance and the paucity of the other. THE DURATION OF THE LOCAL MOVEMENT | Arabic *mudda al-ḥaraka al-makāniyya*, Latin *mora motus localis*. The Arabic *mudda* shares the root with *imtidād*, despite being normally associated, in modern usage, precisely to temporal – rather than to spatial – extension. The rendition does not want however to charge the term of an already temporal connotation, which might entail an unwanted circularity in the definition of time (in any case not present, in all likelihood, in the original text). The explicit reference made here to the «local» movement – *i.e.* movement with respect to the category of «where», cf. *supra*, §128 – raises a possible problem with respect to the subsequent identification (*infra*, §259) of the movement of the (outermost) celestial sphere as the standard and criterion for time, given that that movement is not strictly speaking a local movement, but a 'positional' one (MCGINNIS 2006^c: 159; MCGINNIS 2020, §3.3.2); cf. indeed the more accurate usage of *al-ḥaraka al-waḍ'īyya* on the part of Avicenna in *al-Samā' al-ṭabī'ī*, II.11.2 (MCGINNIS 2009 (I): 156.16), discussed in LAMMER 2018: 340 and fn. 110; 502 and fn. 239. Cf. *infra* the introduction to §259 for further information on the issue.

ANTERIOR AND POSTERIOR | It might be useful to the comprehension of the text what CASTELLI 2012: 218-

219 writes concerning Aristotle's definition of time: «la percezione del movimento è percezione di (almeno) due momenti distinti in una certa successione. Quando percepiamo anteriore e posteriore, allora parliamo di tempo». There is a concomitance of occurrence between movement and time, precisely by virtue of the possibility of distinguishing two 'moments', *i.e.* a «before» and an «after». The concomitance between the two had already been posited *supra*, §256, at the beginning of the third allegation.

THE DWINDLING | Arabic *al-taṣarrum*, Latin *ex hoc...quod...finitur*.

THAT WHICH IS SIMULTANEOUS | Arabic *mā yuqārinu*, Latin *quicquid fuerit simul*.

[§259] D263.7-17

The present paragraph concludes the treatment of the notion of time in the *MF* by identifying the motion of the – outermost – celestial sphere as the standard, or criterion, for all the movements of which the time is measure (in *Physics* Δ [IV] 10, 218^a34-^b5, Aristotle had committed precisely to deny the identification of the time with the motion of the whole). JANSSENS 2019: 110 and fn. 103 deems this reference to be a Ġazālian addition, but references a passage of the *K. al-Naǧāt* (ed. DĀNIŠPĀZŪH 1985: 231.4-5) as a comparable text. However, there are quite clear passages also in the *K. al-Šifā'* to the effect that there would be no time without the circular motion of the outermost sphere: cf. in particular *al-Samā' al-ṭabīʿī* II.13.3 (MCGINNIS 2009 (I): 168.8-169.1), and the further passage from *al-Samā' wa-l-ʿālam* 4 (ed. QĀSIM 1969: 28.8 ff.) – to be also compared with *Išārāt* II.6.16 (ed. FORGET 1892: 165.1 ff.) – quoted together with it in LAMMER 2018: 504 and fn. 249. The innovation of the circular motion of the sphere as determining for the understanding of the notion of time – somehow hinted at in *Physics* Δ [IV] 14, 223^b21-23, but actually against the spirit of the Aristotelian definition – was in any case already well-established in the Arabic Peripatetic tradition thanks to Alexander of Aphrodisias' *Treatise on Time* [*Maqāla al-Iskandar al-Afrūdīsī fī-l-zamān*] (lost in Greek, but translated from Arabic into Latin by Gerard of Cremona and edited in THÉRY 1926): for our issue cf. esp. the passages edited in BADAŪI 1971: 20.12-14; 22.2-4, quoted and discussed respectively in LAMMER 2018: 452 and 495.

STANDARD | Arabic *mī'yār*, Latin *mensuracionem* (perhaps reading **miqdār* pro *mī'yār*).

CUBIT | Arabic *ḍirā'*, Latin *cubitum*. According to the common understanding of the dictionaries, the *ḍirā'* is a unit of measure of length, of variable standard, from 0,525 m to 0,8 m (cf. WEHR 356^b-357^a).

GARMENTS | Arabic *ṭiyāb*, Latin *panni*.

THE DAILY MOVEMENT OF THE [HEAVENLY] SPHERE | Arabic *ḥaraka al-falak al-yawmiyya*, Latin *motus celi diurnus*.

THE QUICKEST OF THE MOVEMENTS [...] ARE SENSED | The reasons why the motion of the outermost sphere is the criterion for all the other movements – and thus for time as measure of the movements – are its being the «quickest» [Arabic *asra'*, Latin *velocior*] and the «most apparent» [Arabic *azhar*, Latin *manifestior*] for the entire creation. These reasons are precisely those given for the preeminence of the celestial motion in Alexander of Aphrodisias' *Maqāla fī l-zamān*, cf. BADAŪI 1971: 21.1-3 (cf. in particular the use of the comparative *asra'*), building on Aristotelian texts like *Physics* Δ [IV] 14, 223^b20 – where the number of the motion of the sphere is said to be γνωριμώτατος – and *Metaphysics* A [I] 1, 1053^a8-12 or *De caelo* B [II] 4, 287^a23-26, where a certain priority is accorded to faster movements with respect to slower ones. For the discussion of the issue and the quoted texts cf. LAMMER 2018: 498-499.

«TIME», THEN [...] WITH THE POSTERIOR. | The final reformulation of the definition of time explicitly includes the reference to the motion of the sphere. For this practice of including Aristotle's

«afterthought» of *Physics* Δ [IV] 14 into the very definition of time of Δ [IV] 11 (for whose formulation in the *MF* see *supra*, §258), cf. LAMMER 2018: 498 and fn. 230.

[§260] D263.18-264.2

(B.1.4) The fourth allegation is almost entirely Ġazālīan. JANSSENS 2019: 110 says that al-Ġazālī «might have found a basic source of inspiration in the opening lines of DN c. 45 (DN 125,15-126,5)», but the actual discussion is proper to the *MF*. Janssens declares himself unable to detect a precise source in Avicenna, although he references (*ivi*: 110 fn. 104) *al-Samāʿ al-ṭabīʿī* IV.12 (MCGINNIS 2009 (II): 485-496) as «the closest Avicennian text to this section». As will be clear from what follows, that chapter is indeed crucial to the arguments advanced by al-Ġazālī up to §263, although an even closer source appears to be *Iṣārāt* II (FORGET 1892: 109-110 = DUNYĀ 1971: 290-295; cf. *infra* §§262-263 for the relevant portion of the text). The topic of the present paragraph is the analysis of the three interrelated but different concepts of (a) movement, (b) inclination, and (c) nature. The three notions are presented in their reciprocal distinction thanks to the consideration of the different behaviours held in different situations by a skin filled with air.

MOVEMENT | Arabic *ḥaraka*, Latin *motus*. The relationship between the movement, the inclination, and the nature is such that the movement necessarily entails the inclination, which is in turn produced by the nature. When the skin is immersed and left free to move, all three elements are perceivable, but the movement can be blocked without harm to the inclination (when the skin is held underwater), and the inclination itself can be inactive (when the skin is out of the water), but the nature, which produces the inclination (and in turn also the movement), is always present even though its effects may be not visible.

NATURE | Arabic *ṭabʿ*, Latin *natura*.

INCLINATION | Arabic *mayl*, Latin *inclinacio*. For a first, informative overview of the notion of *mayl* in Avicenna's natural philosophy cf. HASNAWI 1984: esp. 103-107 (see in particular the useful summarizing table of the kinds of *mayl* at p. 107); cf. *ivi*: 108-116 for two more specific applications of the notion to problems of dynamics (projectile motion and acceleration of the falling bodies). The connection of the inclination with the «nature», *i.e.* the specific form of the moving body, and its being «principle and potency» [*mabdaʿ wa-quwwa*] for the movement are highlighted in HASNAWI 1984: 103-104 (and 119 fnn. 9 and 12) with reference to passages from Avicenna's *al-Samāʿ al-ṭabīʿī* IV.12.1 (MCGINNIS 2009 (II): 485) and *al-Kawn wa-l-Fasād* (QĀSIM 1969: 131). From Hasnawi's analysis it emerges that Avicenna's *mayl* can be (i) natural [*ṭabīʿī*], (ii) psychic [*naḥsānī*] or (iii) violent [*qasrī*], and that it can be conceived both as (a) the tendency towards the natural place and – by the same token – as (b) the resistance opposed by the body to violent movement (*i.e.* to the movement contrary to its natural motion). Meaning (b) will be particularly important *infra*, §§261-262, in the demonstration of the fact that every body is endowed with an inclination. (In an entirely different context, a reference to *mayl* is also to be found in Avicenna's *K. al-Šifāʿ, Ilāhiyyāt* III.9, ed. QANAWATĪ-ZĀYID 1960: 150-151, within an anti-atomistic proof of the existence of the circle). For the topic of the Fourth treatise of the *Metaphysics* of the *MF*, the *mayl naḥsānī* enjoyed by the celestial bodies – thanks of course to the mediation of their souls – will be particularly relevant: cf. esp. HASNAWI 1984: 106, and also JANOS 2011: 206 fn. 114 for a synthesis and further bibliographical references (concerning in particular the notion of *mayl* in the Arabic Alexander and in John Philoponus). The term *naḥsānī* also appears in relation to the celestial motions in Avicenna's *Iṣārāt*, ed. 135/252-253, and it is also reprised by al-Rāzī, *al-Mabāḥiṭ al-mašriqiyya* II, 106-107.

THREE HETERONYMOUS MATTERS | Arabic *ṭalāṭa umūr mutabāyina*, Latin *tria diversa*. For the technical

logical notion of «heteronymous» things, namely things that have different names and different definitions, cf. *supra*, *Logic* I, §9. In the present context, also the common sense of the Arabic term as «mutually different» would however have been appropriate, and such was indeed the choice of the Latin translators.

SKIN | Arabic *ziqq*, Latin *utrem*. An example concerning the behaviour of a skin full of air (although not immersed in water, but compressed by hand) is to be found in Avicenna's *K. al-Šifā', al-Af'āl wa-l-infi'ālāt* [*On Actions and Passions*], I.8, ed. QĀSIM 1969: 236. It is noteworthy that the word *ziqq* is translated with the Latin *uter* also in that context: cf. *Liber quartus de naturalibus*, ed. VAN RIET 1989: 53.32-33. Interestingly, MCGINNIS 2009 (II): 487.1-4 uses a similar idea – that of a «bladder» full of air – to gloss Avicenna's not entirely perspicuous expressions «a little air» [*al-hawā' al-qalīl*] and «a lot of air» [*al-hawā' al-kaṭīr*] in his translation of *al-Samā' al-ṭabī'ī* IV.12.2: «So [for example] displacing a large, heavy stone is not like displacing a small, little one, and pushing a little air [such as a partially inflated bladder] under water is not like pushing a lot of air [such as a fully inflated bladder]».

ITS STRUGGLE AGAINST YOUR HAND | Arabic *taḥāmul-hi 'alā yad-ka*, Latin *quod resistit manui tue*. The presence of the «inclination» [*mayl*] in the body is made manifest by the resistance it opposes to the motion contrary to its natural one, or else to the force that opposes its natural movement (in this example, the hand that forces the skin underwater). The same concept is expressed by Avicenna in *al-Samā' al-ṭabī'ī* IV.14.5, MCGINNIS 2009 (II): 507: «[...] the inclination is what one sensibly perceives when one forcibly tries to bring to rest some natural or forced [motion]. In this case, one senses the pushing power [...]; cf. HASNAWI 1984: 104 (concepts of *mu'āwaqa* and *mumāna'a*). A very similar idea is also present in *al-Samā' al-ṭabī'ī* IV.12.2, MCGINNIS 2009 (II): 486.27-487.1: «Whenever there is an increase in their inclination, their ability to produce locomotion is slower».

[§261] D264.3-15

Building in particular on the couple movement/inclination of the preceding §260 – and thus leaving for the time being aside the basic notion of nature – the paragraph states that every composite body is susceptible of motion, and that every motion is due to an inclination. A body devoid of inclination is impossible, because it would entail a movement not in time, which is in turn impossible: cf. *infra*, §§262-263.

INTENT | Arabic *maqṣūd*, Latin *nichil aliud intendimus nisi*.

EVEN IF ITS NATURE WERE REMOVED [FROM IT] | Arabic *law ḥulliya wa-ṭab^{at}-hu*, Latin *si permittatur nature* (sic pro **permutatur natura?*). Cf. *supra*, *Logic* III, §31, for an analogous structure with *law... wa-*.

AN INCLINATION TO IT | Reading *ilay-hā* as in D-Alt for *ilay-hi* printed by Dunyā. The personal pronoun must indeed refer to the «direction» [*ḡiha*] mentioned *supra*.

IT WOULD INCLINE | *i.e.* the hypothetical body that is here at stake; in the preceding example, the «skin».

FROM THIS IT WOULD FOLLOW | Arabic *yalzamu 'alay-hi*, Latin *sequeretur enim ex hoc*; *i.e.* from the assumption of a body devoid of inclination. The structure *lazima 'alā* would have the meaning of 'being incumbent upon', but the meaning of the sentence seems to require the sense of *lazima min*.

THAT WHICH LEADS TO [THIS CONCLUSION] IS [ALSO] IMPOSSIBLE. | Arabic *mufḍī*, Latin *illud igitur ex quo hoc sequitur*; *i.e.* precisely the assumption of a body devoid of inclination. The reasoning here presented (and concluded in the following two paragraphs) is organized along the lines of a *reductio ad absurdum*: if we assume a composite body as devoid of inclination, its composition, necessarily deriving from at least a non-natural movement (*i.e.* away from the natural domain of the body), should have obtained thanks to an atemporal (or instantaneous) motion. This is because the *mayl* of the body holds and slows down the forced or violent movement (as it is explained shortly afterwards

in §262). If however an atemporal motion is impossible, the hypothesis itself – *i.e.* the assumption of a body devoid of inclination – will be impossible, and the possession of a *mayl* (at least potential) will be demonstrated for every body. What follows aims precisely at showing (a) that an atemporal motion would necessarily be entailed by the assumption of a body devoid of inclination (§262), and (b) that an atemporal motion is impossible (§263). For the explanation of the argument, and its apt qualification as «un raisonnement *per impossibile*», cf. also HASNAWI 1984: 105.

[§262] D264.16-265.13

(a) The first objection to the argument *per impossibile* advanced at the end of the preceding §261 challenges the idea that the assumption of a body without inclination would necessarily entail the existence of an atemporal, or instantaneous, motion. The answer is an argument aimed precisely at substantiating that conclusion, which goes as follows: let B_1 be a body without inclination ($m_1 = 0$), and B_2 a body endowed with a certain degree of inclination (m_2); if B_1 receives such a violent impulse as to be forced to move against its natural direction of a certain distance d , in a certain time t_1 , the same impulse applied to B_2 would necessarily produce a slower movement to traverse the distance d , let's say t_2 . It is certain, then, that $t_1 < t_2$, and let's say for instance that $t_1 = 1/10 t_2$ (*). It is then possible to conceive a third body, B_3 , whose inclination m_3 is exactly one tenth of m_2 ($m_3 = 1/10 m_2$). Given the assumed direct proportionality between inclination and time ($m_3/m_2 = t_3/t_2$), it must be true that the time t_3 – in which B_3 traverses d – is one tenth of t_2 ($t_3 = 1/10 t_2$). But then, for (*), $t_3 = t_1$, which was the time spent to traverse d by the body B_1 , whose *mayl* was null by hypothesis. A body endowed with a certain *mayl*, then, will have the same speed of a body entirely devoid of *mayl*, which is absurd. The only escape to this conclusion would be precisely to accept that $t_3 = t_1$ is an atomic, *i.e.* indivisible amount of time. This is not made explicit in al-Ġazālī's text, but one could surmise that, under this account, the inclination m_3 of B_3 would be interpreted to be so small as to make B_3 behave, to all effects, just like the body without inclination B_1 , *i.e.* to make it move of the distance d in an atomic, not further divisible interval of time (that is, a null amount of time, so that such a movement would be instantaneous). The next paragraph (§263) will precisely discard the possibility of an indivisible or atomic quantity of time, so that the hypothesis of a body devoid of inclination will be conclusively invalidated. The idea that a body devoid of inclination would be subject to instantaneous movement is expressed in *al-Samā' al-ṭabī'ī* IV.12.1, MCGINNIS 2009 (II): 486.12-17:

So, when the body is forcibly removed from its natural place, it necessarily follows that it undergoes motion [back] toward its natural place once the external agent acting by force is removed. Something else that proves this is that any body in which there is no principle of inclination would undergo locomotion from a given *where* or position that it has instantaneously, which is absurd.

Even more to the point, a very similar reasoning to the one conducted here by al-Ġazālī is to be found in *al-Samā' al-ṭabī'ī* IV.12.2, MCGINNIS 2009 (II): 488.5-22:

So the ratio of the distances and times covered by things undergoing motion — both those moved by force and those having a natural inclination — is proportional to the relation between one inclination and another, except that the periods of time are inversely proportional to the distances. In the case of distances, the more intense the inclination, the greater the distance covered, whereas, in the case of time, the greater the inclination, the shorter the time. Now, if there is absolutely no inclination, and [if] the forcibly moved object is moved for a period of time, and [if] that period of time is proportional to a given time of a motion possessing a forced inclination — in which case it is proportional to a given ratio of one inclination (should it exist) to an inclination possessing the inclination of the forcibly moved object — then what has absolutely no inclination in it would be just as susceptible to the force as what does have a given inclination (should it exist). In that case,

however, what has no impediment would be proportional to what does have some impediment (were it to exist), thus resulting in a contradiction exactly like the one we addressed in the case of the void, and for the very same reason.

The clearest formulation of this same argument is probably to be found, however, in Avicenna's *Iṣārāt* II (FORGET 1892: 109-110 = DUNYĀ 1971: 290-295), quoted and translated in French in HASNAWI 1984: 106, and in English in MCGINNIS 2009 (II): 488 fn. 5:

Indication: the body in which there is neither a potential nor actual inclination is not susceptible to a forcible inclination by which it is moved, and, in general, it will not be forcibly moved. If this were not the case, then let x be forcibly moved in a given time [t_1] [and along] a given distance [d_1] and let y , for example, in which there is a given inclination and resistance [i_1], be moved. Clearly, then, y will be moved [d_1] in a longer time. Now, let z [have] an inclination [i_2] weaker than that inclination [i_1] which, as a result of the same mover, covers a [greater] distance [d_2] in the same time [t_1], whose ratio to the first distance [d_1] is the ratio of the time as [*sic*] the one possessing the first inclination [t_2] and the time of the one lacking the inclination [t_1] such that it is forcibly moved the same distance in the same time of the one lacking the inclination. Thus, there will be two forced motions [x and z], z having a resistance in it and x not having a resistance in it, that are of comparable states with respect to speed, which is absurd.

Note: You must note here that there is not some indivisible time [i.e., 0 amount of time] such that, during, it a certain motion having no inclination might occur and would have no ratio to a given time of a motion possessing an inclination.

The argument expounded in the present §262 corresponds in particular to the 'pointer' or «indication» [*iṣāra*], while the «note» or 'reminder' [*tanbīh*] corresponds to the denial of the atomic time, which al-Ġazālī will undertake in the following §263. This twofold affinity of pointer and subsequent reminder makes the passage of the *Iṣārāt* closest to the formulation of the *MF*. HASNAWI 1984: 119 fn. 23 also recalls the presence of a somewhat similar argument in Aristotle, *De caelo* Γ [III] 2, 301^b1-17, which might well be the remote source of Avicenna's reasoning on the issue.

THAT INCLINATION | *i.e.* the natural *mayl* of the body, as opposed to the violent *mayl* impressed by the force that makes the body move upwards, away from its natural place.

RESISTS | Arabic *kāna...muqāwim^{an}*, Latin *resistens*.

THE FORCED SETTING INTO MOTION | Arabic *al-taḥrīk al-qahrī*, Latin *mocionis violente*.

FOR TEN CUBITS | Arabic *ʿaṣarat^a adru^{an}*, Latin *decem palmos* (but cf. *supra*, §259, the more accurate rendition of the same Arabic term, *dirāʿ*, with the Latin *cubitum*). This corresponds to the given distance (d) traversed by the body devoid of inclination (B_1).

LET US CALL IT AN HOUR | Arabic *fa-l-nusamma-hu sāʿat^{an}*, Latin *dicatur hora*. This is time t_1 – that is, the time spent by B_1 in traversing d .

THE RELATION OF THE TIME [...] TO THE INCLINATION | This is the relation of direct proportionality that I have expressed *supra*, in the introduction to the passage, with the formula $m_3/m_2 = t_3/t_2$. Cf. also HASNAWI 1984: 119 fn. 23.

RATHER, JUST LIKE IT IS IMPOSSIBLE [...] *A FORTIORI* | Amount of inclination and time spent to perform a certain movement are proportional (directly, if we consider a violent movement – because in that case the natural inclination opposes itself to the movement). Thus, any variation in one of them entails, *caeteris paribus*, a variation in the other, so that it is clearly impossible to fixate one while changing the other. If an inclination is null ($m_1 = 0$) and another one quantified ($m_3 > 0$), it is all the more impossible [*awlā*] that the two movements thereby produced are «equivalent» [*yatasāwiyā*], because in such a case there is not merely a passage between different quantities, but rather an

ontological gap between the «non-existence» (of the inclination) [*adam*] and its «existence» [*wuġūd*].

[§263] D265.14-266.10

As mentioned *supra* (§262), the second objection raises doubts against the alleged impossibility of an atomic quantity of time, and namely against the impossibility of an instantaneous motion. As shown before, such an impossibility is however a crucial premise for the validity of the entire argument aiming at excluding the existence of a body devoid of inclination. It is interesting to notice that in Naṣīr al-Dīn al-Ṭūsī's (d. 1274) commentary on Avicenna's *Iṣārāt* – given in the lower margin of the page in the edition by DUNYĀ 1971 –, the *tanbīh* concerning the absurdity of the indivisible part of time (see *supra*, §262) is considered to be a necessary condition for the validity of the preceding *iṣāra*: cf. DUNYĀ 1971: 290, discussed in HASNAWI 1984: 106 and 119 fn. 24. The paragraph is concluded by a recapitulatory statement concerning the necessary divisibility of distances (space), movement, time, and bodies, in none of which an atomic entity is conceivable.

INDIVIDUAL SUBSTANCE | Arabic *ġawhar fard*. For this *kalāmī* way of designating the atom cf. *TF*, Discussion 18, MARMURA 2000: 183 and *supra*, *Metaphysics* I.1, §110. Cf. the Latin rendition, with a double explanatory translation: «substancie in pares, (*sic*) id est, indivisibiles» (MUCKLE 1933: 101.13-14).

WE HAVE ALREADY MENTIONED [...] EVERY DISTANCE IS DIVISIBLE | Dunyā *ad locum* refers to the demonstration of the impossibility of the spatial infinity expounded *supra*, *Metaphysics* I.6, §164. For the divisibility of the body cf. also *supra*, *Metaphysics* I.1, §§119-120. The argument for the divisibility of time (against its 'atomic' understanding) proceeds from the divisibility of the movement, in turn depending on the divisibility of space. Since time is measure of the movement (*supra*, §§257-258).

SECTION | Arabic *ṣaṭr*, Latin *cubitus* [!].

WHEN THE ANTERIORITY AND THE POSTERIORITY RESULT, THE TIME ALREADY RESULTS | Cf. in particular the 'complete' Aristotelian definition of time given in §258 *supra*.

AN ATOM | Arabic *ġuz' fard*, Latin *pars aliqua indivisibilis*.

AS IT WAS SAID BEFORE | The backward reference recalls the series of the six geometrical proofs against the atoms advanced *supra*, *Metaphysics* I.1, §§111-116.

[§264] D266.11-267.2

(B.1.5) The fifth allegation concerns the rectilinear movement of the composite sublunary bodies. This is because every sublunary body has a natural place, to which it tends with the shortest of the possible paths. For JANSSENS 2019: 110 the argument is a «slightly reworded version» di *DN* ed. MO'IN 1952: 130.3-14.

A RECTILINEAR MOVEMENT | Arabic *ḥaraka mustaqīma*, Latin *motu recto*.

A NATURAL PLACE | Arabic *makānⁱⁿ ṭabī'iyⁱⁿ*, Latin *loco naturali*. For the technical Peripatetic notion of «natural place» cf. also *infra*, *Physics* II, §§355-356.

ITS NATURE SETTLES DOWN IN IT | Arabic *ṭab^u-hu istaqqarra fī-hi*. Cf. Latin: «Si enim dimissum fuerit naturaliter in ea parte que attributa est ei, quiescet in ea» (MUCKLE 1933: 101.31-32).

THE RESEARCHED SPOT | Arabic *al-mawḍi‘ al-maṭlūb*, Latin *locus quem appetit*.

TO ITS NATURAL SPOT | I provisionally translate the reading of the ms. consulted by Dunyā: *ilā mawḍi‘-hi al-ṭabī‘ī*, instead of the reading *ilā mā waḍ‘^a-hu al-ṭabī‘ī* chosen by Dunyā, which seems to me unnecessarily complicated, without giving a better sense.

SEPARATION | Arabic *mufāraqa*, Latin *Separatus igitur*.

REST | Arabic *sukūn*, Latin *quiescet*. The opposition of rest and movement – already presented as such *supra*, *Metaphysics* I.3, §152 – will of course be crucial in natural philosophy, from the very determination of its subject-matter: cf. *infra*, *Physics*, Preface, §315; cf. also *infra*, *passim*, for instance *Physics* I, §329.

BY THE SHORTEST OF THE ROADS | Arabic *bi-aqrab’ l-ṭuruq*, Latin *via que propinquior est*.

IF IT DEVIATED | Arabic *in ḥarafa*, Latin *si reflectitur*. Every deviation from the shortest path to the natural place, *i.e.* the rectilinear one, would entail a departure from that place (which contradicts its very definition as the place to which the body naturally tends).

WHEN IT HAS BEEN ESTABLISHED [...] SURROUNDING [SURFACE] | The conclusion of the paragraph reconnects with the preceding discussion on the distinction of the two directions on the basis of a centre and a circumference (in two dimensions), or better a spherical surface (in three dimensions): cf. *supra*, §§252-254.

THE MIDDLE | Arabic *wasṭ*, Latin *centro*. As made explicit in the Latin translation, it is clear from the preceding discussion that the «middle» here mentioned stands for the more technical (geometrical) notion of «centre» [*markaz*].

[§265] D267.3-268.3

(B.1.6) The sixth allegation considers the origin of the sublunary rectilinear movements, retracing it in the perpetual circular movement of the heavenly sphere. The demonstration builds on the preceding treatment of the infinity of the causal chains (*supra*, §165), and finds in the perpetual movement of the skies the continuous sequence of causes that can explain the origin of the originated movements in the sublunary world, and with them of all the sublunary things and events.

IS A SIGN OF [...] CELESTIAL MOVEMENT | The pericope of text comprised between *tadullu ‘alā* («is a sign of») *al-ḥaraka al-samāwiyya al-dawriyya* («the circular celestial movement») is not translated in Latin, which reads: «Sentencia sexta est quod motus secundum quod cepit est scilicet, motus horum compositorum, et omnis [*wa-kull A, fa-kull Dunyā*] motus qui cepit, significat esse motum perpetuum sine fine» (MUCKLE 1933: 102.14-16). Exactly the same textual asset, whose long omission is not immediately explainable with the mechanical error of a *saut du même au même*, is also witnessed in the reading of D-Alt as reported by Dunyā.

WHEN THEN THE ORIGINATED ARE BEING | Arabic *wa-idā kānat al-ḥawādīṭ^u kā’inat^{an}*, Latin *postquam igitur ea quae ceperunt esse sunt*.

BECAUSE OF THE CAUSE’S NEED OF A FURTHER CIRCUMSTANCE AND CONDITION | Arabic *li-ftiqārⁱ l-sababⁱ ilā mazīdⁱ ḥālatⁱⁿ wa-ṣarīṭatⁱⁿ*, Latin *ex defectu alterius dispositionis, et cause que addenda est ei, et condicionis*. The Latin translation seems to witness an inversion between *sabab* and *ḥāla* with respect to Dunyā’s edited text, without harm however to the sense, since the «circumstance» and the «condition» added to the cause initially considered are precisely to be seen as a further ‘cause’ that enables the activity of the first one. I have interpreted *mazīd* as a verbal noun from *zāda* in the sense of ‘to add’ (cf. WEHR 451^b and LANE 1282^b) – hence the partially free translation with the adjective «further» –, since the meaning of ‘excess’, ‘superabundance’, attested in WEHR 452^b, appears to me less to the point in the present context.

BRINGING INTO EXISTENCE | Arabic *īḡād*, Latin *debere esse*.

NECESSARILY FOLLOWS | Arabic *lāzim*, Latin *adhuc restat*. The necessity of an explanation for the coming to be of the causality in a certain moment in time, and not before, has simply been shifted from the first considered «cause» [*ṣabab*] to the «condition» [*ḥāla*] – in itself a cause – which enables the first cause's causal action. The question concerning the reason «why it originates now, while it had not originated before» [Arabic *limā ḥadaṭat al-ān^a, wa-lam taḥdaṭ qabl^a-hā*, Latin *cur est modo, et non prius, egebit igitur causa*], thus, remains to be posed.

REASONS | For this rendition of *ʿilal* when coupled with *asbāb* cf. *supra*, *Metaphysics* I.5, §156 (and see also *Metaphysics* III, §211). Cf. also the Latin translation: «ille cause, et occasiones» (MUCKLE 1933: 102.29).

EITHER THEY ARE SIMULTANEOUSLY EXISTENT ACCORDING TO AN INTERRELATION | Arabic *immā an takūn^a ʿalā l-tasāwuqⁱ mawḡūdat^{an} ma^{an}*, Latin *habeant esse simul*. (a) Cf. *supra*, *Metaphysics* I.6, §165, for the demonstration of the self-contradictoriness of the notion of a complex of simultaneously existent causes without a further cause (which would end the causal chain).

OR [THEY ARE] ACCORDING TO A SUCCESSION | Arabic *wa-immā ʿalā l-taʿāqubⁱ*, Latin *vel per successionem*. (b) The causes of the originated sublunary movements are said to be according to a «succession» [*taʿāqub*], which is glossed immediately afterwards as a «continuous sequence» [Arabic *talāḥuq*, Latin *successio*]. This «uninterrupted» [Arabic *muṭṭarida*, Latin] sequence can only derive «by virtue of a perpetual movement» [Arabic *bi-ḥarakatⁱⁿ dāʿimatⁱⁿ*, Latin *per motum perpetuum*].

EVERY PART OF WHICH IS AS IF IT HAD AN ORIGIN | Arabic *kull^u ḡuzⁱⁿ min-hā ka-anna-hu ḥādīⁱⁿ*, Latin *cuius unaquaque pars est quasi nunc incipiat*. The point is crucial for the understanding of the circular motion of the heavenly sphere, which has no beginning nor end, but every point of which can be taken as a virtual beginning of the motion (*i.e.* as a reference point for the occurring of a certain causal action: cf. *infra*, §266). Cf. also *infra*, §270.

[§266] D268.4-26

The paragraph presents a concrete instantiation of how the circularity of the motion of the skies is able to produce the sublunary events. The given example is the seasonal growth and blossoming of a seed buried in the ground, due to the heat produced by the sun (and so on in an astronomical chain of causes, which is infinite because circular). As noticed by JANSSENS 2019: 111, this example is added by al-Ġazālī. This kind of 'astronomical/astrological' causal reasoning will be the subject of specific analysis also *infra*, §267.

THIS SEED | Arabic *ḥādīhi l-ḥabba (ḥaṣaba* ['wood'] A), Latin *hoc granum*.

THE VEGETATIVE SOUL | Reading *al-nabātiyya* in the feminine, as in D-Alt, for *al-nabātī* in the masculine printed by Duniyā (the correction is in accordance with the *usus* of the *MF*, in which *nafs* is mostly feminine, although a grammatical oscillation on the matter is to be registered). For the specific treatment of the vegetative soul cf. *infra*, *Physics* IV, §§.

IT HAD NOT RECEIVED IT | Reading *yaqbalu-hu* instead of the misprint *yaqīlu-hu* (يقيله).

THE EXCESS OF THE COLDNESS IN WINTER | Arabic *li-farṭⁱ l-burūdatⁱ fī l-šitā^x*, Latin *propter habundanciam frigiditatis in hyeme*. The cycle of the seasons is not a corollary aspect in the example given here by al-Ġazālī, but is rather the earthly epiphenomenon of the more fundamental perpetual circularity – that of the motion of the heavenly spheres – which presides over the origin of every sublunary event.

THE NON-EXISTENCE OF THE BALANCE | Arabic *adamⁱ l-iʿtidālⁱ*, Latin *remocionem temperiei*. The notion of «balance» or 'temperatedness' [*iʿtidāl*] is crucial in the theory concerning the origin of the souls of the living beings due to the mixtures of the four elements: a better balance of the elements entails

the possibility of receiving a better (ontologically higher) soul. Cf. *infra*, e.g. *Physics* IV, §402 (on the «balance» needed for the genesis of the human soul).

IN THE CONSTELLATION OF THE ARIES | Arabic *burġ^a l-ḥamal^f*, Latin *signum arietis*. For the sign of the Aries cf. already *supra* the logical example given in *Logic* III, §31. The passage of the sun in the constellation of the Aries marks the passage from winter to spring, and is particularly important in the traditional Persian calendar.

IT DISJOINED ITSELF | Arabic *infaṣalat*, Latin *recessit*.

ITS ATTAINMENT OF IT | *i.e.* of the aforementioned constellation of the «Pisces» [*al-ḥūt*].

IN THE SAME WAY IT GOES TO THE INFINITE | This is because, in the perpetual circular movement of the sky, every position (here the term is not employed, but the meaning is that of *waḍʿ*) held for instance by the sun (with its necessary effects on the sublunary world) is in turn explainable by a preceding position in the circle, without end.

[§267] D268.26-269.19

Building on the aforementioned argument (§265) and example (§266), the present paragraph introduces two ways in which the celestial movement can be said to be a cause for the origin of the sublunary events. (i) The first way is the concomitance of the cause of the origin (which would be in this case supralunary) with the circular movement; (ii) the second is rather a mediated causality, in which the movement of the sky is the cause that predisposes the (sublunary) causes of the single earthly events. FREUDENTHAL 2000 aptly insists on the ‘anomalous’ character of this kind of causal explanations – in particular those of kind (i) here distinguished – in a genuinely Aristotelian framework. The difficulty is in particular the following: «on the one hand, the sublunary realm as described by Aristotle is not a closed physical system, inasmuch as the explanation of certain natural phenomena draws on the assumption that the sun and the moon influence sublunary processes of generation and corruption; on the other hand, the celestial bodies are held to be constituted of the "fifth element," which, by its very definition, is held to be a "stranger" to all processes in the sublunary realm» (FREUDENTHAL 2000: 336). The heating and irradiating action of the Sun is in its own a problematic point in Aristotle’s doctrine, as the Sun as a celestial body should be made of aether, and thus be devoid of the contrary qualities that characterize the sublunary elements. However, the Peripatetic tradition – in this case instantiated also by the *DN* and the *MF* – not only does not try to avoid the possible difficulty arising from this doctrinal aspect, but it even emphasizes, rather, the role of the Sun in the generation of the sublunary events (and in general, thus, the problematic interconnection of the two worlds that Aristotle had strongly tried to keep apart). As FREUDENTHAL 2000: 343 writes with effective conciseness: «the sun’s influence on the sublunary existents, which for Aristotle had been an embarrassing anomaly, has now become the *paradigm* for the relationship between the celestial bodies and the sublunary existents. There can be little doubt that this shift is to be ascribed to the infiltration of astrological motifs into Arabic natural philosophy». According to Freudenthal, one can thus warrantedly speak of an «*astrologization* of the Aristotelian doctrine in the Middle Ages» (*ibidem*). Given the preceding references to the movement of the sun in the sky in astrological/astronomical terms (*supra*, §266: «Aries», «Pisces»), and the general tone of the reasoning here displayed, this conclusion can be extended with a fair amount of safeness to the theoretical stance of the *MF*, as well. Cf. also *infra*, *Physics* II, §351.

THE CAUSE [OF THE ORIGIN] IS WITH IT | *i.e.* with the movement of the sky. Since «movement» [*ḥaraka*] is feminine in Arabic, this interpretation would be more warranted if the suffix pronoun of *maʿa* were in turn feminine, although this is not the case. Nonetheless, ALONSO 1963: 190 translates: «El

primero es por coexistir solamente con él la causa inmediata», where it seems necessary to interpret «con él» as referring to the preceding «el movimiento celeste». For its part, the Latin translation witnesses the variant «cum causatum habet esse cum illo» (MUCKLE 1933: 103.30), which might also be the reading of *Y* (*an yakūna al-musabbab ma'a-hu*, f. 160^r22).

LIKE THE BRIGHTNESS [...] WHICH ARE NOT CONCEALED | (i) As already remarked by JANSSENS 2019: 111, the corresponding example in the *DN* is not about the brightness of the Sun, but rather about the light of a lamp, which progressively increases when the lamp moves towards the observer. On the whole, the description refers to the dawn that progressively lits the world, assuring at first that the animals – and in particular the human beings – can see again after the darkness of the night. The retrieved possibility of the «vision» [*ibṣār*] entails in turn the setting into motion of all the human activities, directed to the various «goals» of the people [*fi aḡrād'-him*]. These activities are performed through various «movements» [*ḥarakāt*], which produce in turn many effects in the world [*ḥawādīt fi l-'ālam*].

A THING AFTER ANOTHER / BIT BY BIT | Arabic *šay^{xn} fa-šay^{xn}*, Latin *multa alia post alia / paulatim*. The same Arabic expression needs – both in my English and in the Latin version – two different translations, the first more proper, and the second adverbial. The global meaning is that of a gradual transmission of light, which gradually produces its effects of enlightenment.

SPREADING OF THE PEOPLE | Arabic *intišār al-nās*, Latin *egressio hominum*.

A CAUSE FOR THE ATTAINMENT OF THE PREDISPOSITION TO THE CAUSES | Arabic *sabab^{an} li-wuṣūl^l l-isti'dād^l ilā l-asbābⁱ*, Latin *causa adveniendi adaptacionem causis*. Much like in the example given in the preceding §266, here as well the crucial theoretical point of the argument is to explain why the predisposition conferred by the heavenly movement does not immediately actualize itself, that is, why the «caused» things [*musabbabāt*] «are delayed» [*tata'aḥḥaru*] with respect to the occurrence of the predisposition. The explanation is that there is a state of «privation» [*in'idām*] of the necessary conditions that make the actualization of the potency possible. For Avicenna's notion of predisposition/*isti'dād* see ÜÇER 2015.

JUST LIKE THE SUN NECESSITATES [...] OF THE RECEPTACLE | (ii) Just as in the case of the first kind of causality attributed to the celestial movement, also this second case is exemplified with a concrete instantiation. As noticed by JANSSENS 2019: 111, the example of the Sun and the seed «replaces the abstract formulation» given in the *DN* for the same doctrine. The sunbeams heating the ground would be enough to predispose the ground «to the influence on the seeds» [Arabic *li-l-ta'tīr fi l-baḍr*, Latin *ad agendum in sementem*] – of course, however, if there are seeds in the ground. But the seeds are in the ground only if a «mover» [*muḥarrrik*] (for instance a farmer), whose will «rests on» [*tubtuniya 'alā*] yet other causes, has decided to sow them.

FOR THE LACK OF THE RECEPTACLE | Arabic *li-faqd^l l-maḥall^l*, Latin *propter defectum telluris*.

SOMETHING SIMILAR TO THAT | *i.e.* to the entire phenomenon of germination of the seeds just described.

[§268] D269.20-270

The paragraph provides a summary of the topics treated in the six allegations that form together the first pillar (B.1) of *Metaphysics* IV (§§249-267) and introduces the subsequent discussion on the causes – efficient and final – of the heavenly movement.

THE COMPOSITION IN THE CLAY OF THE WATER AND THE DUST | Reading *al-tarkīb^a fi l-ṭīnⁱ min^a l-mā^x wa-l-turābⁱ* as in *Y* (160^v10) instead of Dunyā's *al-tarkīb^a bayn^a l-mā^x wa-l-ṭīnⁱ*. Dunyā's text is illogical since the «clay» [*ṭīn*] is already the fruit of the composition between water [*mā^x*] and earth (or «dust» [*turāb*]), and not one of the simple elements that fall in the composition (see *infra*, *Physics* III, §360).

Cf. *supra*, *Metaphysics* IV.a.3, §248; IV.b.1, §249, for two occurrences of the same example, and see also the (correct) Latin translation (which might however have emended *ad sensum*, since it does not seem to be based on the reading of *Y*): «composicio que est inter aquam, et terram» (MUCKLE 1933: 104.12-13).

ARE CONSISTENT WITH [WHAT IS] SENSED | Arabic *wāfiqat al-maḥsūsa*, Latin *conveniunt cum sensibili*. The agreement with the sensible data is the first requirement of the cosmological analysis. However, «[the force of the argument] gets to such a degree» [*šāra bi-ḥaytu*] that it actually works also on a mere intellectual basis, that is, it is sufficient to be made aware of the existence of the composition between the simple elements for knowing intellectually that there must be a surrounding sky, perpetually moving circularly.

IS NOT IN THE POSSIBILITY | Arabic *lā yakūnu maqdūr^{an} ‘alay-hi*, Latin *id fieri non potest*. For the rendition of *maqdūr* cf. *supra*, §222.

[§269] D271.1-11

The paragraph is constituted by a table of contents of the second (B.2) (§§269-281) and the third pillar (B.3) (§§282-293), whose treatment will follow.

SPEECH ON THE CELESTIAL BODIES | Arabic *al-qawl fi l-aḡsām al-samāwiyya*, Latin *Diccio de corporibus celestibus*. ALONSO 1963: 192 fn. 38 also puts here the beginning of the treatment of the second and the third pillars, already mentioned in §249 *supra*. As opposed to the other two, the second pillar (B.2) (§§269-281), which starts here, receives the autonomous title of «Speech on the celestial bodies», although – from the point of view of the *divisio textus* – we are here at the same textual level of the preceding (B.1) (§§249-268) and of the following (B.3) (§§282-293).

THAT THEY ARE MOVED BY A SOUL BY MEANS OF THE WILL | (B.2.1) For the first section of the second pillar (= the first allegation [*daʿwā*]) – cf. *infra*, §§270-271.

BY MEANS OF THE WILL | Reading *bi-l-idāra*, as in *Y* and in the Latin translation («per voluntatem», MUCKLE 1933: 104.31), for *bi-l-idāra* («by virtue of the revolution») printed by Duniā. Cf. also *infra*, the actual treatment of the allegation (B.2.1), §270, which definitely confirms the correction.

THAT THEY HAVE AN [ALWAYS] RENEWED FORMAL CONCEPTION OF THE PARTICULARS | Arabic *la-hā taṣawwur^{an} li-l-ḡuzʿiyyāt mutaḡaddid^{an}*, Latin *percipiunt hec singula statim cum fuerint* (!). (B.2.2) For the second section of the second pillar (= second allegation) cf. *infra*, §§272-274. [*taṣawwur*]

THAT THEY HAVE A GOAL IN THE MOVEMENT | (B.2.3) For the third section of the second pillar (= third allegation) cf. *infra*, §§275-281.

THAT THEIR GOAL IS NOT THE SOLICITUDE [...] OF THE REVELATION | (B.3.1) For the first section of the third pillar (= fourth allegation), cf. *infra*, §§282-288.

SOLICITUDE | Arabic *ihimām*, Latin *curare*.

THE DESIRE OF IMITATION OF A NOBLE SUBSTANCE | Arabic *al-šawq ilà l-tašabbuhⁱ bi-ḡawharⁱⁿ šarīfⁱⁿ*, Latin *desiderant assimilari substancie nobiliori se* (the Latin version anticipates here the comparative «nobler than them», which follows in the Arabic).

THAT [SUBSTANCE] IS CALLED «ABSTRACT INTELLECT» [...] IN THE TONGUE OF THE REVELATION | The passage is particularly interesting, inasmuch as it establishes a perfect identity between the «abstract intellect» [Arabic *ʿaql^{an} muḡarrad^{an}*, Latin *intelligencia nuda*] of philosophy and the «angel close [to God]» [Arabic *malak^{an} muqarrab^{an}*, Latin *spiritus* (!) *deo proximi*] of religion. It is especially noteworthy that the angelical terminology appears here in the context of a juxtaposition between «the language of the group [of the philosophers]» [Arabic *bi-luḡatⁱ l-qawmⁱ*, Latin *a philosophis*], and «the language of Revelation» [Arabic *bi-lisānⁱ l-šar^ʿ*, Latin *in lege*], because this suggests al-Ġazālī's

notion of a merely formal – *qua* lexical – difference between the objects of the *falsafa* and Islamic revelation: on this important point cf. Introduction, §1.7, and in particular §1.7.2. Rather surprisingly, JANSSENS 2019 makes no mention of this important Ġazālīan variation with respect to the *DN*. An intriguing parallel passage to this *locus* of the *MF* is to be found in Abraham Ibn Daʿūd’s *ha-Emunah ha-Ramah* [*The Exalted Faith*]: «Therefore, the human soul is as it were divided into two powers. [There is] a speculative power by which [the human soul] conceives of notable, simple substances that are called in the language of the Torah “angels” and in the language of the philosophers “spiritual beings” [*šēniyim*, lit. ‘secondary’] or “abstract conceptual beings”» (ed. SAMUELSON (WEISS) 1986: 348 (Hebrew), 103 (= 92^b7-10) (English) cf. also the Italian transl. in ZONTA 2009^a: 324). While the identification of the moving intellects with the angels is very common throughout medieval thought, the explicitly linguistic (and merely so) qualification of the opposition between philosophy and revelation (which ends up with dissolving any stronger conceptual opposition) is a feature that Abraham Ibn Daʿūd text has in common with the *MF* (on the point, which is structural in *ha-Emunah ha-Ramah*, cf. FONTAINE-ERAN 2000). Since Abraham Ibn Daʿūd was deeply involved in the Toledan translation movement, the role of source played by al-Ġazālī’s treatise for this theoretical stance appears very plausible. Cf. the Introduction, §1.8.2, for further information and the quotation of a further text by Ibn Daʿūd.

IN THE LANGUAGE OF THE GROUP [OF THE PHILOSOPHERS] | The expression *bi-luġat’ al-qawm’* is omitted in D-Alt (but is present in the Latin translation).

THAT THE INTELLECTS ARE MANIFOLD | (B.3.2) For the second section of the third pillar (= fifth allegation), cf. *infra*, §289.

THAT THE BODIES OF THE SKIES ARE OF DIFFERENT NATURES | (B.3.3) For the third section of the third pillar (= sixth allegation), cf. *infra*, §§290-292.

THAT ONE OF THEM IS NOT CAUSE FOR THE EXISTENCE OF OTHERS | (B.3.4) For the fourth section of the third pillar (= seventh allegation), cf. *infra*, §293. What is meant is that the tenth intellect does not produce another intellect, but rather gives origin to the sublunary world.

[§270] D271.12-272.10

(B.2.1) The first allegation, corresponding to the first subsection of the second pillar, deals with the voluntary movement of the sky. The upward (or the downward direction) of a part of the sky with respect to the others is merely relative and cannot be attributed to that part as natural to it; this, indeed, would necessitate a rectilinear movement, which is not proper to the sky. Building on the observation of the movement of the skies, and having excluded the possibility of their rectilinear motion, the paragraph concludes by attributing to them an inclination to the circular movement.

BY VIRTUE OF THE WILL | Cf. *supra*, §269, the emendation of *idāra* in *irāda*.

AS RESTING | Arabic *sākin^{an}*, Latin *quiescere*.

UNDER US | Reading *tahta-nā* as in D-Alt for the *bi-ḥaytu* printed by Dunyā. Ms. *Y* reads here *hādā al-niṣf*, omitting the preceding phrase *wa-hādā allaḏī fawqa-nā al-ān^a* («this, which is over us now»). The choice of the reading of *A* appears necessary for the meaning of the sentence; cf. also the Latin translation: «subtus nos» (MUCKLE 1933: 105.13-14).

THE IMPOSSIBILITY [...] HAS ALREADY BEEN CLARIFIED | Cf. *supra*, *Metaphysics* IV.b.1.5, §264.

REVOLUTION | Arabic *ḥawl*, Latin *volubilis circulariter* (perhaps due to a misreading of the phrase *al-ḥawl bi-l-idāfat’* as **al-ḥawl bi-l-irādat’?*). The Arabic *ḥawl* usually means ‘year’ (cf. WEHR 253^a), but cf. the explanation given for it in LANE 675^c («*A year* [...] so termed in consideration of its changing, and of the revolution of the sun in its places of rising and setting»), and the normal sense of the

preposition *ḥawla* ('around'; cf. also *infra* the clearer affirmation of the «rotation around [*ḥawla*] the middle» of the sky).

IT DOES NOT RECEIVE | Reading *yaqbalu* instead of the misprint *yaqbil* of Dunyā's text. Although the word *samā*, 'sky', which is the implicit referent of the paragraph, can be both masculine and feminine, I choose the masculine *yaqbalu* over the feminine *taqbalu* because in the following passage there is a shift from the plural, referred to the distinct heavens or the distinct celestial bodies, to the masculine singular (e.g., *mayl'-hu*, and not *mayl'-hā*, cf. *infra*). Moreover, the noun which remains unspoken could also be thought to be «[celestial] body» [*ǧism*] (only masculine in Arabic), which would also warrant the choice of the masculine for the verb.

the rectilinear movement, since it would need another body which delimits for it the directions

SUBSTITUTION | Arabic *tabaddul*.

THEREFORE, IT IS NECESSARY [...] SOME PARTS. | For the treatment of the inclination [*mayl*] directed to the circular movement cf. HASNAWI 1984: esp. 106 (and see *supra*, §260).

[§271] D272.11-20

The paragraph clarifies that the circular movement of the sky is caused by a will, which entails in turn its psychic nature (*i.e.* the celestial bodies' being endowed with a soul). The exclusion of the hypothesis that the heavenly motion simply depends on their nature, and the immediately following introduction of the concept of soul place the *MF* – and clearly also the *DN* as its source – on the same side as Simplicius and against Alexander of Aphrodisias in the late antique debate on the ensoulment of the skies. According to Alexander, the skies move by nature (although this nature can immediately coincide with the soul sometimes hinted at by Aristotle), while according to Simplicius nature and soul must be kept distinct. The debate, and the position of the *falāsifa* within it – Avicenna with Simplicius, Averroes with Alexander – is masterfully reconstructed by WOLFSON 1962.

BY VIRTUE OF A PURE NATURE | Arabic *bi-ṭab^{an} maḥq^{an}*, Latin *natura pura*.

A FLIGHT FROM A POSITION IN THE SEARCH FOR ANOTHER POSITION | Arabic *harab^{um} min waḍ^{an} li-ṭalabⁱ waḍ^{an} āḥar^a*, Latin *fuga ab uno situ ad querendum alium*. This is meant as a definition of «natural movement» [*al-ḥaraka al-ṭabī'iyya*], incompatible with the circular movement of the skies. While the use of the terminology of «position» [*waḍ'*] instead of «place» [*makān*] (or 'spot', [*mawḍi'*]) is perfectly warranted for what regards the circular movement of the skies, the choice might appear less appropriate for a description of the natural movement, which is rather essentially local and not positional.

SUITABLE | Arabic *mulā'im^{an}*, Latin *conveniens*.

INCOMPATIBLE | Arabic *munāfiy^{an}*, Latin *inconveniens*. For the terminology of suitability and incompatibility applied to the ethical and psychological matter of pleasure and pain cf. *supra*, *Metaphysics* III.b.10, §229; for a physical application to the case of movement cf. also *infra*, *Physics* I, §329.

BY VIRTUE OF THE WILL AND THE CHOICE | Arabic *bi-l-irādatⁱ wa-l-iḥtiyārⁱ*, Latin *ex voluntate, et eleccione*.

CONCEPTION/IMAGINATION | Arabic *taṣawwur*, Latin *ymaginacione*. For the psychological use of *taṣawwur* cf. also *infra*, *Physics* IV.

«SOUL»^{1,2} | Arabic *naḥs^{an}1*; *al-naḥs²*, Latin *animal* [sic pro *anima*?]¹; *anima*². The soul is qualified as a «proper nature» [Arabic *ṭabī'a ḥāṣṣa*, Latin *naturam propriam*] and an «individualized form» [Arabic *ṣūra maḥṣūsa*, Latin *formam propriam*]. JANSSENS 2019: 111 notices in this regard: «When al-Ghazālī qualifies [...] the mover by will with a soul, he seems ready to include here what in the *Daneshname* is only affirmed at the end of the next chapter (and will be repeated, in a slightly

different version, in *Maqāṣid*, 274.13-14)». The ensoulment of the orb is indeed presented in the text of the *MF* as an immediate consequence of the denial of the merely natural movement, while in the *DN* this conclusion is reached afterwards: cf. *infra*, end of §274, for the corresponding place in the *MF* pinpointed by Janssens.

A PSYCHIC MOVEMENT | Arabic *ḥarakat^{um} nafsāniyyat^{um}*, Latin *motus animalis*.

[§272] D272.21-273.12

(B.2.2) Having excluded the case of the pure nature in the preceding paragraph (*supra*, §271), the second allegation, corresponding to the second subsection of the second pillar, proceeds to rule out the possibility that the mover of the heavens might be an intellect, thus concluding that it must be a soul.

IT IS NOT PERMITTED [...] A PURE NATURE. | The text of the Latin translation has here one negation too many, so that the sense of the sentence is the opposite of the Arabic one: «Sentencia secunda est quod motor celi *non* potest esse *nisi* res intelligibilis pura non receptibilis permutacionis, sicut nec potest esse natura pura» (MUCKLE 1933: 106.12-14, emphasis added).

«INTELLECTUAL» | Arabic *al-‘aqlī*, Latin *de intelligibili*.

«PSYCHIC» | Arabic *nafsī*, Latin *de permutabili* (strictly worse because tautological with respect to what follows).

THE REST OF THE EARTH | Arabic *sukūn^u l-arḍⁱ*, Latin *situs (quietis) terre* (double translation).

THEY [RATHER] PERSIST IN THE TURNOVER | Reading *fa-inna-hā dā’imat^{an} fī l-tabaddulⁱ* as in *Y*, instead of Dunyā’s *fa-inna-hā dā’im^{an} fī l-tabaddulⁱ*. The text is willingly slightly paradoxical, inasmuch as it qualifies the change or transformation (the «turnover» [*tabaddul*] of the «positions» [*awḍā’*]) as the sole «stable» [*tābit*] condition of the skies (as opposed to the nature directed *ad unum* of the sublunary elements). Cf. the Latin translation: «Situs vero celi semper permanent in transmutacione» (MUCKLE 1933: 106.21-22).

BY VIRTUE OF A CAUSE THAT OVERTAKES IT | Arabic *bi-sababⁱⁿ ṭara’a ‘alay-hā*, Latin *ex aliquo novo quod contingit ei* (maybe presupposing the reading **bi-sababⁱⁿ ṭarīⁱⁿ ‘alay-hā*).

[§273] D273.13-22^a

The modality of the circular movement of the sky receives a further clarification: this movement, composed of particular movements which make the celestial bodies perpetually turn along a circular trajectory, cannot be caused solely by a universal will. Rather, many particular wills, necessitating the many particular movements, must be presupposed. This idea is corroborated by the example of a human (and by the way typically Muslim) activity, that is, the annual pilgrimage to Mecca, which cannot be performed but thanks to many strides: the universal will is just one (reaching the Ka’ba), but it cannot be actualized unless through many particular wills.

THAT WHICH NECESSITATES | Arabic *mūḡib*, Latin *id quod facit debere esse*.

THAT WHICH IS NECESSITATED | Arabic *mūḡab*, Latin *eo quod debet esse*.

THEIR RENEWAL | Arabic *taḡaddud^u-hā*, Latin *renovacionem*. Shortly *infra* I have maintained the translation «renewal» for the verbal noun of the II stem *taḡaddid* (where *A* reads in any case once more

the maṣdar of the V form *tağaddud*) [Latin *renovacio*].

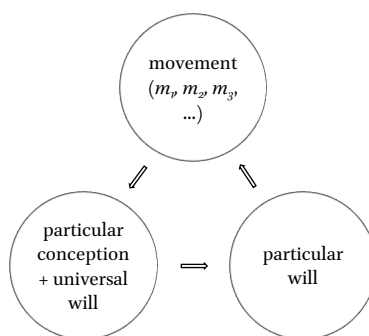
STEP | Arabic *ḥaṭwa*, Latin *passum*.

ATTAINMENT OF THE KA'BA | Arabic *al-wuṣūl ilà l-Ka'bat'*. While the Arabic text clearly refers to the ritual pilgrimage [*ḥaḡḡ*] to Mecca, one of the five pillars of Islam – the circumambulation of the Ka'ba being one of the most important rites to be performed while on pilgrimage –, its Latin translation obliterates the Muslim note, rendering the entire sentence in a much more generic way: «hoc autem non provenit nisi ex voluntate universalis, cuius intencio est durare motum usque ad terminum peregrinationis» (MUCKLE 1933: 107.10-12). On this and the other analogous Latin variations cf. also *supra*, Introduction, §2.2.1. JANSSENS 2019: 111 notices that this example is added by al-Ġazālī with respect to the *DN*, but he tries to undermine its value as a witness of a markedly religious Ġazālīan attitude towards philosophy by writing: «Note that this example is evidently religiously inspired, but it does not modify in whatsoever way the underlying exposition, which, in fact, is highly philosophical, and more particularly Avicennian». I have no quarrel at all with this analysis, which is actually my reading of the Ġazālīan additions in general (cf. *supra*, Introduction, esp. §1.8, but cf. also §1.9 and §1.10). I do think however that the presence of these additions is, nonetheless, an interesting feature, since it conveys some of al-Ġazālī's basic religious and theological tenets from within the rationalistic framework of Avicenna's philosophy – and sometimes also in spite of it.

[§274] D273.22^b-274.14

The paragraph concludes the reasoning conducted in the second allegation (B.2.2) by explaining precisely how the account of the particular acts of will sketched in the previous §273 can account for the movement of the skies. What is at work is a circular process, which can be schematized as follows: the particular movement is caused by a particular will; the particular will is caused by a particular conception together with the universal will; and the complex of particular conception and universal will is caused, in turn, by the (preceding) occurrence of the particular movement.

DIAGRAM 5. *Generation of a particular movement from will and conception*



The example given for such a circular process, which should explain the circular movement of the heavens, is once again drawn from the common human experience, and involves a man walking with a lamp that is only sufficient to light up the distance corresponding to one step of the man.

TOGETHER WITH THE UNIVERSAL WILL IS ORIGINATED | Reading *bi-l-irādat' l-kullīyyat'* instead of *bi-l-idāra* as in *Dunyā*. Cf. also *supra*, §269, for the same correction.

THAT STEP [...] IS CONCEIVED AND RESULTS | Every portion of the movement (in the example: every step),

i.e. every particular movement, can be said to be a cause for the subsequent portion of the movement (the following step), because its occurring causes the «particular conception» [al-*taṣawwur al-ḡuzʿī*] which, paired with the universal will for the movement, necessitates the particular will that is the immediate cause for the (subsequent) particular movement.

IT IS NOT POSSIBLE [...] THE MOVEMENT OF THE SKY TO BE | Since this kind of explanation is deemed to be the sole to be able to account for the particular movement, also the circular movement of the sky will be explained through this conceptional-voluntary account.

NOW, ALL THAT [...] IS CALLED «SOUL», NOT «INTELLECT» | Building on the explanation that precedes, the conclusion of the allegation restates the conclusion already anticipated in §272 *supra*, declaring that the kind of immaterial being which is susceptible of the continuous change of particular wills is a soul, and thus excluding that the responsible for the motion of the skies might instead be an intellect.

[§275] D274.15-275.4

(B.2.3) The third allegation, corresponding to the third and last subsection of the second pillar, deals with the intellectual goal of the movement of the skies, which have no solicitude for the sublunary world (thus seen as a by-product of their movement, rather than as their primary voluntary aim). The present paragraph introduces the reasoning by stating that the celestial bodies are not susceptible of longing or anger, because these are respectively addressed to improving the nature, or preserving it from harm, while the celestial bodies are incorruptible.

THEY DO NOT MOVE [...] NOBLER THAN THEM | The goal and the «solicitude» [Arabic *ihitimām*, Latin *curam*] of the celestial bodies is not directed at all to the «inferior» [Arabic *sufli*, Latin *inferioris*] world, since this «does not affect them» [Arabic *laysa yahummu-hā*, Latin *non est illis cure tantum*]. Rather, their action and «business» [*amr*] must tend to what is «loftier» [*aḡall*] and «nobler» [Arabic *ašraf*, Latin *multo excellentius*] than them. This kind of terminology closely mirrors the one employed *supra* with reference to the First Principle (cf. *e.g. Metaphysics* III.b.11, §234), although in that theological context the same terms are absolute superlatives, while in the present cosmological section they are merely comparative: what is loftier than the celestial ensouled bodies is indeed the heavenly intellects, which are still inferior to the Necessary Existent.

LONGING | Arabic *šahwa*, Latin *concupiscentia*.

ANGER | Arabic *ḡaḍab*, Latin *ira*. Cf. *supra*, *Metaphysics* III.b.11, §229, for a preceding occurrence of the psychological/ethical notion of the «irascible» faculty [*ḡaḍabiyya*] of the soul.

THE RESEARCH OF THAT WHICH IS A CAUSE FOR THE PERSISTENCE OF THE CONTINUATION | Arabic *ṭalab mā huwa sabab^{un} li-dawāmⁱ l-baqā^ʿ*, Latin *virtus appetens id per quod conservatur in vita* (presupposing perhaps **quwwa ṭālib* for Dūnyā's *ṭalab*). For the psychological concept of longing (or desire) and its implications cf. also *supra*, *Metaphysics* III.b.7, §216; III.b.11, §229.

THE FACULTY OF REPELLING [...] DESTRUCTION AND IMPERFECTION | Arabic *quwwa tādaffu^ʿ l-munāfi l-dārrⁱ l-mūḡibⁱ li-l-halākⁱ aw l-nuqṣānⁱ*, Latin *virtus est repellens contrarium et nocumentum quod facit debere minui, vel destrui*. With the meaning of «repelling», Dūnyā's printed *tādaffu^ʿ* seems worse than the simple *mašdar* of the I stem *daf^ʿ*, which occurs in the same sense shortly *infra*. The Latin text *contrarium* might mirror the variant *al-muḍādd*, witnessed by *A* in the place of *al-dārr*.

IT IS INTELLECTUAL | An analogous reasoning, which excludes the presence of an irascible or desiring part in the celestial bodies, is to be found in al-Kindī's treatise on *The Prostration of the Outermost Body* (ed. ABŪ RĪDĀ 1950 (1): 255-256, French transl. in RASHED-JOLIVET 1998: 193, English transl. in ADAMSON-PORMANN 2012: §VI.4, 182-183). The passage is summarised in ADAMSON 2007: 184-185 as follows: «there are three powers of the soul, desiring, irascible, and rational – note the sudden

inclusion of the tripartite Platonic soul, which also appears in al-Kindī's *Discourse on the Soul* – and the heavens would have no need for a desiring or irascible soul. So if they have soul at all, as we have shown they do, they must be rational».

[§276] D275.5-276.8

Since the affirmation of the intellectual character of the goal of the movement of the skies in the preceding §275 was based on the incorruptibility of the heavenly bodies, the present paragraph aims to demonstrate that destruction and imperfection are not possible for them. The demonstration is tripartite, as it excludes (a) that the skies can break or tear apart; (b) that their form (which brings them their nature) can cease; and (c) that their form and matter can radically be thought of as non-existent. The material of this paragraph is considered by JANSSENS 2019: 111 as a Ġazālīan «development» originating from the mention of the 'destruction' in *DN*, ed. MO'IN 1952: 139.113, with no «precise source» in further Avicennan texts. Despite this admission, JANSSENS 2019: 111 fn. 106 still advances the – as such ungrounded – hypothesis that «the real source is in another of Ibn Sīnā's works».

DEMONSTRATION OF THE IMPOSSIBILITY [...] ABOUT IT | What is meant is the «demonstration» [*burhān*] of the incorruptibility of the heaven in its entirety, that is of the supralunary world, as opposed to the changeability of the sublunary world.

IT IS ABSURD THAT IT HAS A TEARING [...] RECTILINEAR MOVEMENT | (a) The «tearing» [Arabic *inḥirāq*, Latin *scindi* (*supra* also *scissione*)] and the «breaking» [Arabic *inkisār*, Latin *scindi*] are reconducted to the notion of «scattering» [Arabic *tafarruq*, Latin *separacionis*]. The Latin translation for «the tearing and the breaking» is «frangi vel scindi» (MUCKLE 1933: 108.16-17), where the ordering of the two terms is probably reversed with respect to the Arabic text; cf. as a matter of fact the Latin rendition of the preceding Arabic expression *bi-l-inkisār wa-l-inḥirāq* («with the breaking and the tearing») as «fraccione, vel scissione» (MUCKLE 1933: 108.13-14). *Iuxta* the definition of *inḥirāq* given *supra*, *Metaphysics* IV.b.1.3, §255, every breaking of the heavens would need to be produced by a rectilinear movement, but the heavens are not susceptible of this kind of motion in the first place (*supra*, §270); hence, they are not breakable nor tearable.

IT IS [ALSO] ABSURD THAT THE SUPPRESSION [...] WITH A RECTILINEAR MOVEMENT | (b) The second possibility of corruption of the skies here considered is the «suppression» [*buṭlān*] of their form, leaving their matter in place. Two alternatives then present themselves: (b.i) the matter of the skies would either remain devoid of a form; (b.ii) or it «would garb itself» [Arabic *talbasu*, Latin *vestiretur*] in another form, different from the first one. Option (b.i) is immediately said to be impossible, while option (b.ii) is excluded with a longer argument: garbed in a different form than the first one it possessed, the matter of the skies would be forced to have a different natural place, and thus to move rectilinearly to it from its preceding place; but again, the rectilinear movement is impossible in the case of the skies, hence case (b.ii) is to be excluded, and with it the entire second possibility (b). For the metaphor of garbing in a form cf. also *infra*, *Metaphysics* V, §299 and *Physics* II, §350.

A GENERATION AND A CORRUPTION | Arabic *kawn^{am} wa-fasād^{am}*, Latin *generacio, et corrupcio*.

THAT IT HAD BY NATURE | Reading *la-hu* (*bi-l-ṭab^{at}*) for Dunyā's incongruous *lā* or *lī* (ل). The subject *ad sensum* of the entire sentence is the sky in its entirety (cf. the beginning of the paragraph).

MATTER | Here: *hayūlā*.

INDEED, IT HAS ALREADY BEEN ESTABLISHED [...] IN WHICH TO SUBSIST. | The argument is based on, and requires, a material «receptacle» [*maḥall*] of inherence for the possibility of the existence anterior to its actualization. Such philosophical arguments are strongly rebutted in the *TF*, in which al-Ġazālī

advances innovative considerations concerning the admissibility of a logical possibility of existence not inhering in any subject, or inhering in the efficient cause, rather than in the material cause of the existent: cf. *e.g.* *TF*, Discussion 1, MARMURA 2000: 42. To the philosophical argument for the eternity of the world that calls for the necessity of a receptacle of inherence for the possibility of the existence of the world before the creation, al-Ġazālī here opposes the fact that, according to the philosophers, the human souls are also «temporally originated substances» [*ġawāhir... ḥādīta*]. The philosophers should then require also in this case a material receptacle for the possibility of the existence anterior to the existence in actuality, but they do not do so, thus being inconsistent with their own assumptions. This important doctrinal aspect of the *TF* was also underlined by WOLFSON 1969: 235 fn. 8, and by GRIFFEL 2019: 425 (also in connection with Moses Maimonides' possible reception of it); for a recent reappraisal, and the quotation of the (different) passages of the *TF* adduced by Wolfson and Griffel with reference to the issue, cf. SIGNORI 2020^b: 177-179 (texts T8-T9).

IT HAS ALREADY BEEN ESTABLISHED BEFORE | Cf. *supra*, *Metaphysics* I.7, §167.

IT IS NOT MADE NON-EXISTENT [...] IMPOSSIBLE | Arabic *lā yanʿadimu inʿidām^{an} yastahīlu baʿd^a-hu wuġūd^a-hu*, Latin *Alioquin privaretur tali privacione quod post eam esset impossibile esse*.

IT IS IMPOSSIBLE THAT THE EXISTENT IS TRANSMUTED INTO AN IMPOSSIBLE | Arabic *wa-muḥāl^{an} an yanqalib^a l-mawġūd^a muḥāl^{an}*, Latin *Impossibile est autem ut id quod est, convertatur in impossibile*. This is because the existence of that which exists is (at least) possible (while it can also be necessary), since otherwise it would not have been a realized existence in the first place.

[§277] D276.9-277.5

The paragraph details the impossibility of a providential action performed by the celestial bodies for the sublunary beings, by means of a sort of *meditatio* on the smallness and insignificance of the sublunary world with respect to the greatness and the splendour of the heavens. Even man, the acme of the created sublunary beings, is for the major part imperfect. Moreover, the size of the entire earth is just a fraction of that of the sun, which is in turn minimal with respect to the celestial sphere in which the sun is embedded; and this sphere is in turn insignificant if compared with the outermost heaven, the sphere of the fixed stars (cf. *infra*, *Metaphysics* V, §297 and Diagram 8 for the representation of the Aristotelian cosmos described in the *MF*). The telescopic enlargement of the perspective has the aim of giving a feel of how tiny our world is with respect to the cosmos, thus making a – mostly rhetorical – point for excluding any explicit solicitude that the supralunary beings may address to us and our this-worldly affairs. An interesting parallel passage for this place of the *MF* is to be found in al-Ġazālī's *Iḥyāʾ* XXXVI (Book of Love), ch. 6, English transl. ORMSBY 2016: 72-73:

Many are the acts of God, but let us search out the last, the simplest and the tiniest of them and contemplate their wonders. Earth, with everything it contains, is the least of the creations. By “least”, I mean in comparison to the angels and the heavenly realm when you peer into it with regard to volume and magnitude in its individual bodies. The sun, despite its apparently small mass, is some 160 times the size of the earth. Now consider the earth's littleness in comparison to the sun, then consider the sun's littleness in relation to the sphere in which it is established; the sun bears no comparison with that sphere, since it is in the fourth heaven which itself is small in relation to the seven heavens that surround it. But the seven heavens themselves are like a ring in a trackless desert in comparison to the Seat of God, and the Sear itself stands in the same relation in comparison to God's Throne. This then is a peek at the outer aspect of individual entities with respect to their sizes. How contemptible is the whole earth in comparison to these!

THE SOLICITUDE FOR THESE CORRUPTIBLE BEINGS | Arabic *al-ihtimām bi-ḥādīhi l-kāʿināt al-fāsidāt*, Latin

curare hec generabilia et corruptibilia.

THAT WHICH IS WANTED FOR A THING IS UNDOUBTEDLY VILER THAN THAT THING | Arabic *mā yurādu li-l-šayʿ*, *fa-huwa aḥass^u min dālīka l-šayʿ lā mahālat^a*, Latin *Quicquid enim queritur per aliud, vilius est eo propter quod queritur sine dubio.*

ETERNAL | Arabic *azaliyya*, Latin *eterna*. It might be important to notice that, in the first two discussions of the *TF*, *azaliyya* (as a noun) will specialize itself – together with its quasi-synonym *qidam* – as a designation of the eternity *ex parte ante*, while *abadiyya* will be used to indicate the eternity *ex parte post*. The opposition between the two concepts can be expressed also as the antithesis between ingenerability and incorruptibility. Under this regard, the Arabic expression *ğayr qābila li-l-halāk wa-l-tağayyur* («not susceptible of destruction and change» [Latin *non receptibilia destructionis nec permutacionis*]), which follows the attribute *azaliyya* in the text, can be construed as completing its meaning, adding to the eternity *ex parte ante* the idea of incorruptibility, *i.e.* eternity *ex parte post*.

WHILE THESE INFERIOR [THINGS] ARE IMPERFECT AND CHANGEABLE, AND THEY ARE IN POTENCY | JANSSENS 2019: 112 remarks that the idea of the greater perfection of the celestial things with respect to the sublunary ones is emphasized in the *MF* with respect to the *DN*.

IT IS ONE HUNDRED AND SOME SIXTY TIMES AS [BIG AS] THE EARTH | Arabic *fa-inna-hā miṭl^a l-arḍⁱ miʿat^{im} wa-nayyif wa-sittina marra^{im}*, Latin *Sol enim cencies sexagies quinquies et tertia unius [!] maior est quam terra*. The indication of the size of the sun is absent in the *DN* (cf. JANSSENS 2019: 112 and fn. 107), while it is present in the passage of *Iḥyāʿ* XXXVI.6 quoted above in the introduction to this paragraph. Avicenna gives the number of 170 times in the *Nağāt* (ed. DANIŠPÄZÜH 1985: 468); of 167 in the *Išāra ilā ʿilm fasād aḥkām al-nuğūm*: cf. MICHOT 2006: 20.4 (Arabic) and 93 (French). For some Greek views on the size of the sun as transmitted in Arabic, different than Avicenna's, cf. *Placita philosophorum* II 21 in DAIBER 1980: 156-157. For more similar views in the Arabic tradition cf. the commentary in DAIBER 1980: 399-400 (for the measure of 170 times the size of the earth given by 'geometers' in a doxographical excerpt reported by al-Ğāḥiḏ in connection with *Placita* II 20) and in DAIBER 1980: 403-404. The closest measure to Avicenna's (and al-Ğazālī's) ones appears to be that of 166 3/8 times given by the Iḥwān al-Şafāʿ (Brethren of Purity) in their encyclopaedia, by ʿAlī ibn Sahl Rabbān al-Ṭabarī in the *Firdaws al-ḥikma*, by the astronomer al-Battānī, and by Saadia Gaon in his commentary to the *Sefer Yeşira* (cf. SIMON 1977: 436-437); cf. also the similar measure of 166,2 times suggested by al-Bīrūnī in his *Kitāb al-Taḥfīm li-awāʿil šināʿa al-tanğīm* (WRIGHT 1934: 116).

THE BODY OF THE SUN HAS [IN TURN] NO PROPORTION TO ITS SPHERE | Arabic *wa-lā nisbat^a li-ğirmⁱ l-šamsⁱ ilā falakⁱ-hā*, Latin *corpus vero solis minimum est comparacione sui circuli*. Every celestial body is thought to be embedded in the matter of its celestial sphere, with whose movement it moves. The sphere is thus of course much greater than the star or planet from which it takes its name. For the complete cosmological diagram cf. *infra*, *Metaphysics* V, §297.

FURTHERMOST | Arabic *aqşā*, Latin *ultimi*.

THE COMPLETENESS OF THE PERFECTION | Arabic *tamām al-kamāl*, Latin *ad compleccionem perfeccionis*.

SUPERIOR BODIES | Arabic *al-ağrām al-ʿulwiyya* (or *ʿalawiyya*), Latin *substancie* [!]*...superiores*. In the philosophical lexicon of the *MF* the term *ğirm* (pl. *ağrām*) is especially employed for the celestial bodies, while *badan* appears predominant for the human body, and *ğism* indicates the body in general sense. For the distinction between *ğism* as physical, and *ğirm* as celestial (or simple) body in Avicenna's *Physics* cf. MCGINNIS 2009 (II): 485 fn. 1. The Latin rendition *substancie* seems to presuppose the misreading *al-ğawāhir* for *al-ağrām* (الأجرام/الجواهر), not impossible in undotted handwriting.

AS IT WILL BE EXPLAINED | Cf. *infra*, *Metaphysics* IV.b.3.1, §§287-288. Cf. also AVICENNA, *K. al-Şifāʿ, Ilāhiyyāt* IX.2, ed. QANAWATĪ-ZĀYID 1960: 389-390 (transl. BERTOLACCI 2007: 715, §4.3). The remote Aristotelian reference is to *Metaphysics* Λ [XII] 7, 1072^b4-7.

THE NOBLE [THINGS] DO NOT TEND TO THE VILER | Arabic *lā yaqşudu al-aşraf al-aḥass*, Latin *id quod est nobilius non intendit in se quod est vilius*. The Latin *id quod est nobilius* presupposes the Arabic **al-*

ašraf (comparative/superlative) for Dunyā's *al-ašraf* (the plural of *šarīf*).

[§278] D277.6-23

The first objection advanced against the preceding argument criticizes the hierarchy there established between (i) that which is for the sake of another, and (ii) the thing for the sake of which (i) is, by presenting three ostensible counterexamples to the priority of (ii) over (i). The answer clarifies that what is wanted for another – (i) – is always viler than that other thing – (ii) – when considered under the sole respect of its being for the sake of something else, although it might be generally nobler if considered under other non-relational respects.

IF THAT WHICH IS WANTED FOR SOMETHING ELSE IS VILER THAN THAT SOMETHING | Arabic *fa-in kāna mā yurādu li-ğayrⁱ-hi fa-huwa aḥass min dālīka l-ğayrⁱ*, Latin *si quicquid queritur propter aliud vilius est eo*. The objector gives here three ostensible counterexamples to the assumed inferiority of (i) that which is for the sake of another with respect to (ii) that other thing, as in the following table.

TABLE 37. Subordination of «that which is for the sake of another» to «that for the sake of which»

	(i) THAT WHICH IS FOR THE SAKE OF ANOTHER	(ii) THAT FOR THE SAKE OF WHICH (i) IS
(a)	shepherd <i>rā^{an}</i> <i>pastor</i>	sheep <i>ğanam</i> <i>oves</i>
(b)	teacher <i>mu'allim</i> <i>magister</i>	disciple <i>muta'allim</i> <i>discipulus</i>
(c)	prophet <i>nabī</i> <i>propheta</i>	community <i>umma</i> <i>populus</i>

BUT FOR CONDUCTING HIS COMMUNITY | Arabic *illā li-l-iršādⁱ ummatⁱ-hi*, Latin *nisi propter informandum populum*. Among the three alleged counterexamples to the superiority of the final cause with respect to the instrumental one, that of the prophet (as an instrument) with respect to the community (as an end) is probably the strongest one, because the recognition of a possible inferiority of the prophet is, in all likelihood, the least intuitive of the three for a Muslim reader.

FOR THE SAKE OF SHEEP CARE ALONE | Arabic *li-ağlⁱ l-ri'āyatⁱ faqaṭ*, Latin *propter pastoratum tantum*. The meaning of the term *ri'āya* is merely 'keeping, custody, charge, care' (WEHR 401^b), but the reference to the activity of sheep-herding is made necessary by the fact that the English word «shepherd» is not etimologically linked with «care»; in Arabic, by contrast, *rā'in* means both 'shepherd' and 'keeper, protector' (WEHR *ibidem*).

THE SHEEPDOG | Arabic *al-kalb al-ḥāris* (literally: 'the watching dog'), Latin *canis custos ovium*.

IF IT HAS NO DESCRIPTIVE FEATURE SAVE ITS BEING A SHEPHERD | Arabic *in lam yakun la-hu wašf^{an} siwā kawⁱ-hi rā'iy^{an}*, Latin *nisi habeat aliquid aliud preter hoc quod non est custos ovium*. This, applied to the sheepdog but clearly valid for the human shepherd as well, is the key-argument of the answer to the objection. The shepherd is indeed inferior with respect to the sheep if he is only considered under the respect of his being a shepherd, just like a sheepdog *qua* sheepdog is certainly viler than the sheep. However, if something else should be considered – «humanity» [Arabic *insāniyya*, Latin *humanitas*] for the shepherd, the ability of «hunting» [Arabic *šayd*, Latin *ad venandum*] for the dog –, then the shepherd *qua* man, and the sheepdog *qua* hunting dog will certainly be superior to the

sheep, thus building a different (and perhaps more intuitive) ontological hierarchy.

EVEN IF HE WERE NOT ENGAGED IN THE BETTERMENT OF THE MANKIND | Arabic *wa-in lam yaštağil bi-išlāhī l-ḥalqī*, Latin *quamvis non informet populum*. The qualities that make the prophet superior to everyone else (cf. also *infra*, *Physics* V.9-10, §§443-453, for the classification of prophethood at the culminating point of humanity) are there independently from his action of «betterment» [*išlāhī*] of his fellow human beings (*ḥalq* can also mean «creation», which would give to the sentence an even more universal flavour; with the vocalization *ḥulq*, the meaning would rather be that of the betterment of the «character», although this sense might appear to be too narrowly psychological in this context). If however the prophet is considered under the sole respect of his action of guidance of the community, he is an instrument to the end of the common «improvement» [*ṣalāhī*], and he is thus to be considered inferior and even viler with respect to said community.

[§279] D277.24-278.2

The second objection challenges the idea that the celestial bodies would be considered to be inferior should they occupy themselves with the sublunary world, on the basis of the *dictum* according to which «doing the good is good». The good action performed by the skies for the sake of the world might then be rightly considered to add to their goodness, rather than jeopardize it. The answer, which starts here and will be completed in the following §§280-281, is built on a close-up analysis of the *dictum*, in order to ascertain precisely in which sense 'doing the good' can be said to be 'good'.

WHICH UNLIKELYHOOD | Arabic *ayyū bu'dūn*. Cf. also *supra*, *Metaphysics* III.b.7, §221 for the same structure, not translated in the Latin version of this passage.

BENEFIT/ADVANTAGE OF THE GOOD | Arabic *ifāda l-ḥayr*, Latin *ut fluat bonum ex se* (probably presupposing **ifāda*, maybe also due to a mispronunciation?).

EXCELLENT GOOD | Arabic *ḥayr^{mn} fādil^{mn}*, Latin *bonum tantum* (!).

DOING THE GOOD IS GOOD | Arabic *fi'l^u l-ḥayr^r ḥasan^{mn}*, Latin *agere enim bonum pulcrum est* (cf. also *infra*, MUCKLE 1933: 110.30: «hoc dictum quod agere bonum, tantum pulcrum est», with the addition of a misleading *tantum*).

A FAMOUS SAYING | Arabic *kalām^{mn} mašhūr^{mn}*, Latin *sermo...communis*. The use of the term *mašhūr* here might be technical and refer to the particular kind of «famous» or 'endoxic' propositions mentioned for the first time *supra*, *Logic* IV, §60, and discussed at greater length *ivi*, §66, in the context of the logical treatment of the possible premises for the syllogism. The famous propositions are described, as a matter of fact, as commonly believed because their contradictory is counterintuitive, albeit this contradictory may prove to be true after closer inspection. Since the following §§280-281 have precisely the aim of qualifying the allegedly absolute truth of the saying *fi'l^u l-ḥayr^r ḥasan^{mn}*, it is reasonable to suppose that it precisely constitutes an endoxic kind of premise, not entirely sound in terms of apodictic demonstration. MADELUNG 2007: 332 states that Ibn al-Malāḥimī's (d. 1141) lost treatise *Ġawāb al-masā'il al-Iṣfahāniyya* «contained a critical discussion of the thesis of the philosophers that doing good for a purpose was not really good» (with special reference to God: on this cf. esp. *infra*, §281, but also the preceding theological discussion in *Metaphysics* III.b.7, §§214-218).

THE COMMON PEOPLE | Dunyā chooses *ʿamma* over the manuscript's reading *ʿawāmm*. The answer to the objection starts by establishing the common Arabic opposition between an understanding proper to the masses and another attainable by the intellectual élite.

SO THAT THEY ARE HELD BACK FROM THE SHAMEFUL DEEDS | Arabic *li-yanzağürū ʿanⁱ l-qabā'ihⁱ* (sg. *qabīha*), Latin *ad hoc ut absterreantur ab inmundis*.

AS FOR WHEN ONE RETURNS [...] MINUTE ANALYSIS | The *dictum* has a mere ethical value for restraining the masses from unjust actions. In contrast, its proper «verification» [*taḥqīq*] will need an «investigation» [*baḥṭ*] and a «minute analysis» [*tafṣīl*], concerning both its «predicate» [*maḥmūl*] (a) and its «subject» [*mawḍūʿ*] (b). On predicate and subject as logical and not only grammatical functions cf. *supra*, *Logic*, Preface, §4; *Logic* IV, §36.

[§280] D278.3-14

(b) The paragraph analyses the subject of the proposition «Doing the good is good», distinguishing between (b.i) an essential good-doing and (b.ii) an intentional good-doing. Only (b.i) can be proper of a perfect agent, while (b.ii) is a sure sign of the imperfection of the agent, because having an intent or a goal is a sign of imperfection (cf. *supra*, *Metaphysics* I.5, §159). (b.i) however cannot be proper of the skies, because it is an involuntary kind of action, while the movement of the heavens has been shown to be voluntary (see esp. §271 *supra*).

BY VIRTUE OF THE ESSENCE | Arabic *bi-l-dāt*, Latin *essencialiter* = (b.i).

BY VIRTUE OF AN INTENT | Arabic *bi-qaṣd^m*, Latin *ex intencione* = (b.ii).

IMPERFECTION | Arabic *naqṣ*, Latin *imperfectionem*.

BY IT ONE DOES NOT MEAN ANOTHER THING AT ALL | Arabic *lā yaqṣudu min-hu amr^m āḥar al-battat^a*. The Latin translation appears vitiated by a misunderstanding: «non per intencionem sui ad aliud faciendum» (MUCKLE 1933: III.3-4).

WE HAVE ALREADY MENTIONED [...] VOLUNTARY | Cf. *supra*, *Metaphysics* IV.b.2.1, esp. §271.

THE OTHER IS THAT WHICH [...] OF ANOTHER THING | The passage on the good-doing due to an intention (b.ii) mirrors the discussion on the imperfection of every agent that acts for the sake of a goal, for which cf. *supra*, *Metaphysics* I.5, §159, and also (for a theological application), *Metaphysics* III.b.7, §§214-218. The fact that God is not described by this kind of imperfect intentional agency, as opposed to the skies and their moving intellects, is one of the ways in which the ontological gap between the Creator and even the noblest of His creatures is conceptualized in the *MF*.

[§281] D278.15-279.8

(a) The paragraph analyses the predicate of the proposition «Doing the good is good», distinguishing (a.i) a good in itself, (a.ii) a good for the recipient and (a.iii) a good for the agent. Only (a.i) does not entail any imperfection (and such is the good represented by the existence of everything through God), while both (a.ii) and (a.iii) entail respectively the imperfection of the recipient and of the agent (because if the realization of something is a good, its previous absence was an imperfection).

IN ITS ESSENCE | Arabic *fī dāt^t-hi*, Latin *quantum ad se* = (a.i). The example given for this first class of good is the «existence of the universe» [Arabic *wuḡūd al-kull*, Latin *esse universalitatis*]. This is a sound example for this typology, because the existence of the universe neither gives benefit to God – which would make it fall into class (a.iii) –, since God is already perfect and does not act for a goal, nor does it give benefit to any further recipient – which would make it fall into class (a.ii) –, since there is nothing external to the universe, for the sake of which the existence of the universe might be considered to be beneficial. This latter explanation might entail that the case of the universe is

actually the only instantiation of the class of the good in itself (a.i) (apart from possible further theological determinations entirely intrinsic to God's essence), since the argument only applies to the «universe» [*al-kull*], implicitly defined as the complex of all created (or contingent) existence.

AS FOR THE RECIPIENT | Arabic *fī-ḥaqqī l-qābil*, Latin *quantum ad recipientem* = (a.ii).

AS FOR THE AGENT | Arabic *fī-ḥaqqī l-fā'il*, Latin *quantum ad agentem* = (a.iii).

«THE UNIVERSE IS A GOOD FOR [THIS THING]» | Arabic *al-kull ḥayr^m la-hu*. The Latin translation conveys a reversed idea: «ut illud dicatur bonum universitati» (MUCKLE 1933: 111.20-21).

HE DOES NOT DERIVE BENEFIT FROM ANYTHING | Arabic *lā yastafidu min-hu šay^m*, Latin *non enim acquiritur ei aliquid*.

THE ACQUISITION OF THE GOOD | Arabic *istifāda al-ḥayr*, Latin *ducere bonitatem*.

IT BECAME FAMOUS | Arabic *ištahara*, Latin *non fuit autem hoc famosum...nisi*. For the technical meaning of the root *š-h-r* in this context, reminiscent of the logical treatment of the premises of the syllogism (§66), see the commentary to §279 *supra*.

EVIL | Arabic *šarr*, Latin *malicia*.

[§282] D279.9-23

(B.3.1)=(4) Also according to ALONSO 1963: 192 fn. 38, the treatment of the third 'pillar' announced *supra* (§245) begins with this paragraph, although the numbering of the 'allegations' does not start again here, but continues the numbering of the second pillar (whereas, at the beginning of the second pillar, a new series of numbering had begun, thus delimiting it more clearly from the first pillar than what happens here between the second and the third). Thus, the one starting here is mentioned in the text as the «fourth» allegation, although – according to the original table of contents of the treatise – it is to be considered as the first of the third pillar (hence the bracketed numbers I added). While presenting the topic in §245, the text had also mentioned the souls [*nufūs*], and not only the intellects [*uqūl*], as it rather happens here. These discrepancies between the programmatic announcement of the *divisio textus* and its actual realization are not uncommon in the text of the *MF*: cf. also the case of the Preface to the *Physics*, for which cf. *infra*, §315.

THE ESTABLISHMENT [OF THE EXISTENCE] OF THE ABSTRACT INTELLECTS | Arabic *itbāt al-ʿuqūl al-muğarrada*, Latin *de probando esse intelligencias nudas*.

BY MEANS OF THE NON-EXISTENCE OF THE FINITUDE [IN IT] | Arabic *bi-wāsitaʿ ʿadamī l-tanāhī*, Latin *mediante remocione finitatis tue* (!).

ETERNAL AND FOREVER | Or, more technically, eternal *ex parte ante* [*azal^m*] and *ex parte post* [*abad^m*]: cf. *supra*, commentary to §277.

A SUPPLY FROM A MOVING FACULTY | Arabic *istimdād^m min quwwat^m muḥarrikat^m*, Latin *rectore* (!) *scilicet, virtute movente illud incessabiliter*. Since it procures support to an infinite movement, it is clear that the moving faculty of the skies must as well be infinite.

IT IS IMPOSSIBLE [...] TO WHAT IS INFINITE | For the attribution to the skies of an infinite potency of movement, the exclusion that this potency might be produced by a body, and the subsequent recourse to the purely immaterial intellects, cf. AVICENNA, *K. al-Šifāʿ, Ilāhiyyāt* IX.2, ed. QANAWATĪ-ZĀYID 1960: 387 (transl. BERTOLACCI 2007: 711, §4.1); *Ilāhiyyāt* IX.2, ed. QANAWATĪ-ZĀYID 1960: 389 (transl. BERTOLACCI 2007: 714, §4.3); the physical basis for the argument is provided in *K. al-Šifāʿ, Samāʿ ṭabīʿī* IV.9, ed. ZĀYID 1983: 301.3-8; IV.15, ed. ZĀYID 1983: 331.5-6.

END | Arabic *ġāya*, Latin *fine*.

COMPLEX | Arabic *mağmūʿ*, Latin *compositum ex illis*.

[§283] D279.24-280.16

Without making the causal terminology explicit, the paragraph distinguishes between an efficient and a final causality for the movement. The final causality is expressed with the terminology of love, while the efficient causality is instantiated by both a physical and a psychic kind of influence, only the latter of which is immediately relevant for the heavens. From the point of view of the efficient cause, the circular movement of the skies is produced by the soul of the sphere, which is however helped in her action by the infinite potency provided by the corresponding fully immaterial intellect. This intellect, *qua* loved object, is the final cause of the movement of the sphere.

THE MOVER HAS TWO DIVISIONS | Reading *li-l-muḥarrik^l* for *Dunyā' al-muḥarrik^u*.

THE FIRST ONE [...] THE BELOVER. | (a) The first division addresses the case of the final causality for the movement. The remote source of the passage is clearly the well-known formula $\acute{\omega}\varsigma \acute{\epsilon}\rho\acute{\omega}\mu\epsilon\nu\omicron\nu$ with which Aristotle, *Metaphysics* Λ [XII] 7, 1072^b3 famously expresses the final causality of the unmoved mover. A very close text to this one of the *MF*, among the many possible ones, is to be found in AVICENNA, *K. al-Šifā', Ilāhiyyāt* IX.3, ed. ed. QANAWATĪ-ZĀYID 1960: 400-1 (transl. BERTOLACCI 2007: 733, §3.7); cf. also *Ilāhiyyāt* IX.2, ed. ed. QANAWATĪ-ZĀYID 1960: 387 (transl. BERTOLACCI 2007: 711, §4.1). As opposed to those passages, to the corresponding one in the *DN*, and also for instance to Avicenna's commentary on Book *Lambda* of the *Metaphysics* within his *K. al-Insāf* (cf. GEOFFROY-JANSSENS-SEBTI 2014: 52.20 ff. (French); 53.99 ff. (Arabic) for the lemma and the commentary on 1072^b3), al-Ġazālī employs here a diversified terminology, involving three different couples of synonymous expressions in order to better capture the relation of 'loving' and 'loved' that constitutes the doctrinal core of the text. The root $\acute{\epsilon}\text{-}\acute{\varsigma}\text{-}q$ (see [1] in the following Table 38), typically employed to translate Aristotle's $\acute{\epsilon}\rho\acute{\omega}\mu\epsilon\nu\omicron\nu$ [*mašūq*], is the most commonly used in Avicennan contexts, and will also be predominant in the *MF* in subsequent formulations of the notion. The Latin translators failed to find a viable rendition for the third couple of terms ([3] *maḥbūb*/*muḥibb*) – indeed almost perfectly synonymous with the first couple [1] – and consequently omitted any translation of it in their version of the passage. For the semantic nuances of the different roots $\acute{\epsilon}\text{-}\acute{\varsigma}\text{-}q$ and *ḥ-b-b* (with their corresponding nouns: *īshq* and *maḥabba*) cf. the *Introduction* to the English translation of al-Ġazālī's *Kitāb al-maḥabba* in the *Iḥyā'* by ORMSBY 2016: esp. xxv-xxvii, and see also ch. 10 in the text: «By linguistic convention [*iṣṭilāḥ*], “love” (*maḥabba*) denotes the soul's inclination for a thing the befits it whereas “passion” (*īshq*) is the term for an overmastering and exuberant inclination» (English transl. ORMSBY 2016: 100).

TABLE 38. Terminology for movement by love in the MF

	MOVING (= INTELLECT)			MOVED (= [SOUL OF THE] CELESTIAL SPHERE)		
1	loved	<i>mā šūq</i>	<i>id quod amatur</i>	lover	<i>āšiq</i>	<i>amatorem</i>
2	wanted	<i>murād</i>	<i>id quod queritur</i>	wanting	<i>murīd</i>	<i>querentem se</i>
3	beloved	<i>maḥbūb</i>	---	belover	<i>muḥibb</i>	---

LIKE THE SPIRIT MOVES THE BODY | Arabic *ka-mā yuḥarriku l-rūḥ^u l-badan^a*, Latin *sicut anima movet corpus*.

AND LIKE THE WEIGHT OF THE BODY [MOVES IT] DOWNWARDS | Arabic *wa-l-tiq^l al-ḡismⁱ ilā asfal^a*, Latin *et*

gravitas movet corpus deorsum.

DIRECT CONTACT | Arabic *mubāšara*, Latin *assiduitate*. Cf. *infra*, *Metaphysics* IV.B.3.4, §293.

ABSTRACT, UNIVERSAL INTELLECT | Arabic *al-aql al-muğarrad al-kullī*, Latin *ex intelligentia enim nuda* (without a counterpart for *kullī* 'universal').

AS IT WAS SAID BEFORE | Cf. *supra*, *Metaphysics* IV.b.2.2, esp. §272.

HER BEING LINKED TO A BODY | Arabic *ġismāniyya*. The soul as such is not properly speaking bodily, but rather merely linked to her body; hence my translation.

ASSISTS HER | Arabic *yamuddu-hu*.

BY THE WAY OF LOVE | Arabic *bi-ṭarīqⁱ l-ʿiṣqⁱ*, Latin *secundum viam amandi*.

[§284] D280.17-281.1

The paragraph presents the answer to a question on the actual modality of the movement «by way of love», by stating that the loved one may move the loving either (i) because its essence itself is researched (*e.g.* the knowledge) or (ii) because the assimilation to its essence is researched. The conclusion is that the skies move by the way of love inasmuch as they love and strive to resemble their moving intellect, thus according to the second aforementioned modality (ii).

EITHER IS | Reading *immā an* for Duniyā's misprint *immā ayy*.

THE OBTAINMENT OF ITS ESSENCE | Arabic *huṣūl dātⁱ-hi*, Latin *assecucio*. What is meant is the realization, and the attainment, of the knowledge itself.

THE RESEMBLANCE TO, AND THE EMULATION OF IT | Arabic *al-tašabbuh bi-hi wa-l-iqtidā'*, Latin *assimilari*.

MASTER | Arabic *ustād*, Latin *magister*.

PUPIL | Arabic *tilmīd*, Latin *discipulo*. The case of the relationship of teaching was also used *supra*, §278, Table 37, (b), as one of the ostensible counterexamples to the notion of the necessary inferiority of that which is for the sake of another (the teacher) with respect to that for the sake of which it is (the disciple), although the terminology there employed was rather that deriving from the root 'lm.

LOVES | Here: *yuhibbu*. For the terminology of love cf. Table 38 [3] in §283 *supra*.

COVETED [THING] | Arabic *marġūb fī-hi*, Latin *res affectata* (?).

MAGNIFICENT | Arabic *ʿazīm*, Latin *aliquid magis*. The attribute of «majesty» or magnificence, with the same root, was predicated directly of God *supra*, *Metaphysics* III.b.11, §§234-235.

THAT THE BODY [SHOULD] OBTAIN | Arabic *an yunāl^e l-ġism^e*, Latin *ut corpus possit recipere*.

DOES NOT DESCEND/INHERE IN A BODY | Arabic *lā yaḥullu ġism^{en}*, Latin *non potest sustinere in corpore* (presupposing the reading *li-l-ġismⁱ* of D-Alt). What is meant is that the intellect – as a purely immaterial substance – cannot descend in a body as in a receptacle. For the notion of «receptacle» [*maḥall*] cf. esp. *supra*, *Metaphysics* I.1, §104; and see also *Metaphysics* III.b.1, §199, Table 35.

BY VIRTUE OF THE ACQUISITION [...] TO ITS DESCRIPTION | What is meant is that the loving thing moves in order to acquire a «descriptive feature» [Arabic *waṣf*; Latin *forme* (!)] proper of the loved one. This is then a qualification of what is intended by the lover's research for the «resemblance» with the loved.

AND OF THE PUPIL TO HIS MASTER | Latin *et discipulis* (sic pro *discipulus*) *magistro*.

[§285] D281.2-5

The paragraph adds a further third possibility to the kinds of movement just described (§284), that is a movement due to the obedience of the moved with respect to the mover. This kind of motion is immediately excluded, because it would entail a goal, and thus an imperfection.

BY THE WAY OF THE COMMAND AND THE OBEDIENCE | Arabic *bi-ṭarīqⁱ l-amrⁱ wa-l-i'timārⁱ*, Latin *ex preceptione illius, vel obediencia istius*. The Latin translation interprets this further possibility of explaining a movement in close connection to the example of the pupil and the master given *supra*, at the end of §284. This might be plausible from the point of view of sense, but the Latin translators are forced to add demonstrative pronouns absent in the Arabic text. Moreover, the rendition of *amr* («command» in a generic sense) as *preceptio* (*praeceptio*), whose primary meaning is ‘teaching’, might be seen as excessively specific. A doctrinal reason for considering this third case in connection with the general cosmological explanation of the movement of the skies, rather than with the immediately preceding example of the pupil, is that the notion of the obedience as a sign of having a goal would not be contradictory if applied to a (clearly imperfect) being like a human student (and likewise *mutatis mutandis* for the teacher), while the text precisely presents it as such, thus making it far more likely that the reference is to the heavens and their intellects.

OBEDIENT | Arabic *mu'tamir*, Latin *obedientem*.

INTENDED [THING] | Arabic *maqṣūd*, Latin *id quod intenditur*.

SUBMITTING TO THE COMMAND | Arabic *imtiṭāl al-amr*, Latin *complere mandatum*.

[§286] D281.6-24

The paragraph presents three conditions according to which the imitative, loving movement of the skies (case (ii) in §284 *supra*) can happen: (1) the presence of a faculty of conception in their soul that wants to resemble the intellect; (2) magnificence of the intellectual features of the loved object; and (3) actual possibility to acquire the loved features. JANSSENS 2019: 112 remarks that al-Ġazālī in this passage «modifies the very wording and order of the conditions that have to be fulfilled in order for the celestial motion to arise» with respect to his source in the *DN*. The first loved object is identified with the First Principle, although the intellects deriving from Him are, in turn, secondary objects of love for the inferior souls.

A CONCEPTION | Arabic *taṣawwur*, Latin *imaginatio* [*forme*]. *Infra* in this same paragraph the notion of «conception» will be glossed as «perception» [Arabic *idrāk*, Latin *apprehensio*], while the conceived characteristic [*wasf*] will be identified *tout court* with the «beauty» [Arabic *ġamāl*, Latin *pulcritudinis*] of the loved one. The paraphrasis of *taṣawwur* with *idrāk* was already advanced in the *Preface to Logic*: cf. *supra*, §2.

LOFTY AND MAGNIFICENT | Arabic *ġalīl^{an} wa-‘aẓīm^{an}*, Latin *precipua* (‘predominant’?).

THE COVETOUSNESS | Arabic *al-raġba*, Latin *fervor amoris*. Cf. the past participle *marġūb*, of the same root, used *supra* in §284.

BY THE WAY OF THE OPINION AND THE IMAGINATION | Arabic *bi-ṭarīqⁱ l-zannⁱ wa-l-taḥayyulⁱ*, Latin *secundam* (sic pro *secundum*) *putacionem et estimacionem* (maybe presupposing an attempt at making sense of the erroneous reading *al-ġayd* of D-Alt). Dunyā’s reading *taḥayyul*, confirmed by ms. Y, strongly suggests to avoid the rendition «imagination» for *taṣawwur* (as in the Latin version), because the *taṣawwur* is attributed to the souls of the skies, while the changing *taḥayyul* is denied of them.

TO THE SUPERIOR DIRECTION | Reading *al-iltifāt ilà ġihatⁱ l-‘abwⁱ*, as in D-Alt, instead of Dunyā’s printed text *ilà ġihatⁱ l-saffⁱ* («to the inferior direction»). The reason of Dunyā’s choice might be the will to emphasize the solicitude of the heavenly intellects on the sublunary world, but this kind of emphasis

feels out of place in a reasoning which aims, rather on the contrary, at underlining the intellects' dependence on, and their search for, what is superior to them.

THEN, HER CONCEPTION [...] OF THE MOVEMENT | The process with which the soul of the sphere causes its movement by contemplating the intellect can be summarized as follows. The Latin translation uses here for the Arabic *'išq* the expression *fervor amoris*, already employed for the different term *raġba* in this same paragraph. For further 'strong' translations of *'išq* and its cognates in the Latin version cf. also *infra*, commentary to §287.

DIAGRAM 6. *Mechanism of the celestial movement «by way of love»*

conception / perception (of the beauty)	→	love	→	research (of the resemblance)	→	movement
<i>taṣawwur</i> / <i>idrāk</i> (<i>lī-l-ġamāl</i>)	→	<i>'išq</i>	→	<i>ṭalab</i> (<i>al-tašabbuh</i>)	→	<i>ḥaraka</i>
<i>imaginatio</i> / <i>apprehensio</i> (<i>pulchritudinis</i>)	→	<i>fervor amoris</i>	→	<i>inquisitio</i> (<i>assimilationis</i>)	→	<i>motus</i>

THAT LOVED IS THE FIRST TRUE, OR WHAT IS CLOSE TO HIM AMONG THE CLOSE ANGELS | The identification of the «loved» one [*ma'šūq*] of the celestial souls with God in the first place, but also (in the second place) with the various angels presiding over the spheres, presupposes the hierarchical emanative model that will be presented in detail *infra*, *Metaphysics* V, §297. Every heavenly soul loves her own intellect, and the hierarchy culminates in God as the source of all being.

WHAT IS CLOSE TO HIM AMONG THE CLOSE ANGELS | Arabic *mā yaqrubu* (or: *yuqarrabu* II, with the meaning of 'is made/brought close') *mīn-hu mīn al-malā'ika al-muqarrabīna*, Latin *id quod propinquius est primo ex angelis propinquus*. It is noteworthy in the present passage that al-Ġazālī explicitly identifies the angels made close to God with the «abstract, eternal intellects removed from the reception of change» [Arabic *al-'uqūl al-muġarrada al-azaliyya al-munazzaha 'an qubūl l-taġayyur*¹, Latin *intelligenciis nudatis eternis, inpermutabilibus*]. For further occurrences of the terminology of the angelical approximation to God cf. *supra*, *Metaphysics* III.b.11, §227; *Metaphysics* IV, §269; *infra*, *Metaphysics* IV.b.3.1, §288; IV.b.3.4, §293; *Physics* V.9, §451. For a clear-cut affirmation of the identity of angels and intellects cf. also *supra*, *Metaphysics* IV, §245 (and cf. also the parallel passage of the *TF* quoted in the commentary); on the issue cf. the Introduction, §1.8.2.

PERFECTIONS | Arabic *kamālāt*, Latin *perfeccionibus*.

[§287] D281.25-282.20

In response to a question of clarification concerning the proper meaning of the aforementioned love and research (of the resemblance to the loved one), the paragraph clarifies that what is researched by every being is, in most general terms, the actualization of the potency, that is, the perfection. Only God is entirely perfect, while every other being has some sort of imperfection (that is, of non-actualized potency). The skies are only slightly imperfect, since they are perfect (that is, fully actualized) in their substance and in almost all their accidents (the exception will be detailed *infra* in §288). Examples of perfect attributes of the heavens are given, such as their shape (spherical) and their appearance (most luminous).

ELABORATE ON | Arabic *tafṣīl*, Latin *distinguere inter*.

THIS LOVE AND LOVED | Arabic *hādā l-ʿiṣq wa-l-maʿṣūq*, Latin *ardorem huius amoris, et hoc ardentem amatum*. For an analogously emphatic translation of *ʿiṣq* in Latin cf. also *supra*, commentary to §286 (*fervor amoris*).

HE IS PERFECT IN ACTUALITY, NOTHING IN POTENCY BEING IN HIM | Arabic *anna-hu tāmm^{un} [qā'im^{un} A] bi-l-fi'lⁱ, laysa fi-hi šay^{un} bi-l-quwwatⁱ*, Latin *quod est stabile* (presupposing the reading of A) *in effectu, et in quo nichil est in potencia*. Cf. AVICENNA, *K. al-Šifā'*, *Ilāhiyyāt* IX.2, ed. QANAWATĪ-ZĀYID 1960: 390 (transl. BERTOLACCI 2007: 716, §4.4-5); IX.3, ed. QANAWATĪ-ZĀYID 1960: 400-401 (transl. BERTOLACCI 2007: 733, §3.7, already quoted *supra* in the commentary to §283). For the notion of the First Principle's perfection above perfection cf. *supra*, *Metaphysics* II.12, §194; *Metaphysics* IV.a.2, §247 (and Table 35). The root *t-m-m* and the root *k-m-l* (*kāmil*, *kamāl*) are used interchangeably in this paragraph to indicate the perfection, with a prevalence of the second one for the inferior beings, while the couple *tāmm* / *tamām* appears proper to God.

IN HIS ACCIDENTS / IN ITS ESSENTIAL ACCIDENTS | While the Arabic expression is in both cases the regular *fi a'rādⁱ-hi* (*al-dātiyya*), the Latin translation has in both cases the incongruous *intencionibus* (MUCKLE 1933: 114.22 and 26), which clearly presupposes the reading **agrād* for *a'rād* (cf. *infra*, end of §288, for another rendition of *ğaraḍ* as *intencio*, and see the Introduction, §1.1).

AMONG THE SHAPES | Arabic *min al-aškāl*, Latin *ex figuris*. The skies are endowed with «the most excellent» [Arabic *aḫḫal*, Latin *nobiliorem*] of the shapes, *i.e.* the «sphere» [Arabic *kura*, Latin *spherica*].

AMONG THE APPEARANCES | Arabic *min al-hay'āt*, Latin *ex maneriis*. Also the appearance of the skies is the most perfect of all, being the «illumination» [Arabic *iqdā'a*, Latin *luminosam*] and the «transparency» [Arabic *šafīf*, omitted in Latin].

[§288] D282.21-283.17

The paragraph, which concludes the fourth allegation [(B.3.1)=(4)] started *supra* at §282, expounds in detail the aspect for which the celestial spheres are in potency, and namely their position. The circular movement gathers in a oneness by species the numerically different positions, each of which passes away, just like man on earth is able to attain the eternity by species, although each individual man passes away. The perpetual circular movement (as opposed to the natural rectilinear one, which is always corruptible) is the utmost degree of resemblance to the moving intellects that the heavenly spheres can attain. Thus, it can rightly be considered as an act of worship for the First Principle.

THE POSITIONS | Arabic *al-awḏā'*, Latin *situs*. For the treatment of the accidental category of «position» cf. *supra*, *Metaphysics* I.1, §128. For Avicenna's notion of the movement of the heavens as 'positional' [*waḏ'iyya*] rather than local cf. *supra* the commentary to *Metaphysics* IV.b.1.3, §§258-259.

FOR THEM | Arabic *la-hā*. The implicit subject of the passage at the beginning is plural (the 'skies' or 'celestial spheres'), while later on it becomes masculine singular (the «celestial body», cf. *infra*).

THIS DEGREE OF POTENCY | Arabic *hādā l-qadr bi-l-quwwa*, Latin *aliquantum in potencia*.

SUCCESION | Arabic *ta'āqub*, Latin *successionem*. What is at stake is an uninterrupted, circular series of different positions in which the sky is time by time to be found; all the different positions pertain to the same «species» [*naw'*].

THE PERMANENCE OF HIS INDIVIDUALITY | Arabic *baqā' šaḫṣⁱ-hi*, Latin *permanere personaliter*. Since the individual eternity is not guaranteed to man on earth, the only way to achieve it is through the

permanence and the «preservation» [ḥifẓ] of the human species, in the series («succession» [taʿāqub]) of the perishable individuals. The link between men and celestial spheres established in this passage is doctrinally very interesting, since it allows for an explanation of the circular «succession» of the positions held by the skies in affinity with the succession of human generations, highlighting in both cases the tension toward an actuality otherwise not attainable by the particular individuals in their singular existence. Both the human and the celestial souls strive for an eternity only reachable through a series – of newly-generated individuals, in the case of man, and of positional states, in the case of the skies. Similar considerations on the kinship between man and skies had already been advanced by al-Kindī, as underlined by ADAMSON 2007: 185, and they will resurface again later on in the Peripatetic tradition, e.g. in Averroes and in Šem Tov ibn Falaquera's *De'ot ha-Filosofim*: cf. the passage, almost perfectly parallel to this one of the *MF*, quoted in FREUDENTHAL 2000: 353 and fn. 48.

IN ITS BEING IN ACTUALITY | It might be better to read *fī kawwān-hā* (with reference to the feminine *ḥaraka*) for Dunyā's *kawwān-hi*.

CHANGES TO REST IN ITS CONCLUSION | Arabic *taḡayyarat ilā al-sukūn fī āḥir-hā*, Latin *variabitur in velocitate* [!] *circa suumm finem*. The Latin reading *velocitate* might be due to a misreading of *sukūn*, or else to a misinterpretation of the variant *al-ḥidda* ('sharpness') attested by *A*.

AND CHANGES TO FEEBLENESS IN ITS CONCLUSION IF IT IS VIOLENT | The pericope is omitted in Latin.

FEEBLENESS | Arabic *futūr*.

LASTS UNIFORMLY | Arabic *tastamirru 'alā watīrat^m wāḥidat^m*, Latin *perseverat uno et eodem modo*. The perpetuity and uniformity of the circular movement is a perfection, resembling the perfection of the moving intellects.

MAINTENANCE | Arabic *istibqā'*, Latin *ad permanendum*.

WORSHIP | Arabic *'ibāda*, Latin *servit*. The «research of the resemblance» is identified with an act of cult and service to God, called here – as already *supra*, *Metaphysics* III.b.11, §237, and *infra*, §293 – with the Qur'ānic epithet of «Lord of the worlds» [Arabic *rabb al-'alamīna*, Latin *domino seculorum*]. The attribute is not used in the parallel passage of the *DN*, where God is rather called 'First' or 'Necessary Existent' (cf. ed. MO'IN 1952: 149.8-150 = ACHENA-MASSÉ (1) 1955: 204.12^b-205.12). It appears twice, however, in the *Ilāhiyyāt* of Avicenna's *K. al-Šifā'*, at IX.7: cf. ed. QANAWATĪ-ZĀYID 1960: 424.14-15 (and see BERTOLACCI 2006: 466 fn. 134).

APPROXIMATION | Arabic *taqarrub*, Latin *appropinquare*. The notion of *taqarrub* is etymologically explained in Arabic as «the research of the closeness» [Arabic *ṭalab al-qurb*, Latin *amplius vicinari*]. *Iuxta* the reasonings conducted in the preceding paragraphs (cf. esp. §286), the closeness to God is thus likened to the assimilation or «resemblance» [*tašabbuh*] to him. Cf. the parallel usage of the participle *muqarrab* to designate the angels «close» or 'drawn close' to God *supra*, *Metaphysics* III.b.11, §227; *Metaphysics* IV, §269; *Metaphysics* IV.b.3.1, §286; and *infra*, *Metaphysics* IV.b.3.4, §293; *Physics* V.9, §451.

THE GOAL THAT MOVES THE SKIES | Arabic *al-ḡaraḍ al-muḥarrik li-l-samawāti*, Latin *intencio que facit moveri celos*.

[§289] D283.18-284.14

(B.3.2)=(5) The fifth allegation – that is, the second allegation of the third pillar – deals with the multiplicity of the skies, which entails their difference of nature and species. Two arguments for this difference are given: (a) the skies are not all conjoined to one another, therefore they must have distinct natures; (b) if they were of the same species they could in principle move from their place to the place of another with a rectilinear movement, but this is impossible to them. According to JANSSENS 2019: 112, al-Ġazālī with respect to the *DN* «omits the issue of whether they have one, or more than one cause». An accurate historical reconstruction of the debate on the plurality of the

moving intellects, from the Aristotelian *corpus* up to Averroes, is available in WOLFSON 1958.

THE MULTIPLICITY OF THE SKIES | Reading *katrat^t-hā* as in D-Alt for Dunyā's printed text *kuriyyat^t-hā* («the sphericity of the skies»). As a matter of fact, the doctrinal context is clearly addressed to diversifying the skies as for their natures and their species, so that it makes perfect sense to state preliminarily their plurality. Their being spherical, by contrast, although a plausible feature, would rather be a common trait for the heavens. Cf. also the Latin translation: «*experiencia significat esse multitudinem celorum*» (MUCKLE 1933: 115.22-23).

THE UNIVERSE WOULD BE MUTUALLY CONJOINED, NOT DISJOINED | Arabic *la-kāna l-kull^t mutawāšil^{an} lā mutafāšil^{an}*, Latin *omnes uniti (vel confusi) essent, non distincti*. More in the spirit of the Latin translation, one could also translate *al-kull* as «everything» or «every [one of the skies]»; however, given the cosmological context, a reference to the universe or cosmos itself does not feel out of place.

DISJOINMENT | Arabic *infišāl*, Latin *distinccionis*.

DISSIMILARITY | Arabic *tabāyun*, Latin *distinccio* (same as for *infišāl*).

THE WATER DOES NOT MIX UP WITH THE OIL | Arabic *al-mā' lā yahtaliṭu bi-l-duhn^t*, Latin *aqua non permiscetur oleo*. The example concerning the immiscibility of water and oil is not mentioned in the *DN*.

OVERSTEPS IT [STILL] BEING DISSIMILAR [FROM IT] | Arabic *yatağāwizu-hu mubāyan^{an}*, Latin *cum superfunditur ei sed continuatur sibi distincte*.

THEN, JUST LIKE ONE KNOWS [...] CONJUNCTION. | The argument goes that since dissimilar parts are immiscible (oil with water), while similar (homeomeric: cf. *infra*) parts are miscible (water with water and oil with oil), and since the universe shows a distinction (of different skies) incompatible with a total mixture, then it is reasonable to suppose that the «parts» [*ağzā'*] of the cosmos – here, the various skies – are mutually distinct, in a way analogous to that in which parts of water and oil are mutually distinct.

BY VIRTUE OF THE MUTUAL SEPARATION | Arabic *bi-l-mufāraqa*, but cf. Latin: «*per confusionem (vel commixtionem) parcium aque assimilationem earum inter se*» (MUCKLE 1933: 115.32-33).

LIKEWISE HERE | That is, in the cosmological context.

MUTUAL RESEMBLANCE | Arabic *tašābuh*, Latin *si fuerint similes*. The root *š-b-h* in the VI stem can convey the technical concept of «homoeomeric parts»: cf. the rendition of *al-mutašābiha al-ağzā'* in MCGINNIS 2009.

ELEMENTS | Arabic *'anāšir* (sg. *'unšur*), Latin *elementa*. For the unusual adjective *'unšuriyya* used to designate the material cause, in keeping with a terminological choice proper of the *DN*, cf. *supra*, *Metaphysics* I.5, §157; a further occurrence of the term *'unšur* in the technical sense of one of the four elements is to be found in *Logic*, specifically in relation to fire: cf. *supra*, *Logic* II, §21; and then cf. *infra*, *Metaphysics* V and *Physics*. For the hypothesis that the Arabic *'unšur* was originally meant to translate the Greek *χυμός* («humour»), cf. WOLFSON 1947: 386.

IT HAS ALREADY BEEN CLARIFIED | For the skies' impossibility to move with the rectilinear motion proper of the sublunary, elementary world, cf. *supra*, *Metaphysics* IV.b.2.1, §270.

[§290] D284.15-end of page

(B.3.3)=(6) The sixth allegation – that is, the third allegation of the third pillar – states the impossibility of a mutual causation between the celestial bodies. This is because there is no proper creative action (*i.e.* causality for existence) performed by a body, since the corporeal agency is limited to the exercise of an efficient causality on a pre-existing body. As noticed by JANSSENS 2019: 112, the sections of the *MF* corresponding to this and the following (§291) paragraph have no direct

correspondence in the *DN*. According to Janssens, the notion that the bodies can influence each other only by means of a mutual direct contact «might be a clarifying addition by al-Ghazālī» (*ibidem*).

THE TANGENCY WITH IT | Arabic *mumāssatⁱ-hi*, Latin [*nisi fuerit*] *contingens illud*. For the notion of tangency cf. *supra* the antiatomistic discussion: *Metaphysics* I.1, §111.

THE CONTIGUITY WITH IT | Arabic *muḡāwaratⁱ-hi*, Latin *vicinum ei*.

THE EQUIDISTANCE | Arabic *muwāzātⁱ-hi*, Latin *ei directe oppositum*. For the relational concepts of «contiguity» and «equidistance» cf. the treatment of the categories *supra*, *Metaphysics* I.1, §128; for «equidistance» as the name taken by the oneness in the accident of position cf. also *supra*, §150.

A [CERTAIN] CORRELATION | Arabic *munāṣabat^{an}*, Latin *secundum aliquam comparacionem*.

ILLUMINATION OF THE BODY | Arabic *iqā'a al-ḡism*, Latin *illuminacionem in corpus*.

COMBUSTION | Arabic *iḥrāq*, Latin *combustionem*.

OF WHAT IT ENCOUNTERS AND TOUCHES | The subject of the sentence is the 'fire', while *supra* – since the verb *ḥādā* had the feminine suffix pronoun *-hā*, which must be referring to the Sun, feminine in Arabic – it was the 'thing'.

ORIGINATION | Arabic *iḥtirā'*, Latin *feri, vel generari, vel creari* (a case of triple translation?). For this rendition of *iḥtirā'* cf. MCGINNIS-REISMAN 2007.

[§291] D285.1-9

The first objection against the argument of §290 provides an ostensible counterexample to the impossibility of the origination of a body from a body, *i.e.* the production of air from water heated by fire. The answer explains that actually the air is not immediately produced by the fire, but rather the fire acts on and influences another body (namely water). Something analogous to this would not be possible, however, in the case of the skies. Cf. *infra*, *Physics* II.1, §§335-337.

«IS NOT THE FIRE [...] BECAUSE OF THE FIRE?» | As mentioned in the introduction to the present paragraph, the reference is to the process of evaporation of boiling water, which is interpreted by the objector as production or origination of the «body» of the element 'air' through the causal action of the body of the 'fire'. As will be made clear in the answer, the objector is wrong because she neglects to consider the mediation of the third element involved, *i.e.* 'water'.

«THE AIR IS NOT A BODY IN THE FIRST PLACE» | Arabic *al-hawā' layṣa bi-ḡismⁱⁿ awwalⁱⁿ*. Depending on the meaning to be given to the expression *bi-ḡismⁱⁿ awwalⁱⁿ*, the Arabic text might be taken to be denying the elementary status of the air. More plausible the rendition chosen by the Latin translation: «non est corpus principaliter proveniens ex igni», on which I base my translation. I take the passage to globally mean that the fire acts on the water in order to produce the effect that we experience as release of the air (evaporation, in modern terms), rather than immediately producing the air.

[§292] D285.10-286.10

The second objection argues against the restriction to mutual contact (and the like) of the range of possible causal actions performed by a body. The answer explains that the action of every body is due to the combined action of its matter and its form, the task of the matter being that of making

locally possible the causality of the form. Under this account, it is imperative that the body is close to the body on which it is to exert its action, in order for the form to be able to meet the other body in that place. Thus, a body *qua* body cannot have a causal action at a distance (as opposed to the soul: cf. *infra*, *Physics* V.9, §§443-446).

«WHY DID YOU SAY [...] OR SOMETHING ELSE?» | The reference is to the beginning of the present sixth allegation (=B.3.3), *supra*, §290.

ABSTRACT MATTER | Arabic *muğarrad al-mādda*, Latin *secundum materiam tantum*.

ABSTRACT FORM | Arabic *muğarrad al-šūra*, Latin *secundum formam tantum*. Each of the two options (b.1) – action of a body through matter alone – and (b.2) – action through form alone – is discarded, because it is the compound of matter and form – or, to be more precise, the form with the mediation of the matter (b.3) – to be properly «active» [*fāʿil*].

IF IT WERE ACTIVE [...] IT IS FORM | The presence of an active (agent) and a passive-receptive (patient or recipient) element was seen as a necessary cause for multiplicity already *supra*, in theological context: cf. *e.g. Metaphysics* II.8, §183.

THE ABSTRACT FORM [...] RATHER IN MATTER | For the inherence of form in matter cf. *supra*, *Metaphysics* I.1, §104.

BY THE MEDIATION OF THE MATTER | Arabic *bi-tawassuṭ l-māddat*, Latin *mediante materia*.

MATTER, INASMUCH AS IT IS MATTER, [...] FALSIFIED THAT | The reference is back to case (b.1) listed *supra*, *i.e.* the hypothesis that the matter composing a body might as such be active. Since that case has already been refuted, any further hypothesis leading to the unwanted consequence that matter *qua* matter «has already acted» [Arabic *qad fāʿalat*, Latin *iam egit*] is also to be discarded. SALMAN 1935-1936: 123 fn. 3 has suggested the emendation of Latin *iam egit* in *non agit*, but his proposal must now be dismissed on the basis of the Arabic text.

BY VIRTUE OF ITS MEDIATION [...] TOWARD THE THING | Arabic *inna-hā bi-tawassuṭ-hā yaʿmalu l-ğism^a ilā l-šay^z*, Latin *quo mediante, aplicetur ad aliquid ad hoc ut agat in illud*.

ITS MEETING | Arabic *talaqī-hu*, Latin *quod tangit*. The distinction of the «meeting» of the active form with the patient body «here» [Arabic *hahunā* (sic pro *Dunyā's hā hunā*), Latin *hic*] and «there» [Arabic *hunāka*, Latin *illic*] makes it clear that the localization of the active body (due to its matter) is indispensable in order to allow for the causal action of its form. Hence, there is no corporeal action but when the active and the receptive body are contiguous to one another, which was the *demonstrandum*.

[§293] D286.11-287

(B.3.4)=(7) The seventh allegation – that is, the fourth allegation of the third pillar – concludes the Fourth treatise of *Metaphysics*, started back at §245. It deals with the correspondence between the intellects, the souls and the bodies of each sky, stating that each of the heavens has a soul and an intellect, because each one has a differentiated movement and a different species than the others. Thus, each one of the celestial souls needs a different intellect, whom she loves and whose resemblance she seeks, producing the movement of her celestial sphere.

IT IS NOT PERMITTED THAT THEY ARE FEWER THAN THE NUMBER OF THE CELESTIAL BODIES | Cf. *infra*, *Metaphysics* V, §297, for the actual conclusion that the number of the celestial intellects is greater than that of the spheres, since there exist nine spheres and ten intellects.

IT HAS BEEN ESTABLISHED [...] AS FOR THE NATURES | Cfr. *supra*, *Metaphysics* IV.b.3.2, §289.

AND THAT THEY ARE POSSIBLE | Arabic *wa-anna-hā mumkinat^{mn}*, Latin *locales vel possibles*. As already remarked by ALONSO 1963: 205 fn. 42, the alternative in translation presented by the Latin version could be explained by surmising an uncertainty of the translators in deciding how to interpret an Arabic *rasm* (maybe partially corrupted in their antigraph), which could be read both as *makāniyya* ('local') and as *mumkina* ('possible', 'contingent'). It is thus more akin to a double translation than to the witness of a possible variant reading in the antigraph.

FROM THE ONE ONLY ONE PROCEEDS | For further occurrences of the *dictum* (added in this point by al-Ġazālī: see JANSSENS 2019: 112 and fn. 108) cf. *supra*, *Metaphysics* II.10, §187 (two formulations), and *infra*, *Metaphysics* V, §294. Cf. the Latin rendition: «Ex uno autem non provenit nisi unum» (MUCKLE 1933: 117.33-34).

IT HAS ALREADY BEEN SAID | Cf. *supra*, *Logic* II, §17 and *Metaphysics* I.2, §141.

PREROGATIVE | Arabic *iḥtiṣās*, Latin *proprietas*.

BY MEANS OF A DIFFERENTIA | Arabic *bi-faṣlⁱⁿ*, Latin *ex differentia*.

DISTINGUISHES ITSELF FROM ANOTHER | Arabic *yubāyinu*, Latin *difert* (sic).

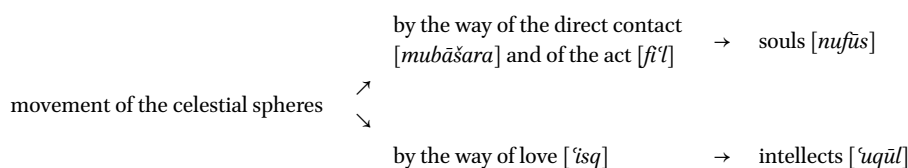
ATTENTION | Arabic *iltifāt*. The Latin rendition *diversitas* seems to presuppose a misreading like **iḥtilāf* in the antigraph.

IT HAS BEEN CLARIFIED IN THE MATHEMATICS | This cursory reference to the «mathematics» [Arabic *riyāḍiyyāt*, Latin *mathematicis*] – and more precisely to their astronomical part, to which the treatment of the motion of the skies pertains in the first place – cannot be a proper crossreference to another section of al-Ġazālī's *summa*, since mathematics is programmatically not treated in the *MF* (*supra*, §1). As for the *DN*, its four mathematical sections (*Geometry*, *Arithmetics*, *Music* and *Astronomy*) have been added to Avicenna's original text by the master's secretary and biographer al-Ġūzġānī. Moreover, a corresponding reference lacks in the *DN*. This might be a hint in favour of the hypothesis, advanced by MADELUNG 2007: 334, that al-Ġazālī's *MF*, as well as Ibn al-Malāḥimī's *Tuhfa al-mukallimīna fi l-radd 'alā l-falāsifa*, might depend on «an exposition of philosophical teaching» deriving from the *DN*, rather than directly from the *DN*, although such a hypothesis is in itself very onerous (cf. the Introduction, §1.3, on the derivation from the *DN*, and again §2.1.3, on Ibn al-Malāḥimī). Further references to scientific material not present in the actual text of the *MF* are in *Logic* IV, §70 (dialectics) and §72 (rhetoric); *Physics* III, §368 (optics); *Physics* IV, §389 (optics). In at least some of these cases, however, Avicenna's *DN* provides a reasonable basis for explaining al-Ġazālī's reference (cf. e.g. the commentary to §70 *supra*), while some others (like the present one) might also be explained in terms of al-Ġazālī's own understanding of the treated topics, and of their belonging to different philosophical sciences (however falling outside the scope of the *MF* itself). On these 'external cross-references' see the Introduction, §1.6.2.

WHAT THEY RESEARCH | Arabic *maṭlab*, Latin *inquisitum*.

THEN, EACH ONE [OF THE CELESTIAL BODIES] [...] BY THE WAY OF LOVE | The cosmological structure of the celestial spheres and of the souls and intellects that contribute to their motion has been expounded in detail throughout the Fourth treatise of *Metaphysics*. Here, it is expressed in a concise way, focused on the physical movement of the skies. Thus, both souls and intellects are considered in that they contribute to the motion of the spheres, rather than in their reciprocal hierarchy (according to which the intellects 'move' the love of the souls, and they in turn move the celestial bodies: cf. *supra*, *Metaphysics* IV.b.3.1=b.2.4, esp. §§283-287).

DIAGRAM 7. «Parallel» account of the intellectual and psychic causes of the motion of the celestial spheres



DIRECT CONTACT | Arabic *mubāšara*, Latin *presenciam*. The Arabic term *mubāšara*, well-known for its mystical echoes, is probably to be intended here in the less abstract sense of ‘practice’, ‘acquaintance’, or ‘assiduous presence’. Cf. *supra*, *Metaphysics* IV.b.3.1, §283 for a previous occurrence of the same word.

THE SOULS ARE THE CELESTIAL ANGELS | Arabic *wa-takūnu l-nufūs hiya l-malā’ika al-samāwiyya*, Latin *anime vero sunt species [!] celestes*. The curious Latin *species* translates here (and in the following definition) the Arabic *malā’ika*, with a double error *prima facie* rather difficult to explain. On the one hand, it might be surmised that the Latin translators read an Arabic text freed of the identification between angels and intellects so often reaffirmed by al-Ġazālī; but if that is the case, the corrector of that manuscript was not very accurate, since many other occurrences of the identification are left unaltered (cf. *e.g. supra*, §245). On the other hand, a palaeographical error *malā’ika* > **anwā’* seems very unlikely. The identification of the souls of the skies with the «celestial angels», and of the intellects with the «close angels» or «cherubim» was anticipated *supra*, *Metaphysics* IV, §245; cf. the commentary to that paragraph, also for the quotation of the parallel passage of the *TF* in which the double identification is most clearly expressed.

FOR THEIR APPROPRIATENESS TO THEIR BODIES | Arabic *li-ḥtišāš-hā bi-aḡsām-hā*, Latin *propter appropriationem suam cum suis corporibus*.

THOSE INTELLECTS ARE THE CLOSE ANGELS | Arabic *tilka l-’uqūl hiya l-malā’ika l-muqarraba*, Latin *ipse intelligencie sunt species deo proxime*. JANSSENS 2019: 112 and fn. 109 comments as well on the double angelical identification of souls and intellects, stating that it is «noteworthy», although he stresses that Avicenna himself employs the angelical terminology in his *al-Išāra ilā ’ilm fasād aḡkām al-nuḡūm* (cf. MICHOT 2006: 36.9). In any case, Avicenna makes use of the angelical lexicon also elsewhere (not least in the *DN* itself). The interesting feature of the *MF* is thus, rather, that al-Ġazālī greatly emphasizes this use: on the issue cf. Introduction, §1.7.2.

FOR THEIR FREEDOM [...] TO THE LORD OF THE WORLDS | The sentence is meant as an explanation of the qualification of *muqarraba* («close», or ‘drawn close’) given to the angels that identify with the moving intellects of the spheres. This attribute is due in the first place to their independence from the «material attachments» [*’alā’iq al-mawādd*], but more precisely for the «closeness» [*qurb*] to God of their «attributes» [*ṣifāt*]: for the same idea cf. *supra*, *Metaphysics* III.b.11, §237.

LORD OF THE WORLDS | Arabic *rabb al-’alamīna*, Latin *dominum dominorum*. The Latin translation presupposes D-Alt’s variant reading *rabb al-’arbāb* («Lord of the lords»), which has a stronger ṣūfī connotation: cf. for instance its usage in Dāwūd al-Qayṣarī’s (d. 1350) *Premise* to his commentary on Ibn al-’Arabī’s *Fuṣūṣ al-ḥikam*, the so-called *Muqaddima al-Qayṣarī*, now available in English translation in ALI 2020 (cf. *e.g.* Ch. 9: 188). For the usage of the Qur’ānic epithet *rabb al-’alamīna* in the *MF* cf. *supra*, *Metaphysics* III.b.11, §237; *Metaphysics* IV.b.3.2, §288. The first of the two parallel passages, which deals with the joy felt by those who contemplate God, is particularly akin to the present occurrence, since there as well the angels are described in terms of their closeness to the Divine, precisely called «Lord of the worlds». For the alternative reading *rabb al-’arbāb* as attested *inter alia* by Ibn al-Malāḡimī’s *Tuḡfa al-mutakallimīna* cf. the Introduction, §2.1.3, Table 22, [26]; cf. also §1.9.1, Table 18, [6].

Treatise V

[§294] D288.1-20

The Fifth treatise of *Metaphysics*, which begins here, deals with the derivation of all beings from the First Principle, in an hierarchical process of emanation. As such, it forms a dyptich with the Fifth treatise of *Physics*, which considers the process of return of the creation to the First (cf. Introduction, §1.5). The present paragraph posits the problem of how the multiplicity of beings experienced in the world can be made derive from the One God, without prejudice to the axiom of emanative metaphysics usually summarized with the Latin expression *ex uno non fit nisi unum*, especially since the multiplicity of the existing beings is actual and irreducible to a single hierarchical chain. On the principle, also known in Arabic as ‘rule of one’ [*qā’ida al-wāḥid*], cf. HYMAN 1992, D’ANCONA 2007 and, most recently, AMIN 2020. JANSSENS 2019: 112-113 notices that the section of the *MF* corresponding to §§294-296 in my translation (he gives in particular Dunyā’s paging 288.3-290.7) does correspond to *DN* §38, but «it is reworded in a didactic way, namely by positing questions before formulating the appropriate answers». While this feature might indeed be particularly remarkable in the present context, it seems to me that the reformulation by questions and answers of Avicenna’s doctrines is quite typical of the style of the *MF* at a way more general level.

THE MODALITY OF THE HIERARCHICAL ORDERING [...] OF THE FIRST TRUE | This section of the long title of the Fifth treatise of *Metaphysics* is erroneously printed by Dunyā as part of the main text (with his own title ending at «from the First Principle», *min al-mabda’ al-awwal*). An uncertainty in establishing where exactly the title ends is also witnessed by the Latin tradition, at least as reported by MUCKLE 1933: 119.1-5, who prints in small caps the text up to «causer of the causes», relegating to the main text the section corresponding to «and [on] this treatise being [...] of the First True» («Tractatus iste [...] primi, et veri», see MUCKLE 1933: 119.6-8; for criticism of Muckle’s reading of ms. BNF lat. 6552 in this point at MUCKLE 1933: 234-235, and the errors of the ms. itself, cf. SALMAN 1935-1936: 123-124 fn. 3). For ensuring the ascription of that section as well to the proper title of the treatise, it is telling that Albert the Great, in his *De causis et processu universitatis a prima causa*, could refer to this treatise of al-Ġazālī’s *Metaphysics* as ‘flos divinatorum’, precisely employing with the function of title the Latin translation of the Arabic *zubda al-ilāhiyyāt* («cream of the divine [things]»): cf. ALBERT THE GREAT, *De causis* 2.1.1, ed. FAUSER 1993: 60.51 («Huiusmodi tractatum Algazel ‘Florem divinatorum’ vocavit»); ed. FAUSER 1993: 61.7 («His igitur de causis Algazeli placuit hunc librum ‘De floribus divinatorum’ intitulari»). It is noteworthy that *Flos divinatorum* was for Albert the title given by Algazel to his treatise on the causes – in parallel with Albert’s own *De causis* –, alongside names like *Tractatus de bonitate pura* (attributed to al-Fārābī) and *Liber de lumine luminum* (attributed to Avicenna): cf. DE LIBERA 1992: esp. 92 (where the identification of *Flos divinatorum* with the fifth treatise of the *Metaphysics* of the *MF* is acknowledged). These passages of Albert’s *De causis* are covered in CORTABARRÍA 1962: 270-271, although he was not able to identify their *verbatim* source in the Latin text of the *MF*: cf. now, on the entire issue, SIGNORI 2019: 525 and fn. 194 (see also *ivi*, Appendix: 606-607, numbers [277]-[278], for the two quotations concerning the «flower/cream of the divine things»). On the basis of all the preceding considerations and of the sense of the text, I have restored in the translation the correct ‘typographical’ arrangement of the title.

THEIR GIST | Arabic *ḥāṣil* - *ḥā*, Latin *id quod acquiritur ex eis*. For the same sense of *ḥāṣil* cf. *supra*, *Logic* IV, §38; *Metaphysics* I.8, §167; *Metaphysics* III.b.4, §208. Together with the preceding *zubda al-ilāhiyyāt*, also this expression is an indication of the central role attributed by al-Ġazālī to the Fifth

treatise of *Metaphysics* in the structure of the entire work: in a way, the entire subject-matter of the «divine things» is summed up in this brief treatise, which can thus be seen as a metaphysics in a nutshell.

THE MODALITY OF THEIR ASCENT TO ONE | Arabic *kayfiyya irtiqāʿ-hā ilā wāḥidⁱⁿ*, Latin *quomodo omnia proveniunt (?) ad unum*.

CAUSER OF THE CAUSES | Arabic *musabbib al-asbāb*, Latin *causa causarum*. The Arabic expression recurs identical at the beginning of the fourth treatise of *Metaphysics*: cf. *supra*, §245, also for a textual and doctrinal commentary on the phrase and its implications.

The beginning of an obscurity about it is that

IT HAS ALREADY BEEN SAID THAT THE FIRST IS ONE | For the proper discussion of the unicity of the Necessary Existent cf. *supra*, *Metaphysics* II.7, §182 (with an interesting, though cursory, anticipation in *Metaphysics* I.2, §142).

UNDER EVERY RESPECT | Reading *min kullⁱⁿ waǧhⁱⁿ* for Dunyā's *min kullⁱⁿ wāḥidⁱⁿ*.

FROM THE ONE ONLY ONE COMES TO EXIST | Cf. *supra*, *Metaphysics* II.10, §187 (two formulations); *Metaphysics* IV.b.3.4, §293.

IS NOT CONSECUTIVE | Arabic *laysa yaṭṭaridu*, Latin *non continget*. What is meant is that not all things can be placed in one and only hierarchical chain ascending to the First Principle, but there are different 'chains' of beings. There is, in sum, an irreducible multiplicity in the world that waits to be explained.

IT IS INEVITABLE THAT A MULTIPLICITY ASCENDS TO ONE | I propose to correct in *tartaqī* Dunyā's text *taltaqī*, which would mean have the meaning of 'to encounter', 'to meet'. Cf. indeed the verbal noun *irtiqāʿ* («ascent») used *supra* in this paragraph.

[§295] D288.21-289.22

After the exposition of the difficulty in explaining the multiplicity of beings when starting from an absolutely one principle (§294), the present paragraph advances in general terms its solution. This consists in assuming a multiplicity in the first originated from the First Principle, due to the possibility of considering it both from the point of view of its cause – the absolutely necessary principle of every existence – and from the point of view of itself – a caused being, in itself only possible. This germinal multiplicity in the self-intellection of the first caused intellect reverberates and spreads throughout the emanative process, thus giving rise to the manifold beings of the cosmos without contravening the rule of *ex uno non nisi unum* (cf. D'ANCONA 2007 and the further bibliography mentioned *supra*, §294). An elegant exposition of this passage of the *MF*, and of the fundamental metaphysical idea here expressed, can also be found in GILSON 1955: esp. 379-380. On the problem of the emanation of multiplicity from the First cf. also the *locus parallelus* in *Metaphysics* II.10, §187.

RESCUE | Arabic *maḥlaṣ*, Latin *refugium*. GILSON 1955: 379 aptly paraphrases the Latin *refugium* with the French «échappatoire»: what follows is indeed presented as the only conceivable way of escaping from the aforementioned difficulty (§294), salvaging at the same time the principle of derivation of one from one (up to the One), and the real multiplicity of existing beings.

That one is accompanied | Arabic *yalzamu dālīka l-wāḥidⁱⁿ*, Latin *consequitur*.

NOT FROM THE SIDE OF THE FIRST | Arabic *lā min ḡihat^l l-awwal^l*, Latin *non tamen ex hoc quod est ex primo*. Although parenthetical, the phrase is crucial for the understanding of the argument: while only one thing is emanated from the First, in keeping with the axiom *ex uno non nisi unum*, this first caused is already touched by multiplicity from the side of itself, that is, when considered in itself (as caused)

and not with reference to its absolutely one Cause.

BY ANOTHER STATE | Arabic *ḥukm^m aḥar*, Latin *quiddam aliud*. This is the grammatical subject of the Arabic sentence, but I have translated it in the passive voice in order to keep the order of the words more natural in English, preserving at the same time the connection of the object of *yalzamu* («that one» [*dālika l-wāḥid^a*]) with the formulation of the «rule of one» which immediately precedes.

A MULTIPLICITY ON A PAR | Arabic *kaṭra mutasāwiya* (as in *Y*, versus *mutasāwiqa* ‘forming a sequence’ Dunyā, omission *A*), Latin *multitudines coequevas* (in the plural, in place of the Arabic singular). Cf *infra* in this paragraph the second occurrence of «on a par» for a discussion of the correction.

HIERARCHICALLY ORDERED | Arabic *murattaba*, Latin *ordinatas*. My rendition of the past participle of the II stem is based on the translation of the verbal noun *tartīb* as «[hierarchical] order[ing]». By contrast, I have rendered the participle of the V form *mutarattaba*, which appears shortly *infra* in the text, as «the arranged [things]», which conveys the *variatio* but is also clearly connected to the idea of (gradual) ordering implicit in the root *r-t-b*.

THE [THINGS] ON A PAR | Arabic *al-mutasāwiya* (as in *Y*, *musāwiqa* Dunyā, *musāwiya A*), Latin *coequeva*. The passage, rather tormented in Arabic, receives a clarification and an undoubted reason of interest thanks to the reading of the Latin translation. The term *coaequaeus*, which appears here twice in the plural, will become indeed in subsequent Latin thought a relevant lemma in the theological discussion on creation, as it will come to designate, rather technically, the four realities – matter, time, (Empyrean) heaven, and angelic nature – first (and sempiternally) created by God. The doctrine is well crystallized in Albert the Great’s *summa* eponymously titled *De IV coaequaevis* (although ANZULEWICZ 2012: 42 warned that «[t]he familiar short title, *De IV coaequaevis*, is a later, not entirely satisfactory invention»), and it appears in a wealth of other authors and works, such as the *Summa Halensis* (I^a-II^{ae}, inq. 1, tr. 2, q. 2, *titulus* 4, cap. 2, no 70, as indicated by GRANGE 2019: 46 fn. 141), Thomas Aquinas (*Summa theologiae*, I, q. 66, art. 4, resp.), and Denis the Carthusian (also in explicitly theological works, e.g. the *Enarratio in Baruch prophetam*, *expositio capituli tertii*: ‘Et nunc, Domine omnipotens, Deus Israel’, cap. 3, versus 32). The possible provenance of the term in this technical usage from Arabic-Latin translations, and in particular from al-Ġazālī’s text, was argued for the first time by the remarkable GILSON 1955, a pathbreaking short essay which regrettably seems to have been quite forgotten since its publication. Gilson discovered the two close occurrences of *coaequaeua* in the *MF*, and also pointed at the necessity of looking more closely to the medieval translations from Arabic into Latin in order to find further evidence for this terminology. Indeed, in Avicenna’s *Philosophia prima*, the Latin version of the *Ilāhiyyāt* of the *K. al-Šifā’*, there is an occurrence of the adjective as a translation of the present participle of the VI stem *mutakāfi*, which occurs in the original Arabic in the dual (cf. MARMURA 2005: 99.7: «[As such,] the two, inasmuch as this one is unity and the other is plurality, would be equivalent in existence [*mutakāfi’ayni fi l-wuḡūd^d*]»), and the translation in *Philosophia prima*, ed. VAN RIET 1977: 144.7: «et essent coaequaeua in esse inquantum haec est unitas et illa est multitudo»; cf. also ALGloss online, *sub voce* «coaequaeus»). Three further occurrences of the adjective in translations from Arabic into Latin are to be found in Avicenna’s *Fons vitae* (not extant in Arabic; cf. the Latin text in BAEUMKER 1892-1895: 118.10-20, English transl. in JACOB-LEVIN 2005: 110). In the light of this important and diversified doctrinal context, which I plan to explore in greater detail in a future contribution which is currently under preparation, I choose here and in what precedes the reading *mutasāwiya* (present participle of the weak root *s-w-y* in the VI stem) as present in ms. *Y*, because it appears to offer altogether a much better sense than Dunyā’s printed *mutasāwiqa* (or, even worse, *musāwiqa*). The sense of ‘forming a sequence’ which can be given to *mutasāwiya* seems indeed to repeat at best the same idea also conveyed by *mu(ta)rattaba*, thus missing a crucial nuance of meaning: for the reasoning overall conducted in this passage, indeed, it is pivotal that the multiplicity which must be explained as proceeding from the First should not be already ordained, because an orderly multiplicity of things deriving from one another would not cause any particular conceptual problem in the light of the ‘rule of one’ expounded *supra*. It is rather precisely a multiplicity of things «on a par», equal in

ontological level, that requires a specific explanation, because it appears to contradict that fundamental ontological principle. Moreover, the reading *mutasāwīya* is the most compatible with the rendition *coaequaeva* in the Latin translation, whose prefixed *cum* (*co-*) might be intended to capture precisely the meaning of reciprocity and mutual action implied by the Arabic VI stem; hence, I have also discarded the Arabic reading *musāwīya*, in the III stem, attested by A.

IT IS NOT POSSIBLE BUT LIKE THAT | Dunyā's reading *wa-lā yumkinu ka-dālīka* («it is not possible like that») is vitiated by a polar inversion of meaning and requires an integration giving it the correct sense. I read therefore *wa-lā yumkinu illā ka-dālīka*, as in Y. The correction is also indirectly confirmed by the Latin rendition: «nec potest esse aliter nisi sic» (cf. MUCKLE 1933: 120.4-5).

HIS EXISTENCE IS PURE EXISTENCE | Arabic *wuġūd^l-hu wuġūd^m maḥd^m*, Latin *esse eius est esse purum*.

HIS CONCRETE EXISTENCE IS IDENTICAL WITH HIS QUIDDITY | Arabic *anniyyat^l-hu 'ayn^u māhiyyat^l-hi*, Latin *cuius hanitas est ipsa eius quidditas*.

THE EXISTENCE OF EVERY POSSIBLE [...] AS IT WAS SAID BEFORE | While the distinction of existence and quiddity in everything but the Necessary Existent was often stated in the preceding discussion, the closest passage to the present analysis is *Metaphysics* I.8, §§169-170, where the concepts of necessary and possible are treated extensively and in properly metaphysical terms.

IT HAS BEEN CLARIFIED [...] IN [ANOTHER] RESPECT | Cf. *supra*, *Metaphysics* I.8, §§169-170.

BECAUSE EVERY EXISTENCE [...] AN ACCIDENT FOR IT | This passage represents altogether one of the clearest statements of the accidentality of existence in the *MF*, although the concept is reaffirmed also elsewhere in the text: cf. *supra*, *Logic* II, §12 and §16; *Metaphysics* I.1, §137; *Metaphysics* II.4, §179; *Metaphysics* II.7, §182; *Metaphysics* II.11, §189. In the present occurrence, al-Ġazālī's affirmation seems to mirror an actual statement in the same direction made by Avicenna (cf. *DN*, ACHENA-MASSÉ I: 174), but the doctrine of the accidentality of existence is stated far more often, and with less hesitation, in the *MF* than in the *DN*. On the issue cf. BERTOLACCI 2013^a: 256-259.

[§296] D289.23-290.8

The paragraph clarifies how the intrinsic multiplicity of the first caused can reverberate in a greater degree of multiplicity in the progressively emanated chain of being. The first intellect is necessary by virtue of its Cause, and possible by virtue of itself, and it knows itself in these two different states. This double, and thus already manifold, self-knowledge is productive, at an ontological level, of the subsequent multiplicity, which gets greater as the downward flow of the emanation proceeds.

FROM THE FIRST AN ABSTRACT INTELLECT PROCEEDS | Arabic *yaşduru min al-awwal^l 'aql^m muġarrad^m*, Latin *ex primo provenit intelligencia nuda*.

RATHER THEY GRADUALLY EVOKE ONE ANOTHER TO THE MULTIPLICITY | Arabic *bal 'alā al-tadrīġ^l tatadā'ā ilā l-kaṭrat^l*, Latin *sed secundum gradus ceciderunt in multitudinem*.

THE INTELLECTS [...] ALL THE DIVISIONS OF THE EXISTENTS | All the existing things are said to be either intellects, souls, bodies, or, accidents. For a similar *divisio entis* cf. *TF*, Discussion 3, MARMURA 2000: 66. Here, al-Ġazālī says that things subdivide themselves into (a) beings that are in a receptacle, to which accidents [*a'rāḍ*] and forms [*şuwar*] belong, and (b) beings that are not in a receptacle. The latter can be either (b.1) receptacles for other things, like the bodies [*aġsām*], or (b.2) not receptacles at any rate. At this level one can speak of self-subsisting substances [*ġawāhir qā'ima bi-anfus^l-hā*], and further subdivide them according to whether (b.2.1) they exert an influence only on the bodies (and thus they are souls [*nufūs*]), or else (b.2.2) they also influence the souls (and then they are intellects [*uqūl*]). For further *divisiones entis* in the *MF* cf. *supra*, *Metaphysics* I.1, §104, and *infra*, *Metaphysics* V, §309 (this time, the division is based on the notions of good and evil, and is thus

ontologically different from the one expounded here and in the *TF*).

[§297] D290.9-291.14

The paragraph contains one of the clearest descriptions of the cosmological emanative model of al-Fārābī and Avicenna that is to be found in Arabic philosophy. The first intellect, necessary in consideration of its Cause (God), by knowing itself as such produces a second intellect; while by knowing itself as a possible caused, it produces the (material) furthestmost sphere of the cosmos (on the process see *supra*, §§295-296 and the remarks by D'ANCONA 2007). The process is then repeated at each step, until the tenth intellect is too far apart from the First Principle to be able to produce an eleventh intellect, and thus only produces the sphere of the Moon (and the sublunary world lodged in its concave). With respect to corresponding Avicenna's texts – in both the *DN* and the *Ilāhiyyāt* of the *Šifā'* (see *infra* the commentary) – al-Ġazālī's text is more didactic, inasmuch as it makes sure to mention all the names of the celestial spheres – without abridging the explanation of the process after its first steps. The resulting description of the structure of the cosmos is thus more detailed, and probably also more intuitively understandable for a beginner, than its more advanced Avicennan counterparts. This didactic trend, typical in general terms of the *MF* and historically at the basis of the great success enjoyed by the work, well beyond the Arabic-Persian *milieu* in which it originated, is also at the origin of a well-perceivable simplification of the less clear-cut aspects of Avicenna's cosmological model (for instance on the issue of the proper number of the moving intellects: cf. *infra* the commentary for further details). The Avicennan-Fārābīan (and ultimately Ptolemaic) structure of the cosmos as described in the *MF* is represented in the following Diagram 8.

DIAGRAM 8. *Structure of the cosmos*



AS IT WAS SAID BEFORE | Cf. *supra*, *Metaphysics* V, §295.

DISTINCTION OF THEIR HIERARCHICAL ORDERING AND OF THEIR COMPOSITION | Arabic *tafṣīl tartīb-hā wa-tarkīb-hā*, Latin.

AN ANGEL AND A SPHERE | Arabic *malak wa-falak*, Latin *angelus, et celum*. A stylistical predilection for couples of rhyming terms, typical of Arabic literary prose and often instantiated in titles, may partially account for al-Ġazālī's choice to speak here of an «angel» [*malak*], rather than technically of an «intellect» [*ʿaql*] (mentioned only afterwards), besides the corporeal «sphere» [*falak*] of the skies. For the same expression cf. *infra*, *Metaphysics* V, §313; see also *infra*, *Physics* I.1, §322, for a reformulation involving the relative adjectives instead of the corresponding nouns. JANSSENS 2019: 113 and fn. 110 remarks that «the qualification of the separated [*sic*] Intelligence as 'angel' (290,15) has a support» in Avicenna's *Ilāhiyyāt*, ed. QANAWATĪ-ZĀYID 1960: 435.7.

DESCRIPTIVE FEATURE | Arabic *waṣf*, Latin

WHICH IS IN IT LIKE MATTER. | Obviously, the intellect as such has no matter, as opposed to the material celestial sphere. What is intended here is however the link just established between possibility and matter, on the one side, and necessity and form, on the other side.

THE FURTHERMOST SPHERE | Arabic *al-falak al-aqṣà*, Latin *celum supremum*.

THE SPHERE OF THE CONSTELLATIONS | Arabic *falak al-burūġ*, Latin *circulus signorum*. This corresponds to what is also called the sphere (or sky) of the fixed stars, for which there exists in Arabic as well the expression *falak al-kawākib al-tābita*: cf. for instance AL-FĀRĀBĪ, *Treatise on the Intellect*, ed. LUCCHETTA 1974: 107. The same expression is also employed in Avicenna's *Risāla fi l-aġrām al-ʿulwiyya* cf. JANSSENS 2019: 113 fn. 111. In the *Ilāhiyyāt* of the *K. al-Šifā'*, ed. QANAWATĪ-ZĀYID 1960: 401.12-13, as remarked again by Janssens, the expression chosen to designate this sphere is rather *kura al-tawābit*. The notion of 'zodiac', as Janssens translates the term *burūġ*, rather appears in Avicenna's *Taʿlīqāt*: ed. BADAWĪ 1973: 134.3-5. *Ibidem*, Janssens also implicitly remarks that the proper names of the spheres are not present in the *DN*, although they are (of course) «clearly in line with Ibn Sīnā».

THE SPHERE OF SATURN | Arabic *falak zuḥal*, Latin *circulus saturni*.

THE SPHERE OF JUPITER | Arabic *falak al-muštārī*, Latin *circulus iovis*.

THE SPHERE OF MARS | Arabic *falak al-mirriḥ*, Latin *circulus martis*.

THE SPHERE OF THE SUN | Arabic *falak al-šams*, Latin *circulus solis*.

THE SPHERE OF VENUS | Arabic *falak al-zuhara*, Latin *circulus veneris*.

THE SPHERE OF MERCURY | Arabic *falak ʿuṭārid*, Latin *circulus mercurii*.

THE SPHERE OF THE MOON | Arabic *falak al-qamar*, Latin *circulus lune*.

SOUND | Arabic *ṣaḥīḥ*, Latin *verum*.

THE [ASTRONOMICAL] OBSERVATION | Arabic *raṣd*, Latin *speculatores*. The Arabic *raṣd al-aflāk*, 'the observation of the spheres', specifically means 'astronomy'. As for the fundamental importance of astronomical observation as a «crucial ancillary to the metaphysical enterprise», see JANOS 2011: 199: «In this respect, one perceives clearly the value of astronomy in Ibn Sīnā's metaphysics, as well as the importance of empirical knowledge and observation in solving problems that one would otherwise consider to be purely metaphysical, such as the number of the separate intellects. These points in turn show how faithfully Ibn Sīnā follows Aristotle's method and his views on the role of astronomy in the metaphysical inquiry at *Metaphysics*, XII.1073b7-17, where the number of unmoved movers is believed to hinge upon the astronomical observations concerning the number of motions and orbs».

ONE DOES NOT GET TO A STANDSTILL BUT AT THESE NINE [SPHERES] | The problem so concisely presented here is actually among the most relevant questions of Avicennan cosmology. The problem of the number of the moving intellects is addressed several times in Avicenna's works, without a clearly identifiable doctrinal evolution. As noticed by JANOS 2011: 185, «[t]he crux of the problem lies in Ibn Sīnā's understanding of how the separate intellects relate to the celestial bodies and of the role they play in causing the individual motions of the planets. He adopts an ambiguous position in this regard

and even provides two contrasting explanations». The most relevant passage for the presentation of the two alternative explanations is AVICENNA, *K. al-Šifāʾ, Ilāhiyyāt* IX.3, ed. QANAWATĪ-ZĀYID 1960: 401, transl. MARMURA 2005: 325-326 (slightly modified and with added emphasis; cf. also the Italian transl. in BERTOLACCI 2007: 734-5, §4):

Thus, the number of the separate intellects after the First Principle would be the same as the number of movements. [i] *If, in the case of the wandering spheres [al-aflāk al-mutaḥayyira], the principle of the movement of the sphere of each star therein is a power emanating from the stars, then it would not be unlikely that the separate [intellects] would have the same number as the number of [these] stars – not the spheres – and their number would be ten, after the First. [...]* [ii] *If, however, this is not the case, but each moving sphere has a rule governing its own motion and every star, then these separate [intellects] would be of a greater number.* It would follow, according to the doctrine of the First Teacher, that there would be something close to fifty and over, the last being the active intellect. But you have known, from what we have said in the Mathematics, what we have attained in ascertaining their number.

In al-Ġazālī's passage, the problem seems however to be posed in a slightly, but significantly different way. In the *Ilāhiyyāt* of the *Šifāʾ*, as a matter of fact, the circumstance that the celestial «spheres» [aflāk] are more numerous than the nine corresponding to the planets, the zodiac and the furthestmost sky is taken for granted: see JANOS 2011: 173: «Ibn Sinā considered not only the planets, but also the various kinds of moving devices – concentric and eccentric orbs and epicyclic spheres – to fall in the category of “spherical bodies” (*aḡsām kuriyya*) and thus to be concrete, corporeal existents». In the cosmology of the *Metaphysics* of the *Šifāʾ*, the problem is thus to determine whether [ii] it is necessary to assume an intellect for each sphere [falāk], including the «wandering» [mutaḥayyira] ones – that is, all those astronomical entities, incorporeal according to Avicenna, that had been introduced in Ptolemy's astronomy in order to account for the irregular motions of the planets –; or else whether [i] the moving intellects linked to the primary spheres could be enough to explain the secondary motions, as well. In the *MF*, by contrast, the number of the intellects appears to depend exclusively on the number of the spheres, so that an increase in the latter would necessarily entail an increase in the former. Since however the astronomical observation is a witness of the existence of nine spheres, the intellects must be considered to be ten, without further inquiry. With respect to Avicenna's more nuanced positions, witnessed for instance by the *Ilāhiyyāt* of the *Šifāʾ*, the stance of the *MF* is to be seen as a quite radical simplification of the astronomical framework, which appears in particular to disregard the finer aspects of Ptolemaic cosmology.

[§298] D291.15-end of page

After the description of the emanation of the supralunary world in §297, the present paragraph begins the treatment of the multiplicity proper of the sublunary world, dealing in particular with the four elements, whose matter is common and whose forms are mutually different and irreducible to one another.

WILL THEIR NATURES BE UNITED | Reading *tattaḥidu* instead of Dunyā's متحد. Cf. the Latin translation: «quomodo ergo una erit natura eorum» (MUCKLE 121.31-32).

SUSCEPTIBLE OF GENERATION AND CORRUPTION | Reading *qābila l-kawni wa-l-fasād*, as in D-Alt, instead of *qābila li-l-kawni* printed by Dunyā. The correction seems guaranteed by the parallel passage of the *Physics* explicitly referenced here (see *infra*), where *kawn* is regularly accompanied by *fasād*; but for the couple of terms, in itself very common, cf. also *supra*, *Metaphysics* IV, §276 and, more importantly,

the conclusion of the present reasoning in *Metaphysics V*, §301.

AS IT WILL BE EXPLAINED IN THE *PHYSICS* | For the four elements' generability and corruptibility cf. esp. *infra*, *Physics* II, §333 and §335; for the commonality of their matter see §350.

SINCE IT IS NOT CONCEIVABLE THAT A BODY IS FROM [ANOTHER] BODY | Cf. *supra*, *Metaphysics* IV.b.3.3, §§290-292.

COMMON MATTER | Arabic *mādda muštaraka*, Latin *materia communis*.

CAUSE OF THEIR EXISTENCE | That is, of the elements.

[§299] D292.1-13

The paragraph discusses the origin of the sublunary matter, identifying its cause in a separate substance (that is, the intellect presiding over the sphere of the Moon) which acts however in cooperation with the form. The origin of matter from the combined action of the separate intellect and the form is compared with the motion of the body and the ripening of the fruits, as in the following diagram.

DIAGRAM 9. *Comparative examples for the account of the origin of matter through both intellectual and formal causality*

CAUSE	CAUSED	CONDITION
moving faculty [<i>quwwa muḥarrīka</i>]	existence of the movement [<i>wuǧūd al-ḥaraka</i>]	receptive faculty in the receptacle [<i>quwwa qābila fi l-maḥall</i>]
Sun [<i>al-šams</i>]	ripening of the fruits [<i>nađǧ al-fawākih</i>]	natural potency in the fruit [<i>quwwa ṭabī'yya fi l-fakiha</i>]
separate intellect [<i>al-'aql al-mufāriq</i>]	existence of the matter [<i>wuǧūd al-mādda</i>]	cooperation of the form [<i>mušāraka al-šūra</i>]

THE NON-EXISTENCE OF THE MATTER WOULD FOLLOW FROM THE NON-EXISTENCE OF THE FORM | Arabic *la-lazima 'adam^a l-māddatⁱ bi 'adamⁱ l-šūratⁱ*, Latin *sequeretur destrui materiam ad destructionem forme*. The reason why the cause of matter cannot be form alone is that the destruction of the form does not entail *ipso facto* the destruction of matter: matter, thus, must have a further cause for its existence, different than the form.

GARBING ITSELF IN ANOTHER FORM | For the metaphor of clothing and «garbing» [*lābisa*] used to describe the relationship of matter and form cf. also *supra*, *Metaphysics* IV.b.2.3, §276 and *infra*, *Physics* II, §350.

THE FORM HAS NO ACCESS AND NO SHARE [AT ALL] IN THE EXISTENCE OF THE MATTER | Arabic *lā yakūn^a li-l-šūratⁱ madḥal^{am} wa ḥazẓ^{am} fi wuǧūdⁱ l-hayūlā*, Latin [*nec potest negari*] *quin sit forme aliqua dignitas* [!], *et efficiencia ad esse hile*. It is neither possible that the form plays no role at all in giving origin to the matter, since in the absence of the form matter does not remain identical to itself, but loses and changes its prior definition.

THE MATTER AND ITS DEFINITION | Arabic *al-hayūlā wa-ḥadd^a-hā*. The Latin rendition «*ile sola*» (MUCKLE 1933: 122.11-12) reveals a misunderstanding like **[al-]waḥīda* for the sequence *وحدها*

BY VIRTUE OF A COOPERATION OF THINGS | Arabic *bi-mušārahakat' umūr^m*, Latin [*esse materie est*] *a multis*. A SEPARATE SUBSTANCE | Arabic *ġawhar mufāriq*, Latin *substantia separata*. The adjective *mufāriq* will be also directly applied to the intellect [*'aql*] *infra*, making it all the more clear that the widely employed expression *muġarrad*, when used for the intellect, has the meaning of 'separate' or «abstract», and certainly not of «abstracted».

IT IS NOT BY VIRTUE OF IT ALONE | That is, of the sole separate substance, since a cooperation of the form has been shown to be necessary.

THE CAUSE OF THE RIPENING OF THE FRUITS | Arabic *sababⁿ nađġi' l-fawākih*, Latin *causa maturitatis pomorum*. For another example concerning the action of the sun on the sublunary world – in the broader framework of the «astrologization» of Aristotelian cosmology (FREUDENTHAL 2000, FREUDENTHAL 2002, FREUDENTHAL 2006) – cf. *supra*, *Metaphysics* IV.b.1.6, §266.

RECEPTIVE OF THE INFLUENCE [OF THE SUN] | Arabic *qābila li-l-atar^r*, Latin *receptibilis impressionis maturitatis*. The Latin *maturitatis* might simply derive from the feeling that *atar* alone had an incomplete meaning (just like my bracketed «[of the sun]»), and does not necessarily presuppose a different Arabic antigraph.

YET ITS BEING IN ACTUALITY | Reading *bi-l-fi'l* for Dunyā's *bi-l-'aql*. The correction imposes itself for the meaning and the witness of the Latin translation (MUCKLE 122.21-22: «in effectu»). Moreover, the error *bi-l-'aql* could be explained as a diplography, since the same expression appears just before.

[§300] D292.14-293.5

The paragraph gives details as for the origin of the different determinations of sublunary matter. The universal, common nature of matter *qua* matter depends on the celestial intellect(s), and specifically on the intellect presiding over the sphere of the Moon. The different predispositions that matter receives in order to become one or the other of the four elements, as well as the physical delimitation of its extension, depend on the different influences of the different celestial bodies.

INDIVIDUALIZATION | Arabic *taḥṣīs*, Latin *appropriacio*.

THIS IS NOT IN THE FIRST PLACE BUT FROM THE CELESTIAL BODIES | The logical subject («this») is the reception of a certain form as opposed to another.

THE MATTERS | Arabic *al-mawādd*, Latin *materie*.

DISPOSITIONS | Arabic *isti'dādāt*, Latin *aptitudines*. For a further inquiry on the notion of «disposition» see *infra*, §301.

CONCORDANT IN A UNIVERSAL NATURE | Arabic *muttafiqa fi ṭabī'at^m kulliyat^m*, Latin *conveniunt in natura universali*. In *Metaphysics* IV.b.3.2, §289 *supra*, the focus was rather on the differences in nature of the celestial bodies, which could account for their multiplicity. Indeed, the universal nature in which they are said to be concordant is probably to be intended as their common circular movement by the way of love, due to their intellects, while they are mutually different as for their bodily features.

ACQUIRES | Arabic *tufidu*, Latin *fecerunt [materiam]* (the Latin version assumes the aforementioned «celestial bodies» as subject of the verb *tufidu*, while I take *al-mādda* to be the logical subject of the sentence; the meaning, in any case, does not change sensibly).

THE ABSOLUTE DISPOSITION | Arabic *al-isti'dād al-muṭlaq*, Latin *absolute...aptam*.

PROPER NATURE | Arabic *ṭab^{am} ḥāṣṣ^{am}*, Latin *naturam propriam*.

FROM THE INTELLECTUAL, SEPARATE SUBSTANCE | Arabic *min al-ġawhar^r l-'aqliyy^r l-mufāriq^r*, Latin *a substantia intelligibili separata*. The fact that «the root of the bodily matter» [Arabic *aṣl al-mādda al-ġismiyya*, Latin *radix materie corpulente*] comes from the abstract intellect reiterates the conclusion achieved in the preceding §299, because it leaves open the possible reception of further

determinations on the part of matter from further causes, specifically forms. It is partially unclear to me whether the celestial origin is meant to account (a) for the most basic formal determination of matter, *i.e.* the «form of corporeality» (cf. *supra*, *Metaphysics* I.1, §§106-120) – but then a form would already be involved at this germinal level –, or rather (b) for something even more fundamental, *i.e.* the very existence of matter itself – but then the adjective *ǧismīyya* would seem to be already too specific for the described process. The following statement to the effect that «being delimited as for the directions» comes as well from the celestial influence might be a hint in favour of alternative (a), since the delimitation appears to be a fundamental feature of what a body is.

IT IS ALSO PERMITTED [...] TO THE PARTICULARS | I have interpreted the correlation *an yakūna li-ba'ḍi-hā ayḍ^m min ba'ḍiⁿ* as referred to different 'portions' or 'parts' of the original, undifferentiated matter, in the sense that the matter of one of the elements – *e.g.* fire – can predispose the matter of another element – *e.g.* air – to receive (from the bestower of forms) the form of the first element. Examples of elemental transformation are recurring in the *MF*: cf. also *supra*, *Metaphysics* IV.b.3.3, §291, and see the discussion explicitly devoted to the doctrine of mutual transformation between the elements *infra*, *Physics* II, §§349-350.

FROM THE SEPARATE [INTELLECT] | Arabic *min al-mufāriq*, Latin *ab intelligencia separata*. For the identical expression cf. *supra* the end of §299 and again *supra* in this paragraph.

[§301] D293.6-end of page

The text distinguishes between potency and disposition, inasmuch as the latter is only addressed to the existence, while the first is equally addressed to existence and non-existence. A common «first disposition» explains the commonality of the matter of the four elements, while the application of different predisposing causes («proper dispositions») to this matter can account for the different forms (or natures) that the elements receive.

A DISTINCTION IS MADE | Arabic *furiqa*, Latin *differt*.

«POTENCY» | Arabic *al-quwwa*, Latin *potentie*. The potency is defined here as being addressed to both the «form» [*ṣūra*] and «its contrary» [*naqīḍⁿ-hā*], but cf. *Metaphysics* I.7, §168, where the application to both the act [*fī'l*] and its contrary [*naqīḍ*] was attributed to the sole «voluntary potency» [*quwwa irādiyya*], and not to the natural one. The Latin rendition «et esse tale cui infundatur» for the Arabic *naqīḍⁿ-hā* presupposes the misreading **yafīḍu-hā* (or **tafīḍu-hā*), with a *rasm* very similar to Dunyā's printed text.

«DISPOSITION» | Arabic *al-isti'dād*, Latin *aptitudinis*. By contrast, in *Metaphysics* I.1, §127 we find the phrase *isti'dād li-kamālⁿ aw naqīḍⁿ-hī* («predisposition to a perfection or its contrary», cf. *supra* the commentary *ad loc.*), which employs *isti'dād* in the sense seemingly reserved here to *quwwa*.

ITS IMPROVEMENT | Arabic *ṣalāḥⁿ-hā* (cf. *infra* for the rendition *ad sensum* of the Latin translators).

GIVES PREPONDERANCE TO | Arabic *yatarāǧǧahu*, Latin *ut sit paracior* [*ad recipiendum*]. Or: «selectively determines» one of the forms over the other. For different possible renditions of the root *r-ǧ-h* in Avicennan metaphysical, and specifically ontological, contexts cf. *supra*, *Metaphysics* I.4, §160 and *Metaphysics* III.b.7, §219. See also *infra*, *Physics* IV.3, §423.

IN PARTICULAR | Arabic *'alā l-ḥuṣūṣ*, Latin *proprie*.

EQUALLY | Arabic *bi-l-sawā'*, Latin *equaliter*.

OF THE FORM OF THE FIRENESS AND THE WATERNESS | Arabic *li-ṣūrat^t al-nāriyyat^t wa-l-mā'iyat^t*, Latin *forme aquee et ignee*. The Latin translation presupposes the reading *li-l-ṣūrat^t al-nāriyyat^t wa-l-mā'iyat^t* of D-Alt, with the article before *ṣūra* that forces to interpret as adjectives the following terms. The variant is in any case entirely indifferent.

THE PREDOMINANCE OF THE COLDNESS | Arabic *ǧalaba al-bard*, Latin *dominium frigiditatis*. The intervention of an environmental cause like the coldness determines (makes propend, or gives preponderance to; cf. *supra*) the reception of a certain form as opposed to another. It is not entirely clear why the example takes into account a matter already endowed with a form (specifically, the form of air), rather than the originally undetermined matter, since this would be the best candidate to transform itself in any of the elements, thanks to the supervening formal causes of heat/coldness and wetness/dryness. Instead, the text deals with the elemental transformation of air into water or fire. *Supra*, in *Metaphysics* IV.b.3.3, §291, the air had received a different, but partially parallel, awkward treatment, since there the text of the *MF* seemed even to deny its proper status of element. Here, as well as *supra*, air appears to be treated somewhat differently with respect to its other elementary counterparts, although the hints present in the text are too scanty to advance a hypothesis as to why this happens. For the orderly determination of the various characteristics of each element, here anticipated only in part, cf. in particular *infra*, *Physics* II, §334 ff.

THE MATTER ADJACENT TO THE BODY WHICH MOVES IN PERPETUAL | Arabic *al-mādda [al-šūra A] al-muǧāwira li-l-ǧism l-mutaḥarrik ʿalā l-dawām*, Latin *forma* (presupposing the reading of D-Alt) *vicinior corpori semper mobili*. What is meant is the matter of the sublunary world that touches the inner surface of the sphere of the Moon (conceived as a solid body, as all celestial spheres in Greek-Arabic cosmology).

WORTHIER OF THE FORM OF THE FIRENESS | Arabic *awlā bi-šurat l-nāriyyat [l-nār A]* Latin *forma ignis* (presupposing the reading of D-Alt). The corresponding passage of the *DN* (ACHENA-MASSÉ I: 212) provides a crossreference to *Physics* as for the closeness of the fire to the perpetual movement, but al-Ġazālī omits in this case to mention it, limiting himself to state that «heat» and «movement» have a reciprocal «correspondence» [*munāsaba*].

WORTHIER OF THE REST | Arabic *awlā bi-l-sukūn*, Latin *dignior quiete, et frigiditate*. What is meant is the earth, the heaviest and most stable element, in polar opposition to the utmost lightness and mobility of the fire. The Latin addition *et frigiditate* has no correspondence in the Arabic text printed by Dunyā, and might have been made *ad sensum* due to common knowledge of the characteristics – cold-dry – of the element ‘earth’: cf. *infra*, *Physics* II, §334.

THAT WHICH IS FAR FROM IT | Arabic *al-baʿīda min-hā*, Latin *remocior ab illis*. I interpret the feminine suffix pronoun as referred to the aforementioned «heat» [*ḥarāra*]. Less likely, it might also be intended (as the Latin translators probably did) as a generic plural neutral for the ‘celestial bodies’, whose absolute «upward» direction is, as a matter of fact, farther removed from the earth (absolute «down»; cf. *supra*, *Metaphysics* IV.b.1.2, §253 and Diagram 4).

THAT MATTER HAS | Here: *hayūlā*.

[§302] D294.1-295.1

Continuing the description of the progressive generation of the multiplicity of the sublunary world, the text articulates five classes of beings that derive from the mixture and the blending of the four elements: (i) meteorological phenomena, (ii) minerals, (iii) plants, (iv) animals, and (v) man. These mixtures are always the fruit of a concurrence between various orders of causes: terrestrial movements, at the most basic level, make the composition of the elements possible, but celestial causes are added. In particular, the separate intellect of the sphere of the Moon emanates the forms (hence its denomination of Bestower of the forms), while the movements of the celestial bodies make the sublunary mixtures predisposed to the reception of those emanated forms. While the sciences treating classes (iii) and (iv) – that is, respectively, botany and zoology – have no proper place in the philosophical encyclopaedia of the *MF*, meteorology and mineralogy (i)-(ii) will be treated *infra* in *Physics* III. Moreover, the discussion of the human soul (v) in *Physics* IV is premised by a treatment of the vegetative (iii) and animal (iv) souls, always introduced by specific

considerations on the different elementary mixtures (progressively more harmonious) that give origin to those souls: for various affirmations concerning this progressive graduality cf. esp. *infra*, *Physics* IV.1, §376; *Physics* IV.2, §379; and *Physics* IV.3, §402 (the beginning of the treatment of the vegetative, animal, and human souls, respectively). It is worth noticing, with JANSSENS 2019: 113, that the detailing of this gradual hierarchy is added by al-Ġazālī, while the corresponding section of the *DN* (ed. MO'IN 1952: 161.1-8) speaks only generally of the link between natural mixtures and received forms. This feature of the *MF* might be seen as part of al-Ġazālī's more general effort to bind together the subject-matter treated in the *DN*, making the mutual link of the various parts of philosophy even more explicit than it is in Avicenna's text. On this cf. the Introduction, §1.4.1 and §1.4.3.

BY VIRTUE OF THE MIXTURE OF THESE ELEMENTS | Arabic *bi-mtizāġī hādīhi l-'anāsirī*, Latin *ex commixtione elementorum istorum*.

THE FIRST OF THEM [...] AND SO FORTH | (i) The first class of beings composed of mixed elements is constituted by «the events of the atmosphere» [Arabic *ḥawādīt al-ġawwī*, Latin *id quod fit sub luna usque ad aquam* (noteworthy the long periphrasis for the Arabic *ġaww*, for which cf. also *infra*, *Physics* III.3, §364), which form the subject-matter of meteorology proper (dealt with in books I-III of Aristotle's *Meteorologica*). The further specifications of items such as the «vapour» [*buhār*] and the «smoke» [*duḥān*] – that is, the two fundamental exhalations of Aristotelian meteorology – and the «shooting stars» [*šuhub*, sg. *šihāb*] also pertain to the meteorological material which will be dealt with *infra*, *Physics* III: see *Physics* III.3, §§364-369 on the vaporous phenomena; *Physics* III.4, §§370-372, on the smoky ones (cf. in particular III.4, §370, for the shooting stars). The Latin translation seems to be based on a partially different Arabic antigraph: «scilicet, fumus, et vapor, et stella que videtur cadere, et hastilia ignea et alia» (MUCKLE 1933: 123.33-34), since the reciprocal order of *buhār* and *duḥān* appears to have been reversed, and two examples of fiery appearances in the skies are given, as opposes to the sole «shooting stars» mentioned by Dunyā.

THE SECOND OF THEM ARE THE MINERALS | (ii) The second class of mixed beings is that of «minerals» [Arabic *ma'ādīn* (sg. *ma'dīn*), Latin *minere*], whose treatment follows the discussion of meteorological phenomena in *Physics* III.5, §§373-375 (cf. the commentary *ad locum* also for further information on the structure of Arabic, and especially Avicennan, meteorology and mineralogy).

THE THIRD THE PLANTS | (iii) Ascending the hierarchy of composed beings, the third class considered is formed by «plants» [Arabic *nabāt*, Latin *vegetabilia*]. While in the *MF* there is no proper botanical section, the first part of the treatise on psychology is devoted to the vegetative soul (and to the elemental mixture that gives origin to it): cf. *infra*, *Physics* IV.2, §§376-378.

THE FOURTH THE ANIMALS | (iv) The fourth class is that of the «animal» [Arabic *ḥayawān*, Latin *animalia* (logically plural)]. Much like in the case of plants, in the *MF* there is not a section explicitly devoted to the science of animals or zoology, but the animal (sensible) soul is treated quite extensively in *Physics* IV, §§379-401.

THE LAST OF THEIR ORDER, THE MAN | (v) The conclusive and highest step of the «order» [*tarattub*] of sublunary beings is «man» [Arabic *insān*, Latin *homo*]. The treatment of the human soul and her faculties forms the bulk of the treatise on psychology within the natural philosophy of the *MF*: cf. *infra*, *Physics* IV.3, §§402-424 (but see also the preceding §§376-401, in *Physics* IV.2, for the faculties proper of the vegetative and the animal souls, which however the rational soul also possesses).

EARTHNESS | Arabic *turābiyya*, Latin *terree*. I usually translate *turāb* as 'dust', in order to distinguish it from *arḍ*, although places like this one clarify that the two terms are used almost interchangeably in the *MF*.

PRIMARY MIXTURE | Arabic *bi-l-iḥtilāṭ al-awwal*, Latin *ex commixtione igitur primorum*. The Latin translation presupposes the reading *bi-ḥtilāṭ l-uwal*, which might have its merits. However, *al-iḥtilāṭ al-awwal* as «primary mixture» occurs again at *Physics* III.2, §360, precisely with regard to

meteorological phenomena, and this might be taken to secure Dunyā's reading also in this place.

BESTOWER OF THE FORMS | Arabic *wāhib al-ṣuwar*, Latin *a datore formarum*. This is the first occurrence in the text of the *MF* of the famous Avicennan catchphrase *wāhib al-ṣuwar*, often translated also as 'Giver of forms' (as a calque of the common Latin wording *dator formarum*). Further occurrences include *infra*, *Metaphysics* V, §304, and then seven interesting cases located in natural philosophy, more specifically in *Physics* II (§§350-351), III (§373) and IV (§384, §388, §402, and §422); cf. HASSE 2000: 188 fn. 616 (who only mentions the last four cases) and JANSSENS 2002: 552 fn. 8 (who fails to mention the first of the physical occurrences). As well noticed by both Hasse and Janssens, the text of the *MF* in its Latin translation became a crucial source for the Scholastic reception of the notion of *dator formarum*, even more so than Avicenna's own treatises, where the *verbatim* expression, if not the very notion, appears more scantily. According to a common, albeit not unanimous, interpretation, 'Bestower of forms' is the name given by Avicenna to the Agent Intellect (cf. *infra*, *Physics* IV, §411), probably to be identified, in turn, with the separate intellect presiding over the sphere of the Moon (cf. *supra*, §297 and Diagram 8). This identification is never made entirely explicit in authentic Avicennan texts, but it is indirectly confirmed by a series of later sources, such as the *Šarḥ Risāla Zīnūn al-Kabīr* [*The Commentary on the Epistle of Zeno the Great*] (for which cf. PUIG MONTADA 1988: esp. 314-321), as well as sparse claims in Hallevi (*Cuzari* apud DAVIDSON 1992: 183) and Averroes (*Long Commentary on Metaphysics*, ed. BOUYGES 1942 (II): 882); on the issue cf. DAVIDSON 1992: 78 ff. and JANSSENS 2002: esp. 558. In the text of the *MF* the specific identity of the Giver of forms with the agent intellect is not entirely clear, either, but its identification with an eternal intellectual substance is by contrast explicitly stated: for this rather important point cf. *infra*, *Physics* IV.3, §422. A parallel identification of the Giver of forms with an «angel» [*malak*] appears in *TF*, Discussion 17, MARMURA 2000: 168 (cf. *supra*, *Introduction*, §1.7.2, Table 14, number [26]). For a different, less persuasive identification of the Giver of forms with God – for which some Avicennan basis can nonetheless be found (see e.g. JANSSENS 2002: 552-553) – see for instance GRIFFEL 2000: 138; STONE 2008: 117. The same position is also attested *ab antiquo* in Albert the Great's commentary on Peter Lombard's *Sententiae*: cf. HASSE 2000: 189 and fn. 620. For the Latin reception of the doctrine of the bestower of forms see also HASSE 2012; for a history of the notion of *wāhib al-ṣuwar* particularly sensitive to its Neoplatonic sources, see D'ANCONA 2014.

A PREDISPOSITION TO THE PROCEEDING | Reading *isti'dād^{um} li-ṣadrⁱ* instead of *li-ṣaddⁱ* printed by Dunyā, which would have the incongruous meaning of 'to the aversion' and is thus a likely misprint (by omission of the final *rā'* of the *rasm*). The Latin translation: «provenit aptacio recipiendi formas substanciarum mineralium» (MUCKLE 1933: 124.10-11) seems to entail a (in itself likely) misreading **ṣuwar* for *ṣadr*, but might presuppose also a **qabūl* [= *recipiendi*] after *isti'dād*.

THE MINERAL SUBSTANCES | Arabic *ḡawāhir ma'diniyya*, Latin *substanciarum mineralium*. The same expression is also in *TF*, Discussion 17, MARMURA 2000: 173.

THE TEMPERAMENT OF THE HUMAN SEED | Arabic *mizāḡ^u nuṭqatⁱ l-insānⁱ*, Latin [*commixtio*,] *qua fit sperma hominis*. For the human seed as the most perfectly balanced of the elemental mixtures cf. *infra*, *Physics* IV, §402.

THEIR ENTANGLEMENT | Arabic *ištibāk^u-hā*, Latin *colligacio eorum*. The concurrence of both terrestrial (sublunary) and celestial (supralunary) causes in the origin of the human soul is a central asset in the philosophical understanding of human generation.

IS PERFECTED | Arabic *yatimmu*, Latin *perficiatur*.

[§303] D295.2-10

All the elementary mixtures just described, although sublunary, have their remote cause in the supralunary movements of the celestial bodies. Despite their temporariness, then, they have an eternal arrangement, which – in the case of ephemeral beings like the plants and the animals –

expresses itself most clearly in the permanence of their species (cf. *supra*, *Metaphysics* IV.b.3.1, §288).

BY CHANCE | Arabic *bi-l-ittifāq*, Latin *casu*. JANSSENS 2019: 113 also renders the expression as «by chance», and seems to qualify it as a Ġazālīan addition, despite saying that it is nonetheless «based» on *DN* ed. MO^ḤIN 1952: 165.5-6.

WELL-ARRANGED ACCORDING TO A RULING | Arabic *muttasiqa ‘alā niẓāmⁱⁿ*, Latin *proveniunt secundum ordinem*.

STARS | Arabic *kawākib*, Latin *stellas*. Probably to be identified with the fixed stars of the eighth sphere («sphere of the constellations», cf. *supra*, §297 and Diagram 8), they might also encompass the other celestial bodies that we would now call planets. Their function is that of exemplifying the class of individually permanent beings, while the «plants» and the «animals» are only permanent by species. HAS BEEN ARRANGED | Arabic *dubbira*, Latin *provisum est*. The same verb occurred also *supra*, *Metaphysics* IV.b.3.1, §288, in the same doctrinal context concerning the «preservation» [*ḥifẓ*] of the species; in this paragraph the terminology employed is rather that of the «permanence» [*baqā’*], but the reasoning in the two places is nonetheless perfectly coincident.

BY VIRTUE OF THE GENERATION FROM THE DUST | Arabic *bi-l-tawallud^f min^a l-turābⁱ*, Latin *fiunt ex terra*. For further occurrences of the important topic of spontaneous generation in the *MF* cf. *supra*, *Metaphysics* I.1, §103 (also for a discussion and further bibliography, including a parallel passage from *TF* 17) and *Metaphysics* I.7, §167.

THROUGH AN INDIVIDUALIZED CELESTIAL CAUSE | Arabic *bi-sababⁱⁿ samāwīyyⁱⁿ maḥṣuṣⁱⁿ*, Latin *cum fuerit propria adaptatio ex causa celesti*. Spontaneous generation occurs for the direct action of a celestial cause, while ordinary, sexual procreation (cf. *infra*) is produced by the celestial causes through the mediation of a «faculty» or potency [*quwwa*] that reproduces what is potentially similar to the actualized (adult) individual of that species: for the «generative» [*muwallida*] faculty, common to the vegetative, the animal and the human soul, cf. *infra*, *Physics* IV.1, esp. §376.

PROCREATION | Arabic *bi-l-wilādatⁱ*, Latin *partu*. As remarked by JANSSENS 2019: 113, the emphasis on the continuity of the species in the sublunary world, granted either through spontaneous generation or, more commonly, through standard procreation, is Ġazālīan. Janssens’ terminology is however inaccurate, in that he seems to apply *tawallud* to the sexual generation/procreation (actually called *wilāda* in the *MF*), distinguishing it from «spontaneous generation» (while it is precisely the asexual kind of generation to be called *tawallud* in the *MF*; cf. *supra*).

IS ELICITED | Arabic *tantazī’u*, Latin *separans*.

THERE IS NO EVENT BUT IN THE CONCAVE OF THE SPHERE OF THE MOON | Arabic *lā ḥādī^a illā fī muqa^carⁱ falakⁱ l-qamarⁱ*, Latin *Contingens autem non est nisi intra concavitatem circuli lune*. The concavity of the sphere of the Moon is of course a periphrasis for the sublunary world. The sentence states the Aristotelian emphatic separation of the two worlds, precisely based on the respective presence or lack, in the sublunary and supralunary worlds, of contingent events, that is, of temporally originated beings.

[§304] D295.11-end of page

The celestial bodies are in perfect and complete actuality for all their attributes, with the exception of the position and the relation (JANSSENS 2019: 113 and fn. 113 remarks that the notion of ‘position’ as a «weakness in the celestial spheres» is added by al-Ġazālī, despite coming in his view from Avicenna’s *Ta’līqāt*, ed. BADAWĪ 1973: 102.8; but cf. also *supra*, *Metaphysics* IV.b.3.1, §§287-288). This potential aspect gives rise to different combinations and correspondences among the stars, which is in turn the cause for the differentiation of the sublunary mixtures and the sublunary events. Since

however some matter is only predisposed to the reception of certain forms, there is an observable regularity in the processes of generation, so that, for instance, a horse never generates a man.

AS FOR THE CELESTIAL BODIES [...] AND THE RELATION | For the perfect actuality of the heavenly bodies cf. *supra*, *Metaphysics* IV.b.3.1, §§287-288. There, their only aspect of potentiality was explicitly said to be the accidental attribute of «position» [Arabic *wadʿ*, Latin *situs*], while here the «relation» [*iḍāfa*] is added. The partial tension can be solved by assuming – as it seems by the way intuitively reasonable – that changes in position also entail changes in relation. It must be noted that the Latin text has however «illuminatio» for *iḍāfa* (cf. MUCKLE 1933: 125.3), which must presuppose the reading **iḍāʿa* in the Arabic. *Iuxta* §287 *supra*, however, «illumination» [*iḍāʿa*] is one of the perfectly actualized attributes of the celestial bodies (together with «transparency», it constitutes the actualization of their «appearance»), so that we can be sure that the Latin reading is in this case the wrong one.

THE TRINE AMONG THE STARS [...] THE SQUARE | These are all terms of the astrological vocabulary, designating the aspects, *i.e.* the angular distances among the planets on an ideal circular map of the zodiac, as seen from Earth. As remarked by JANSSENS 2019: 113, the terms are added here by al-Ġazālī, although they are also mentioned (but critically) by Avicenna in his *Iṣāra ilā fasād ʿilm aḥkām al-nuġūm*: cf. MICHOT 2006: esp. 23.14-15 (Arabic), corresponding to 101 (French: «sextile», «trigone», «quadrature», «opposition» – the conjunction is not mentioned). ALONSO 1963: 212 fn. 44 already noticed the astrological provenance of «trine», «sextile» and «square» (or ‘quartile’), but «conjunction» and «opposition» pertain to exactly the same doctrinal context, and thus are not to be considered as generic terms. The Arabic term for (astral) «conjunction» – here the verbal noun of the III form *muqārana* – seems more commonly to be *qirāna*, as for instance in the alternative title of Abū Maʿšar’s *Book of Religions and Dynasties* (cf. YAMAMOTO-BURNETT 2019 (1): 2), but the shared root (*qm*) and the context both guarantee for the chosen meaning. The astrological aspects here mentioned, which are the five aspects already considered by Ptolemy, can be summarized as follows.

TABLE 39. *Astrological aspects mentioned in the MF*

SYMBOL	ENGLISH	ARABIC	LATIN	ANGLE
♌	conjunction	<i>muqārana</i>	<i>coniunctio</i>	0°
*	sextile	<i>tasdīs</i>	<i>sextilitas</i>	60°
□	square	<i>tarbīʿ</i>	<i>quadrabilitas</i>	90°
Δ	trine	<i>taṭlīṭ</i>	<i>triplicatio</i>	120°
♋	opposition	<i>muqābala</i>	<i>oppositio</i>	180°

THE PLACES WHERE THE RAYS ARE CAST | Arabic *maṭāriḥ al-ṣuʿāʿ*, Latin *emissionum radii* (the Arabic *ṣuʿāʿ* is indeed grammatically singular – the plural being *aṣīʿa* – but is used as collective noun, hence my translation in the plural). The technical expression *maṭāriḥ* (sg. *maṭraḥ*) of the ‘rays’ is referred to a specific feature of Greek and then medieval astrology, that is, the persuasion that each of the planets – including the Sun and the Moon – casts seven ‘rays’ onto the ecliptic, which form altogether three regular polygons: a square, a triangle, and a hexagon. If another planet is located in the vicinity of the points where the rays are cast (the *maṭāriḥ*), it is said to form an «aspect» (see *supra*, Table 39)

with the originally considered celestial body (the one casting the *šū'ā'*). The expression *maṭāriḥ al-šū'ā'* is thus to be seen in close connection with the 'aspects' mentioned just before, since it constitutes in many ways a prerequisite for their astronomical origin and astrological interpretation. On the various technicalities of this crucial tenet of medieval Islamic astrology cf. KENNEDY-KRIKORIAN-PREISLER 1972; HOGENDIJK 1989; CASULLERAS 2004 (on the Andalusī astronomer Ibn Mu'ād al-Ġayyānī's (d. 1093) *Epistle on the Projection of Rays* [*Risāla fī maṭraḥ al-šū'ā'ūt*]); and, most recently, the comprehensive summary provided by CASULLERAS-HOGENDIJK 2012 (esp. 40-41 for a very clear explanation of the astrological notion of 'rays', with a useful diagram of the cast rays and the deriving aspects).

IN THE SCIENCE OF THE STARS | Arabic *fī 'ilm' l-nuġūm'*, Latin *astronomia*. A conflation of the two different disciplines that we would nowadays call 'astronomy' and 'astrology' is apparent.

IS NOT IN THE POTENCY OF MAN | Arabic *laysa fī quwwat' l-bašar'*, Latin *non est virtus in homine*. The fact that the «fulfillment» [Arabic *istifā'*, Latin *comprehendere*] – that is, the complete and perfect understanding – of all the various reciprocal positions of the planets is impossible for man seems to refer back to the example of the astronomer/astrologer [*munaġġim*] advanced *supra*, *Metaphysics* III.b.5, §211. There as well, as a matter of fact, the ineffectiveness of astrological predictions was explained in terms of insufficient knowledge of the network of the causes on the part of the self-styled foreteller (while the actual link of causality between celestial and terrestrial is never queried).

FROM THE BESTOWER OF THE FORMS | As mentioned by JANSSENS 2002: 552 and fn. 6, this occurrence of the expression *wāhib al-šūwar* (for which cf. *supra*, commentary to §302) has a parallel in the *DN* (MO'IN 1953: 161.13) where the notion is rendered with the Persian *šūrat dihandā* [صورت دهندہ] (Janssens has the erroneous transcription *dinanda*); cf. ACHENA-MASSÉ (1): 213.24: «Donateur des formes». It is worth stressing that this is the only occurrence of the expression in the *DN*, while the further eight ones present in the *MF* – despite being certainly Avicennan in spirit – are the fruit of al-Ġazālī's own elaboration.

WHO IS NOT NIGGARDLY IN GRANTING [THEM] | Reading *yabḥalu* as in BİĠŪ: 159 for Dunyā's misprint *يحل* (*yyḥl*). Cf. also *infra* in this same paragraph the occurrence of the term *buhl*, of the same root, for «avarice», and the Latin translation of the passage: «non est avarus in dando [Arabic *ifāda*]» (MUCKLE 1933: 125.10). JANSSENS 2002: 552 sees in the emphasis placed here on the liberality and generosity of the Giver of forms a small hint of its possible identification with God, rather than with the tenth intellect. See also JANSSENS 2002: 553 for a parallel passage in Avicenna's *al-Af'āl wa-l-Inf'ālāt* II.1 (ed. QĀSIM 1969: 256.10), which analogously stresses the 'generosity' [*ġūd*] of the Giver of forms (on this same passage cf. also *infra* the commentary on *Physics* II, §350).

THOSE CELESTIAL CORRESPONDENCES | Arabic *tilka l-munāsabāt al-samāwiyya*, Latin *habitudines ille celestes*.

A MARE HAS NEVER GIVEN BIRTH TO A MAN | Arabic *lam yalid faras^{um} insān^{am} qatṭ^u*, Latin *equa numquam parit hominem*. The Arabic *faras* may indicate both a horse and a mare. The fact that sublunary nature maintains a certain regularity in spite of the many and many relative positions of the celestial bodies is explained on the basis of the predisposition of matter to receive a certain form as opposed to another. Since only certain elemental mixtures can receive a certain form, living beings are not generated at random, but rather the individuals of a certain species are procreated in an orderly manner by their conspecifics, despite the great variety of celestial movements.

[§305] D296.1-11

After having expounded the variety and yet the regularity of the things happening and originating in the sublunary world (§304), the present paragraph briefly deals with the possible exceptions to that natural regularity – that is, the abnormal things and mishaps (like the generation of 'monsters'

studied in teratology) that escape what Aristotle would have called the ὤς ἐπὶ τὸ πολὺ («for the most part»; for the formulation of the principle cf. e.g. *Metaphysics* E (VI), 1026^b30). These abnormal situations are not due to a defect in the bestower (the celestial intellect), but rather to a material imperfection on the part of the recipient (cf. also *infra*, §306). The conclusion of the paragraph states the greatest perfection of the existing things thanks to the «good» poured forth by the First Principle through the mediation of the celestial intellects. The universe is the best possible universe, and it is necessary for it to be so.

THEY NECESSITATE | Reading *awğabat* for *awğabat* (erroneously separated), which seems to be printed in Duniyā's edition.

PERFECTION | Here: *kamāl*, contrasted with «imperfection» [*nuqṣān*].

IN THE WOMB OF ITS MOTHER | Arabic *fi raḥimⁱ* (or *riḥmⁱ*) *ummⁱ-hī*, Latin *in materno utero*.

ACCORDING TO THE BEST AND MOST PERFECT OF THE WAYS | Arabic *'alā aḥsan^a al-wuğūhⁱ wa-akmal^a-hā*, Latin *secundum quod pulcrius, et perfectius esse potuit*.

MORE PERFECT | Here: *atamm*.

[§306] D296.12-19

In order to confirm the optimistic thesis of the best of the possible worlds advanced in the preceding §305, the text gives here a supposedly counterintuitive example, that is, an example of a seemingly inferior kind of being – the flies – whose existence might naively be taken for shallow and futile. This however is not the case, since (i) the matter of the flies cannot receive a better form than that of the flies themselves (since otherwise it would undoubtedly receive *that* form, and not that of the flies); and (ii) the bestowal of the form of the flies on that kind of matter produces a greater perfection than its hypothetical lack (since otherwise the flies would not exist at all, inasmuch as their existence would truly not bring any benefit to the order of the world).

THE FLIES | Arabic *dubāb*, Latin *muscae*.

MORE PERFECT | Here: *akmal*.

FROM ITS BESTOWER | Reading *min wāhibⁱ-hā*, as in Bīḥū 2000: 160.9-10 and in the Latin translation («a datore eius», MUCKLE 1933: 126.1), for Duniyā's *min wāğibⁱ-hā* (which could tentatively be given the sense of 'obligatorily', 'by necessity', being however clearly worse than the chosen reading).

EFFUSIVE BY NATURE | Arabic *fayyāḍ bi-l-ṭab^a*, Latin *affluens naturaliter*.

LIKE THE LIGHT [...] PREDISPOSITION OF THE MATTERS | Sunlight is equally and constantly emitted by the Sun, but is received in a different way in different material substrata: it is not visible in diaphanous materials like air, while it gets visible in opaque ones, with a further differentiation depending on whether the surface is reflective, like water or a mirror, or non-reflective, like earth. JANSSENS 2019: 113 recognizes that «this example might be personal to al-Ghazālī». Globally, the passage is a reformulation of the widespread axiom that can be summarized, with a commonly used Latin wording, as *quidquid recipitur ad modum recipientis recipitur*. The principle has a wide fortune in medieval thought: cf. for instance THOMAS AQUINAS, *Summa theologiae* I, q. 75, art. 5; III, q. 5; and see also the gnoseological reformulations of the axiom («Cogitum...est in cognoscente secundum modum cognoscentis») in *Summa theologiae* I, q. 12, art. 4; q. 14, art. 1 ad 3; q. 16, art. 1; q. 19, art. 6, ad 2; *Summa contra Gentiles* II 79, 7; *De veritate* q. 2, art. 3. The same principle is clearly applied in the well-known beginning of Dante's *Paradiso* I 1-4: «La gloria di colui che tutto move / per l'universo

penetra e risplende / in una parte più e meno altrove. / Nel ciel che più de la sua luce prende [...]» (on which cf. SIGNORI 2016: 52). Apart from its poetical excellence, the luminous metaphor employed in Dante's *Comedy* is conceptually not far from the one here expounded by al-Gazālī.

IS REFLECTED | Arabic *yan'akisu*, Latin *reverberatur (resultat)* (double translation, both here and in the preceding occurrence of the verb *yan'akisu*).

THE RADIANCE | Arabic *al-išrāq*, Latin *radius* (which seems to presuppose the misreading **al-šu'ā'* for *al-išrāq*).

FROM THE STANDPOINT OF THE SUN | Arabic *min nāḥiyatī l-šamsī*, Latin *a parte solis*.

FOR THE DIFFERENTIATION OF THE PREDISPOSITION OF THE MATTERS | Arabic *li-ḥtilāf isti'dādī l-mawāddī*, Latin *propter diversitatem aptacionum materiarum*.

IF IT WERE LEFT AS IT IS | What is meant is: if the matter apt to receive the form of the flies were left devoid of that form, in an anti-teleological scenario.

[§307] D296.20-297.7

The text presents here a formulation of the problem of evil and announces an answer based on the analysis of the notions of good and evil. The question of the objector who presents the problem mainly consists of a list of evils, both exterior and interior to man, whose manifestation calls into question God's will for the good, or conversely His omnipotence.

THIS WORLD IS OVERFLOWING WITH EVILS, HARMS AND MONSTROSITIES | Arabic *al-dunyā ṭāfiḥat^{um} bi-l-šurūrī wa-l-āfātī wa-l-fawāḥiṣī*, Latin *mundum plenum maliciis, nocumentis, et turpitudinibus*.

THE LIGHTNINGS | Arabic *šawā'iq* (sg. *šā'īqa*), Latin *fulguribus*.

THE EARTHQUAKES | Arabic *zalāzil* (sg. *zalzala*), Latin *terre motu* (in the singular). For *zalzala* as rendition of σεισμός in the Arabic versions of Aristotle's *Meteorology* see LETTINCK 1999: 496.

THE FLOODS | Arabic *ṭūfānāt*, Latin *publicis tempestatibus*. For *ṭūfān* as rendition of Greek κατακλυσιμός see LETTINCK 1999: 496 (the same Arabic word can also render κύμα 'tidal wave'). For a further occurrence in the *MF* cf. *infra*, *Physics* V.9, §443. The first three examples of 'external' evils all refer to meteorological phenomena in Aristotelian framework, but only the «lightnings» will receive a proper treatment in the section of the *MF* devoted to meteorology: cf. *infra*, *Physics* III, §370 and §372.

THE PREDATORY ANIMALS | Arabic *sibā'* (sg. *sabu'*), Latin *rabie luporum*. The Latin translation specifies the generic «predatory animals» of the Arabic as 'wolves', while *rabies* is likely an addition *ad sensum*.

IN THE SOULS OF MEN | Arabic *fī nufūsī l-ādamiña*, Latin *in animabus humanis*. The evils interior to the soul mentioned in the text are «longing» [*šahwa*] and «anger» [*ḡaḍab*], for which cf. the psychological *excursus* of *Metaphysics* III.b.11, §§228-234, esp. §229.

WAS IT BY DIVINE DECREE? | Arabic *a bi-qadarīn*, Latin *Venitne ex providencia primi*. The Latin translation renders *qadar* («divine decree») with *providentia*, and *ināya* («providence») with *cura*: for the latter notion cf. also *supra*, *Metaphysics* III.b.7, §§219-220.

THE POWER OF THE FIRST AND HIS WILL | Arabic *'an qudratī l-awwalī wa maš'ratī-hi*, Latin *extra primi potenciam, et voluntatem*. A schematic understanding of the problem of evil might oppose the notions of (total) power and (good) will of God in the sense that the existence of evil would deny either one or the other of the two attributes. Here however the concept of «will» (expressed with the Arabic *maš'ra* rather than with the more commonly used *irāda*) is linked with that of omnipotence, inasmuch as something escaping God's «decree» [*qadar*] would escape both His power and His will. For the specific treatment of God's attributes of «will» [*irāda*] and «power» [*qudra*], both seen as depending on God's knowledge, cf. respectively *Metaphysics* III.b.7, §§214-221 and III.b.8, §§222-223.

THE SECRET OF THE DIVINE DECREE | Arabic *sirr al-qadar*, Latin *secretum providencie*. Cf. *infra*, §314, for another occurrence of this characteristic notion in the conclusive remarks of the treatise (and with it of the entire *Metaphysics*) and further commentary on it. An English translation of the pseudo-Avicennan (cf. GUTAS 2014^a: 490, under the *siglum* GM-Ps.4) short *Epistle on the Secret of the Divine Decree* [*Risāla fī sirr al-qadar*], which has close points of contacts with al-Ġazālī's treatment of *qadar* in this section of the *MF*, is available in HOURANI 1963.

MENTION | Arabic *dikr*, Latin [*nisi prius*] *exponatur*. Despite the possible šūfī echoes of the term *dikr*, which would not be entire farfetched here given the connection with the theological concept of *sirr al-qadar*, I prefer the plain translation «mention» – widespread in the *MF* – over more mystical possible renditions such as 'recollection' or 'remembrance'.

[§308] D297.8-20

The answer to the problem of theodicy starts in this paragraph with the distinction of two meanings of «good»: (a) good as existent and (b) good as God.

«GOOD» | Arabic *al-ḥayr*, Latin *bonitas*.

PERFECTION | Here: *kamāl*.

THE EVIL HAS NO ESSENCE | Arabic *al-šarr^m lā dāt^a la-hu*, Latin *malicie non est essentia*. The passage is globally a typical formulation of the traditional conception of the ontological inconsistency of evil as *privatio boni*.

THE EXISTENCE IS A PURE GOOD, WHILE THE NON-EXISTENCE IS A PURE EVIL | Arabic *al-wuġūd^m huwa ḥayr^m maḥḍ^m wa-l-‘adam^u šarr^m maḥḍ^m*, Latin *esse vero est pura bonitas; privatio vera (sic pro vero?) eius est malicia*. The stark opposition of the two extremes of pure good and pure evil anticipates the more nuanced classification of the following §309.

DESTROYS | I prefer the vocalization *yuhliku* (IV form) over *yuhalliku* (II form) because the perfect of the IV form *ahlaka* occurs shortly *infra* in the text.

THE OTHER [RESPECT] [...] THIS MEANING | (b) The second meaning that «good» can assume is explicitly theological, since it refers to God as «pure good» [Arabic *ḥayr^m maḥḍ^m*, Latin *bonitas absolute*] and can be traced back to the pseudo-Aristotelian *Book on the Pure Good* [*K. fī l-ḥayr al-maḥḍ*]: for a previous implicit reference to the same doctrinal context in the *MF* cf. *supra*, *Metaphysics* II.b.12, §194, also for further bibliography. The idea that seems to be conveyed by «pure» [*maḥḍ*] in this second meaning is not that of an unadulterated quality, but rather that of a source-like perfection: that from which something derives (God) has the derived characteristic (existence, goodness) in the utmost degree. In this regard, it is also worth recalling the comparison between the wealth of the king and the knowledge of God advanced *supra* in *Metaphysics* III.b.4, §208 (cf. Table 34), since there as well the attribute can be said to pertain to the two terms of comparison because they possess it originally, as founts or sources for it.

[§309] D297.21-298.5^a

The paragraph expounds a (theoretical) fourfold classification of things, based on the possible derivation of good and evil from them, as in the following Table 40. Classes in which the emanated evil is total [2], or even predominant with respect to good [3] are said to be non-existent, while classes [1] and [4], in which the emanated good is predominant, are necessarily existent.

TABLE 40. *Third divisio entis. Classification of things on the basis of the good and evil deriving from them*

	GOOD	EVIL
PURE	[1] existent = angels	[2] non-existent
PREDOMINANT	[4] existent (cf. §§310-311)	[3] non-existent

PREDOMINANT | Arabic *aġlab*, Latin *vincens*.

IT HAS ALREADY BEEN Poured FORTH BY THE FIRST | The Latin translation has a further description of the First Principle, absent in Arabic: «a primo largissimo» (MUCKLE 1933: 127.5).

THE ANGELS | Arabic *al-malā'ika*, Latin *angeli*. [1] The first class of beings is composed of things which are «pure good», from which nothing evil ever proceeds and which immediately derive from the Creator (cf. *infra*, §312). Only in this case, al-Ġazālī immediately identifies this kind of purely good things with a specific class of beings, *i.e.* the celestial intellects, which he however calls angels, in keeping with a common usage in the *MF* (cf. Introduction, §1.7.2). The angels are said to be «causes of the goods» [*asbāb^{mn} li-l-ḥayrāt^f*], while the Latin text as printed by Muckle has the incongruous «commune bonitatum» (MUCKLE 1933: 127.6), which might be a misreading for **caus[a]e* occurred within the Latin tradition itself.

ITS TRUTH IS THAT IT DOES NOT EVEN EXIST | Class [3], composed of hypothetical beings whose existence would produce more evil than good, in «its truth» [Arabic *ḥaqq^u-hu*, Latin *iustum est*] does not exist, since it would contradict the divine providence (cf. esp. *supra*, *Metaphysics* III.b.7, §§219-220).

JANSSENS 2019: 114 and fn. 114 remarks that this is a Ġazālīan addition, although coming in his opinion from Avicenna's *Ilāhiyyāt*, ed. QANAWATĪ-ZĀYID 1960: 421.9-10 (compared with *DN*, ed. MO'IN 1952: 164.5-9).

BEARING | Arabic *iḥtimāl*, Latin *sustinere*.

[§310] D298.5^b-12

As an example of the fourth class of beings [4] listed *supra* in §309, the text gives here the cases of the fire and the rain. Since fire and rain exist, the good they provide is surely more abundant than the evil they cause; and this residual evil is absolutely necessary, inasmuch as it would not have been possible to create fire and rain without producing it, while the alternative – that is, not creating them at all – would have left the world devoid of the (abundant) good they bring forth.

THE FIRE | Arabic *nār*, Latin *ignis*.

A MAGNIFICENT PROPERNESS FOR THE WORLD | Arabic *qawām^{mn} 'aẓīm^{mn} li-l-'ālam^f*, Latin *magna constitutio mundi*. Or, reading *qiwām^{mn}*, «a magnificent support». The notion of *qiwām* is also present in Avicennan *summae* such as the *K. al-Šifā'* and the *K. al-Hidāya*: cf. LIZZINI 1995: 372.

WOULD BE DEFECTIVE | Arabic *iḥtalla*, Latin *permutaretur*.

THE GARMENT OF THE POOR [MAN] | Arabic *ṭawb al-faqīr*, Latin *pannum pauperis*.

BY MEANS OF THE CLASH OF THE CAUSES | Arabic *bi-muṣādamat^f l-asbāb^f*, Latin *comburentibus* [!] *causis* (for attraction of the preceding *comburit?*).

THE RAIN | Arabic *maṭar*, Latin *pluvia*.

THE AGRICULTURE | Arabic *zirā'a*, Latin *seminacio*.

WOULD BE WRECKED | Arabic *ḥuriba*, Latin *deficeret*.

THE ROOF OF THE HOUSE OF THE OLD WOMAN | Arabic *saḥḥ^a baytⁱ l-ʿaḡūzⁱ*, Latin *planiciem domus vetule pauperis* (the last attribute, «poor», is an addition with respect to Dunyā's Arabic text).

AN ACT OF A CHOOSING [BEING] | Arabic *fi^{l'm} min muḥtār^m*. The Latin translation introduces a further qualification with respect to Dunyā's Arabic text, *i.e.* the notion of life besides that of free choice: «hec autem accio non est nisi *viventis*, et *elegantis*» (MUCKLE 1933: 127.23-24, emphasis added). The addition of *viventis*, presupposing a **ḥayy^m wa-(muḥtār^m)* in the Arabic antigraph, seems reasonable in the light of the beginning of §311 *infra*, where the concept of life is reprised: without the anticipation of the same notion here, its introduction there would indeed feel abrupt. For the concept of life as self-knowledge of the First cf. *supra*, *Metaphysics* III.b.1, §199.

[§311] D298.13-end of page

The paragraph concludes the reasoning on the fourth class [4] presented in §309, insisting on the unavoidable origin of a little evil in order for a greater good to be produced, and emphasizing that the evil accidentally proceeds from the First Principle, while the good is emanated essentially from Him.

THE FORM OF THE WATER [...] THE FORM OF THE LIFE | Cf. the reading of *A* as reported by Dunyā: «The form of the water as abstract does not receive the form of the goodness [*ḥayriyya*] without a mixture which does not receive the form of the good deed [*ḥayra*]».

PERFECTION | Here: *kamāl*.

ANIMAL | Arabic *ḥayawān*, Latin *animal*. Given the context, it is worth remarking on the common root in Arabic between *ḥayawān* and *ḥayya* («life»), so that the first could also be translated here as «living [being]», or the like.

WHAT IS ADVANTAGEOUS FOR THE GOOD | Arabic *al-mufid li-l-ḥayrⁱ*, Latin *dator vero bonitatis*. The Latin translators interpreted *al-mufid* as epithet of God as 'grantor' of existence (cf. *supra*, *Metaphysics* III.b.10, §226 for an actual occurrence of the term with this meaning), probably misled also by the omission of the conjunction before what they saw as the main verb of the clause, (*wa-*)*lā yu'ba'u* (which I translated as «without caring»). Cf. the entire passage as translated into Latin: «dator vero bonitatis non curat si ex pluvia creata propter bonum commune sequitur aliquod malum, quod aliquando fit, et provenit necessario cum ex non creata sequatur malum commune» (MUCKLE 1933: 127.27-30). Under my interpretation, another possible translation of the phrase would be: «what grants the better [condition of the world]...», with what follows.

FOR THE GOOD OF THE WORLD | Arabic *li-ḥayrⁱ l-ʿālamⁱ*, Latin *propter bonum commune* (cf. *supra*). The Latin text agrees with the reading of *A*: *li-ḥayrⁱ l-ʿāmmⁱ* (cf. *infra* the same adjective «common» [*ʿāmm^{an}*] applied rather to the «evil» [*al-šarr*]; Latin *malum commune*).

RARE | Arabic *nādir*, Latin *aliquod*.

CAN BE GENERATED | Arabic *yatawalladu*, Latin *fit*.

DECIDEDLY | Arabic *qaṭ^{an}*, Latin *omnino*.

SATURN AND MARS | Arabic *zuḥal wa-l-mirriḥ*, Latin *saturnus et mars*. Cf. *supra*, §297. Saturn and Mars were considered to be inauspicious planets in classical and Arabic astrology. Of the three couples of potentially 'evil' creatures, this first one represents the highest degree, that of the negative celestial influences. In §307 *supra*, this kind of supralunary evil had not been taken into consideration.

THE FIRE AND THE WATER | Arabic *al-nār wa-l-mā'*, Latin *ignis et aqua*. The second degree of evil in the world pertains to the sublunary world, and is exemplified by two of the four elements. The closest

reference is the immediately preceding discussion of the harms caused by fire and rain, but cf. also *supra*, §307, whose list of ‘meteorological’ evils can in part be traced back precisely to fire (lightnings) and water (floods).

THE LONGING AND THE ANGER | Arabic *al-šahwa wa-l-ğadab*, Latin *voluptas et ira*. These are exactly the two examples of evils internal to the human soul already given *supra*, §307 (cf. also *Metaphysics* III.b.11, §§228-234, esp. §229). After «*voluptas et ira*», the Latin translation adds the following words: «*quamvis hec aliquando noceant*» (MUCKLE 1933: 127.34). This makes for a useful clarification, since desire and anger are usually helpful to the creatures which are endowed with them.

BECAUSE OF THEIR LOSS | Arabic *bi-sabab' faqd'-hā*, Latin *propter privacionem eorum*.

THE GOOD IS REQUIRED [...] BY VIRTUE OF [HIS] DIVINE DECREE | While the good comes from God essentially [Arabic *bi-l-dāt*, Latin *per se*], the evil only comes accidentally [Arabic *bi-l-'arađ*, Latin *accidentaliter*]. As noticed by JANSSENS 2019: 114 and fn. 114, this distinction is a Ġazālīan addition, although coming in Janssens' opinion from Avicenna's *Ilāhiyyāt*, ed. QANAWATĪ-ZĀYID 1960: 421.1-2.

[§312] D299.1-8

The text presents a further objection and answer concerning theodicy. Challenging the existence of the fourth class of beings distinguished in the preceding §309 [4], the objector argues that, in order to avoid any harm to the creatures, God should have created only the first class of beings [1], that is, those consisting in a pure good from which nothing evil can proceed. Despite some issues of argumentative circularity, a charitable interpretation of the idea underlying the answer seems to be that while class [1] emanated necessarily from God, the actualization of the – *per se* only possible – existence of [4] did in fact represent an increase of the total quantity of good of the world; but the existence of [4] necessarily entailed, in turn, some quantity of evil; therefore, there was no way to create [4] (mainly good) without creating also that small quantity of evil. Without that evil, rather, class [4] would cease altogether to be itself, collapsing into class [1].

«IT WOULD HAVE BEEN DESIRABLE [...] PURE GOOD» | Arabic *kāna yanbaği an yuħliq^a bi-ħaytu yakūna ħayr^m maħđ^m*, Latin *congruum erat quicquid est sic creari ut esset bonum tantum*.

THE DIVISION WHICH IS PURE GOOD ALREADY EXISTED | Class of beings [1], that is, the angels (cf. *supra*, Table 40), was said to immediately derive from God also *supra*, §309, where it was introduced for the first time («it has already been poured forth by the First»).

IF INDEED IT WERE NOT LIKE THIS, THIS DIVISION WOULD NOT BE | The reasoning condensed here, which might be charged of circularity, explains that if beings of kind [4] do exist, then their existence was certainly better than their non-existence – and precisely because of that God brought them into existence. The main reasoning presented by the text is able, however, to detach itself at least in part from the bounds of this kind of circular argument (cf. the introduction to the paragraph). A close parallel passage to this one of the *MF* is to be found in the (pseudo-Avicennan) *Risāla fī sirr al-qadar*, (1) transl. HOURANI 1963: 138:

And if this world were not composed of elements which would give rise to good and evil in it, and produce both righteousness and corruption in its inhabitants, there would have been no completion of an order for the world; for if it contained nothing but unmixed righteousness, it would not have been this world, but another one.

FIRE / SATURN | Cf. the same examples – respectively of sublunary and supralunary beings of class [4] – given at the end of §311 *supra*.

[§313] D299.9-end of page

The third of the series of objections on the problem of evil calls into question the idea that evil truly is of limited extent in the world, implying that it is actually more than what philosophical optimism cares to consider. The answer is rhetorically construed in a similar way as the argument against the celestial solicitude for the sublunary affairs provided *supra* in *Metaphysics* IV.b.2.3, §277. In both cases, as a matter of fact, the argument is styled by means of a sort of zooming device, albeit the direction of the mechanism is opposite in the two cases: in §277 the perspective is enlarged ('zoom out') in order to emphasize the insignificance of this world with respect to the heavens; in the present paragraph, by contrast, the perspective is progressively narrowed down ('zoom in') in order to show how limited the presence of evil is in comparison to the global size of the cosmos.

SMALL | Arabic *qalīl*, Latin *parum*.

THE DESTRUCTION AND THE IMPERFECTION | Arabic *al-halāk wa-l-nuqṣān*, Latin *destruccio, et diminucio*. THE NON-EXISTENCE OF AN ESSENCE [...] FOR THE ESSENCE | For this definition of evil as *privatio* [Arabic 'adam], either of an «essence» [Arabic *dātⁱⁿ*, Latin *essendi* (!)] or of «the attribute of an essence» [Arabic *ṣifa dātⁱⁿ*, Latin *proprietas essencie*] which is a «perfection for the essence» [Arabic *kamāl bi-l-dāt*, Latin *perfeccio essendi* (!)], it can be useful to point at a not immediately obvious parallel passage from the *TF*, Discussion 5, MARMURA 2000: 93. There as well, in the context of a discussion of God as «Pure Good» [*ḥayr maḥd*], al-Ġazālī says that evil is not but «the non-existence of a substance» [*adam ḡawharⁱⁿ*] or «the non-existence of the integrity of the state of a substance» [*adam ṣalāh^t ḥāl^t l-ḡawhar^t*]. Apart from the non-technical substitution of «substance» to «essence» (which is more aptly generic, given the very abstract nature of the reasoning), the core of the two passages is exactly the same.

THIS IS IMPOSSIBLE [...] AS IT WAS SAID BEFORE | For the incorruptibility of the skies (and *a fortiori* of their immaterial moving intellects) cf. *supra*, *Metaphysics* IV.b.2.3, §276. This is not in contradiction with the reiterated inclusion of inauspicious planets such as Saturn and Mars within the fourth class of beings [4] (cf. *supra*, §§311-312), because the planets as such are incorruptible, but they can cause harm with their damaging influence on the sublunary world.

AS FOR THE ANGEL AND THE SPHERE | Arabic *fi ḥaqqⁱ l-malak^t wa-l-falak^t*, Latin *in angelo, et celo*. For the phrase *malak wa-falak*, which plainly substitutes the religious term «angel» to the philosophical one «intellect», cf. also *supra*, §297 (and see *infra*, *Physics* I, §322).

THE MUTUALLY CONTRARY FORMS | Arabic *al-ṣuwar al-mutaḡādda*, Latin *ubi est contrarietas formarum*. Cf. also the verbal noun of the same root and the same VI form employed shortly *infra* to express the notion of «mutual contrariety» [Arabic *taḡādd*, Latin *contrarietatem*]. For the forms of the «elements» [*anāṣir*] and their contrary qualities (hotness and coldness, dryness and wetness) – which are however said to be accidents, not forms – cf. *infra*, *Physics* II, §§334-338.

THEN, THAT IS NOT BUT ON THE EARTH | The fact that the origin of the evil as annihilation (of an essence or of the perfection of an essence) is traced back to the mutual contrariety of the forms of the elements guarantees that evil is only found in the sublunary realm, and not in the heavens.

IT WOULD [HOWEVER] BE SMALL SINCE THE WHOLE EARTH IS SMALL | I translate according to the reading of D-Alt *la-kāna qalīlⁱⁿ id kull^u l-arḡ^t qalīlⁱⁿ*, against Dunyā's chosen text *la-kāna l-arḡ^t kull^t-hā qalīl^{at}in*, which could perhaps be given the same meaning, but with some hardship.

FLAWLESSNESS | Arabic *salāma*, Latin *bonitas*. The 'zooming in' technique adopted by al-Ġazālī in this passage allows him to exclude more and more areas of the creation from the charge of being subject to evil: first of all, any harm can only happen in the sublunary world (i); and not in all of its creatures, but only in animals (ii); and not in all, but only in some of them (iii); and not in all of their states, but only in some of them (iv). This emphasis on the insignificance of evil, while functional to the

argument that is here at stake, is partly in keeping and partly in contradiction with the analogous emphasis placed *supra*, in §277, on the insignificance of this world. As a matter of fact, while the smallness of the sublunary realm is a *trait d'union* between the two passages, in §277 the imperfection of mankind – however considered the acme of sublunary creation – was energetically highlighted.

ARE FLAWLESS | Arabic *yaslamu*, Latin *experia sunt*.

THE FEAR OF THE NON-EXISTENCE OF THE ESSENCES | The centrality of the case of the «non-existence» (or: annihilation) [Arabic *'adam*, Latin *destruccionis*] of the essence for the definition of evil seems to rest on a partially psychological argument, that is, the greater «fear» [Arabic *ḥawf*, Latin *timor*] that is felt when conceiving the loss of existence *tout court*, than when conceiving the loss of a mere attribute of the essence.

THE EVIL IS NON-EXISTENCE [...] THE PLEASURE | For the notions of «pain» [*alam*] and «pleasure» [*ladda*] as perceptions cf. in particular *Metaphysics* III.b.11, §228. For the idea here at stake, JANSSENS 2019: 114 references *DN* §57, ed. MO'IN 1952: 164.5-9.

[§314] D300

The paragraph concludes the Fifth treatise of *Metaphysics*, started back at §294, and with it the entire, lengthy section on divine things (started at §91). Apart from a brief summary of the topics discussed in the treatise, the text offers by way of conclusion further reflection on the «secret of the divine decree» – a logical limitation of God's omnipotency – which ought not be revealed to the masses.

THUS, THE MODALITY [...] ELUCIDATED | The summary recapitulates the topics treated in the Fifth and final treatise of the *Metaphysics*, reprising in shortened form the long title of the treatise (cf. *supra*, §294).

UNDER THE FATE AND THE DIVINE DECREE | Arabic *taḥta l-qaḍā' wa-l-qadar*, Latin *sub providencia*. The phrase *al-qaḍā' wa-l-qadar* is a fixed expression in Arabic, typical of Sunnī Muslim terminology, and it might also be translated with the English «decree and determination» (so e.g. GRIFFEL 2021: 488). Its occurrence in a philosophical context «creates a conscious connection to the discourse of Islamic theology, and here particularly of Ash'arite theology», as Griffel usefully explains with regard to the case of Abū l-Barakāt al-Baḡdādī's Judaeo-Arabic *Tafsīr Sifr Qohelet*, where the same classically Sunnī terminology also appears (cf. GRIFFEL 2021: *ivi* and 542 n. 35).

HAVE ALREADY BEEN ELUCIDATED | Arabic *qad ittadaḥa*, Latin *iam ergo ostensum est*.

WE ONLY RESTRAINED FROM | Impersonal in Arabic: *wa-innamā muni'a min*.

THE SECRET OF THE DIVINE DECREE | Arabic *sirr al-qadar*, Latin *secretum providencie*. Cf. *supra*, §307, for an analogous mention of the notion of *sirr al-qadar*. JANSSENS 2019: 114 notices that the emphasis on the divine *qadar* «might constitute a personal adding of al-Ghazālī, but remains Avicennian at least in spirit insofar as it denies that God can do something impossible». While this is certainly true, but the terminology and the emphasis placed by al-Ghazālī on this aspect certainly require to consider this aspect something more than a mere Avicennian reworking. At fn. 115, Janssens further references Avicenna's *Risāla al-qaḍā'*, in MICHOT 2000: 2.14-18 (Arabic), 105 (French), for Avicenna's own idea that «the divine decree and predetermination are God's secret».

AMONG THE COMMON PEOPLE | Arabic *'inda l-'awāmm*, Latin *vulgus*. The passage reveals once more, and in the clearest way, the strong underlying presence of the opposition between élite and mass in the *MF* (cf. also e.g. *Metaphysics* IV.b.2.3, §279), which represents by the way a very recognizable feature of much of Islamic *falsafa*. The idea of the necessary restraint from the masses of the actual explanation of God's omnipotency has interesting parallels elsewhere in the *MF*: cf. *Logic* IV,

§66 and §75 – where the proposition «God is powerful upon everything» is listed among the ‘famous’ premises, whose contradictory is counterintuitive but which are not true – and *Metaphysics* III.b.8, §22. The same idea is also affirmed very clearly at the beginning of the *Risāla fī sirr al-qadar*, transl. HOURANI 1963: 138:

Someone asked the Eminent Shaykh Abū ‘Alī ibn Sinā the meaning of the Ṣūfi saying, “Whoever makes known the secret of destiny is a heretic.” In reply he stated that this question is extremely recondite, being one of those questions that can only be put down in cipher and taught in private, on account of the harmful effects its open explanation would have on the general public.

Analogously, and even more explicitly, the *MF* states that since the common people think of any limitation – even merely logical – of God’s power as a «weakness» [Arabic *‘aǧz*, Latin *impotentiam* (MUCKLE 1933: 129.10 has the clear palaeographical error «in potenciam»)], it is «advisable» [Arabic *ṣawāb*, Latin *visum fuit*] to tell them a sort of ‘noble lie’, thus triggering in their hearts [Arabic *ṣudūr*, Latin *cordibus*] a «glorification» or ‘aggrandizement’ of God [Arabic *ta‘ẓīm^m*, Latin *magnitudo potentiae*].

DISTINGUISHED | Arabic *fuṣūla*, Latin *distingueretur*.

TO COOK FARE BY MEANS OF IT | Arabic *yaṭbuḥu bi-hi al-ṭabīḥ^a*, Latin *ut coqueretur* [*conqueritur* (!) Muckle] *cibaria ad ipsum*.

TO MELT THE [MINERAL] SUBSTANCES BY MEANS OF IT | Arabic *yudābu bi-hi l-ḡawāhīr^a*, Latin *liquescant substantie per ipsum*. For the complete expression *ḡawāhīr ma‘dīniyya*, which is here clearly implied, cf. *supra*, §302; for the conditions of melting minerals cf. *infra*, *Physics* III.5, §§373-375.

THE FIREWOOD OF THE POOR | Arabic *ḥaṭab al-faqīr*, Latin *pannum pauperis* (as in the first occurrence of the example: cf. *supra*, §310 = MUCKLE 1933: 127.16). Of course, the firewood in itself is meant to be burnt, but the rationale of the example – which must describe a damage caused by fire – is to presuppose that fire can destroy the stocks of wood laboriously gathered by the poor man, against his will. The argument for the impossibility of a choosing fire, willing to provide good and avoid evil, is exactly the same advanced *supra* in §§310-312.

THEY WOULD BELIEVE | Arabic *la-ẓannū*, Latin *putaretur*.

HE DOES NOT HAVE THE POWER TO CREATE THE LIKE OF HIMSELF | The impossibility for God to create a second God – in keeping with the Islamic precept of *tawḥīd* – was already used in *Logic* IV, §66 (and again *ivi*, §75) as a counterexample for the ‘famous’ premise «God is powerful upon everything».

TO GATHER THE BLACKNESS AND THE WHITENESS | Arabic *‘alā l-ḡam^a bayna l-sawād^d wa-l-bayād^d*, Latin *ne coniungere simul albedinem et nigredinem*. A second example of limit to the potency of God – which appears thus once more to be a *potentia ordinata*, rather than a *potentia absoluta* – is the impossibility of reuniting the contraries. A partially parallel passage to this one may be found in *TF*, Discussion 17, MARMURA 2000: 175-176 (emphasis added):

[God] ought then to be able to change genera. He would thus change substance into accident, knowledge into power, *blackness into whiteness*, sound into smell, just as He had been able to change the inanimate into the animate and stone into gold, and there would follow as necessary consequences impossibilities beyond enumeration. [...] As for the changing of genera, some of the Islamic dialectical theologians have said that it is within God’s capacity [to enact]. We, however, say: [...] A thing’s becoming something else is unintelligible. *For if blackness changes into a cooking pot, does the blackness continue to exist or not?* If it ceases to exist, it does not change [into something else]; rather, the thing ceases to exist and something else comes into existence. If it [continues to] exist with the cooking pot, then it did not change, but something was added to it. If [on the other hand] the blackness remains while the cooking pot is nonexistent, then the former did not change, but remained as it had been. [...] Between accident and substance, there is no common matter – nor between blackness and the cooking pot. And there is no common matter between the rest of the genera. It is in this respect, then, that [the transformation of different genera one into another] is impossible.

GOD KNOWS WHAT IS RIGHT | Arabic *Allāh^u a'lam^u bi-l-ṣawābⁱ*, Latin *deus autem plus novit quam hoc*. The conclusive eulogy puts back in God's hands the ultimate resolution of the problem of His power and its logical limits. Analogous topical conclusion in pseudo-Avicenna's *Risāla fī sirr al-qadar*, transl. HOURANI 1963: 140 («But God is more knowing and wiser»).

THE SECTION [...] LIES NEXT TO IT. | The final sentence, which announces the following treatment of *Physics*, is not reported in Muckle's edition.

LIES NEXT TO IT | Arabic *yālī-hu*.

PHYSICS

الطبيعيّات

Preface

[§315] D303

The Preface to the *Physics* presents first of all a very short summary of the categorical material – already treated in *Metaphysics* I.1 –, which is used as a basis for the reassessment of the subject-matter of natural philosophy, also in comparison with that of metaphysics and that of mathematics. After this epistemological framing, the paragraph presents a table of contents of the following material, which is noteworthy inasmuch as it only lists four treatises out of the actual five tracts that globally form the section on *Physics*. This omission has a parallel in the Preface to *Logic*, where the topic of the fifth treatise is similarly omitted from the programmatic table of contents (cf. *supra*, §4). On the omission in *Physics* cf. REYNOLDS 2002. The material corresponding to this paragraph incorrectly appears in Muckle's Latin edition under the heading *Tractatus primus*, and thus not as a general preface to the section on natural philosophy.

WE HAVE ALREADY MENTIONED [...] AND THE QUANTITY | The material loosely corresponding to Aristotle's *Categories* was treated *supra*, *Metaphysics* I.1, which deals altogether with the preliminary distinction of being into (a) substance and (b) accident. As for (b) the accidental categories, they are discussed especially at §§127-138. The bipartition of accidental categories into (ba) that which does not need another thing to be conceived (quantity and quality) and (bb) that which does need another thing (the remaining seven accidents) reproduces the one presented *supra*, §§127-128 (and cf. also the summarizing Table 29 in §138). The terminology of «relation» [*idāfa*] employed here is a bit trickier, since in *Metaphysics* I.1, §128 that term only designated the category, while the dependent and 'relative' status of the accidental categories other than quantity and quality was rather expressed with the Arabic *nisba* (cf. esp. §133). The most economic interpretation of the present passage seems to me that of a loose understanding of the word *idāfa* occurring here, that reads it as synonymous of the *nisba* of §133.

WHICH BRANCHES OFF FROM THE SUBSTANCE, THE QUALITY, AND THE QUANTITY | Arabic *wa-huwa mutafarri^{am} 'alā l-ḡawharⁱ wa-l-kayfiyyatⁱ wa-l-kammiyyatⁱ*, Latin *et hoc dispergitur super substantiam, et quantitatem, et qualitatem*. If class (bb) is to be interpreted as composed of the seven accidental categories of relation, when, where, position, having, acting and being acted upon, one certainly cannot give to the participle of the V form *mutafarri* 'the meaning of a 'branching of substance, quantity, and quality'. Likewise, the interpretation of the Latin translation appears erroneous, and the meaning of the verb *dispergitur* ('spread', 'scatter') quite inappropriate. According to these considerations, I have translated the verb as 'branch off from' (see WEHR 828^a), in the sense of a bifurcation of these seven accidental categories with respect to another branch formed together by quantity, quality, and substance. This separation would be based on the fact that the latter three – despite crossing the boundary between accidents and substances – are nonetheless united by their property of being conceivable independently from another notion, as opposed to the lack of conceptual autonomy of the other seven. Another possibility to make sense of the passage would be

to interpret *mutafarri^{am} alà* as «secondary with respect to» (such a meaning is attested for the plural form *mutafarri'āt* in WEHR 828^b).

THE KNOWLEDGE ABOUT THE SUBSTANCE [...] TO METAPHYSICS | The description refers in particular to the subject-matter of the First treatise of *Metaphysics* (§§100-175), as summarized in the general *Preface* to *Metaphysics* (*supra*, §91). While the mention of substance and accident entails in particular the reference to *Metaphysics* I.1 (§§100-138), the further mention of the «states of the existence» [*aḥkām al-wuġūd*] stands globally for the remaining seven fundamental subdivisions of being dealt with in *Metaphysics* I.2-8 (§§139-175).

THE QUANTITY, WHICH IS THE SUBJECT-MATTER OF MATHEMATICS | The qualification of quantity as the subject-matter of mathematics is pragmatically functional, but somewhat inaccurate from the theoretical and epistemological point of view. The parallel passage of *Metaphysics*, First Premise, §96 made it clear, by contrast, that the subject-matter of mathematics is constituted by those material things that can be conceived apart from their matter in estimation, although not in (real) existence. WHAT DEPENDS [...] NOR IN THE EXISTENCE | By contrast with the somewhat loose definition of the subject-matter of mathematics, the text accurately describes the subject-matter of natural philosophy as formed by those material things that cannot be conceived in separation from their matter, neither in «estimation» [*wahm*] nor in «existence» [*wuġūd*], as in the normative definition given at §96 *supra* (cf. also Table 28 in the commentary *ad locum*).

MATERIAL [BOUNDS] | Arabic *mawādd*, Latin *materiis*.

ABSTRACTION | Arabic *taġrīd*. For a comprehensive analysis of the notion of *taġrīd* in Avicenna see HASSE 2001; cf. also GUTAS 2012^a: 425-428 for a shorter but extremely valuable reappraisal.

THE BODY OF THE WORLD [...] BEFALL IT | Given the epistemological framework sketched *supra*, the actual object of natural philosophy is classically identified with the «body of the world» [Arabic *ġism al-'ālam*, Latin *corporis mundi*], further qualified as subject to «change» [Arabic *taġayyur*, Latin *permutationi*], «movement» [Arabic *ḥaraka*, Latin *motui*] and «rest» [Arabic *sukūn*, Latin *quieti*].

INTENT | Arabic *maqṣūd*, Latin *intentio*.

IN FOUR TREATISES | Arabic *fī arba^t maqālatⁱⁿ*, Latin *in quatuor tractatibus* (Muckle); *in quinque tractatibus* (Liechtenstein). In Duniyā's edition and in Muckle's Latin text – based on ms. Vat. lat. 4481 – the table of contents only indicates the presence of four treatises in the subsequent section on *Physics*, as opposed to the actual five tracts that form the text. On this basis, as well as on signs of doctrinal maturity which he himself recognized in the text, REYNOLDS 2002: 36 has maintained that «the fifth article seems to better reflect Ghazzālī's fully developed thought. It seems quite possible that he later returned and added this article to the *Physics*, without editing the list of contents in the beginning of the *Physics*». As I noticed elsewhere (SIGNORI 2020^a: 82-83), however, the fifth treatise of the *Physics* appears strongly connected to the preceding discussion, and its material is easily retraceable in the corresponding conclusive sections of the *Physics* of the *DN*. It thus seems reasonable to conclude that it actually made part of the original project of the *MF*, which heavily lies on the structure of the *DN*, especially since al-Ġazālī could hardly miss the nicely conclusive role of the prophetological section in Avicenna's work as well (in parallel with the analogous conclusion of the *K. al-Šifā'*): cf. the Introduction, §1.2 and then again §1.4.2.1. As will be made clear in what follows, the material gathered in *Physics* V forms indeed a fitting culmination for the theoretical discussion conducted throughout the work. Moreover, the argument for a later addition based on the 'fuller development' of al-Ġazālī's thought is untenable if the earlier dating of the *MF* is not conclusively demonstrated with further (and different) internal or external reasons. To these considerations, one could also add that the Latin tradition actually witnesses a form of the text which mentions five treatises, sometimes also introducing a short description for the fifth missing treatise. This happens in particular in the Renaissance edition printed in Venice in 1506 by Petrus Liechtenstein, which Muckle consulted in copy Paris, BNF Reserve 809 (see MUCKLE 1933: IX and 130) and which reads «in quinque tractatibus» (anastatic reprint by LOHR 1969: 89^b2; page not numbered in the edition) and later, after the indication of the topic of the fourth treatise, «Quintus est de eo quod fluit in anima

ab intelligentia agente» (LOHR 1969: 89^b9-10). The same situation is represented by ms. Paris, BNF lat. 16605, which analogously reads *in quinque tractatibus* (fol. 52^v) and also adds in a marginal note the indication of the topic of the fifth treatise (*quintus de eo quod fluit in animam ab intelligentia agente*). This latter formulation, with the accusative *animam* rather than the ablative *anima*, is identical to the title given for the Fifth treatise in ms. Prague, Bibliotheca Capituli Metropolitani, O.1 (1585) (fol. 1^r: *Tractatus quintus de eo quod fluit in animam ab intelligentia agente*). Moreover, ms. Paris, BNF lat. 16096, which is the sole known witness of the general Prologue of the *MF* in Latin translation (cf. *supra*, §1), omits the summary of the contents of the various treatises, but correctly reads, at the beginning of the passage, *in V tractatibus* (fol. 108^{ra}).

THE FIRST [...] THE PLACE | (1) The first treatise of natural philosophy is about «that which is attached» [Arabic *mā yalḥaqu*, Latin *hoc quod comitatur (sequitur)*; double translation] to all bodies *qua* bodies, that is, «form» [Arabic *ṣūra*, Latin *forma*], «matter» [Arabic *hayūlā*, Latin *hīle*], «movement» [Arabic *ḥaraka*, Latin *motus*] and «place» [Arabic *makān*, Latin *locus*]. The actual treatment of the topics in *Physics* I only takes into account the two latter notions, *i.e.* movement (§§316-323) and place (§§324-332).

THE SECOND [...] AMONG THE BODIES | (2) The second treatise deals with what is «more specific» [Arabic *aḥaṣṣ*, Latin *minus commune*] than what pertains to body *qua* body, *i.e.* with the «simple» bodies [Arabic *basīt*, Latin *de simplicibus (corporum)*] which are the four elements: cf. *infra*, *Physics* II, §§333-356.

THE THIRD [...] MIXED [THINGS] | (3) The topic of the third treatise, which deals with the nature of the blend of the elements and with the material of Greek-Arabic meteorology, is summarized as having to do with «the composite and the mixed [things]» [Arabic *al-murakkabāt wa-l-mumtaziġāt*, Latin *de compositis, et de commixtis*]; cf. *infra*, *Physics* III, §§357-375.

THE FOURTH [...] HUMAN SOUL | (4) The fourth treatise deals with philosophical psychology: cf. *infra*, *Physics* IV, §§376-424.

THE GOAL IS COMPLETED | Arabic *yatimmu l-garaḍ*⁴ [*l-garaḍ*⁴ *wa-l-maqṣūd*⁴ Y], Latin *completur intencio*. As mentioned *supra* in the commentary, the topic of the Fifth treatise is not announced in Dunyā's and in the Latin text, but the summary provided by the Renaissance editions and by certain Latin manuscripts – *de eo quod fluit in anima ab intelligentia agente* – is rather accurate: cf. *infra*, *Physics* V, §§425-455.

Treatise I

[§316] D304.1-305.12

In principle, the First treatise of the *Physics* of the *MF* deals with what is common to all bodies (matter, form, movement, and place), but it actually focuses only on movement and place. The present paragraph introduces the first of the two main topics, *i.e.* movement, by giving a definition of it and a broader explanation of its nature. Having extended (as customary in the Aristotelian tradition) the meaning of movement to any transition from a state to another state, the text distinguishes between an instantaneous and a gradual kind of movement, giving examples for both.

THEY ARE FOUR [...] [LAST] TWO | Cf. the summary of the subject-matter of the First treatise of *Physics* provided *supra* in the Preface, §315.

CANNOT BE DISJOINED | Arabic *lā yanfakku*, Latin *sine quibus non potest esse corpus*. The Latin text then goes on to add these words, absent in Arabic, which are meant to justify the omission of matter and form in the following treatment: «de quibus iam tractavimus» (MUCKLE 1933: 131.16).

SPEECH ON THE MOVEMENT | Arabic *al-qawl fī l-ḥaraka*, Latin *dictio de motu*. The sentences preceding this title are attached in Muckle's edition to the material of the Preface: see §315.

WELL-KNOWN | Arabic *mašhūr*. Given the logical notion of *mašhūrāt* as endoxic propositions explained *supra*, *Logic* IV, §60 and §66, the sense of the participle *mašhūr* here might be technical, and thus be closer to 'usually thought' than to 'famous' in its ordinary meaning.

«MOVEMENT» ONLY APPLIES TO THE TRANSFER FROM A PLACE TO [ANOTHER] PLACE | The ordinary meaning of «movement» [*ḥaraka*] designates the local motion, from a *makān* to another *makān*. The use in this preliminary explanation of the word «transfer» [*intiḳāl*] – which could also be rendered with 'transition' – anticipates the «technical usage» of the philosophers (see just *infra*) according to which the sense of *ḥaraka* is far wider, as it includes any transfer, transition or «travel» (see *infra* in this paragraph) from a state to another state, not limited to local locomotion.

IN THE TECHNICAL USAGE OF THE GROUP [OF THE PHILOSOPHERS] | Arabic *bi-ṣṭilāḥi l-qawmī*, Latin *secundum quod convenerunt philosophi*. For al-Ġazālī's wide usage of *iṣṭilāḥ* in the *MF* cf. *supra*, Prologue, §1; *Metaphysics* I.1, §104 and §118 (cf. esp. the commentary *ad locum* for the same Latin translation also adopted in this occurrence); and again *Metaphysics* II.11, §188 and *Metaphysics* IV.a.1, §246.

TRAVEL | Arabic *sulūk*, Latin *processus*. The more common meaning of *sulūk* is 'behaviour', but it has here very clearly the same sense of the preceding *intiḳāl*, thus meaning 'passage', 'change', 'transition' (from an attribute to another attribute). While MCGINNIS 2009 (*e.g.* in II.1, 111) – in agreement with the choice made here by the Latin translators of the *MF* – renders the term as «procession», I prefer to reserve all English terms related to 'processes' and 'proceeding' to the root *ṣ-d-r*, in itself quite crucial in the emanative metaphysics of the work. The translation «travel» that I have adopted, although very generic and thus inevitably partially inaccurate, allows however to maintain in translation the same root for verbal occurrences of the same term: cf. for instance the active participle *sālik^{an}* rendered as «travelling» *infra* in this paragraph.

WITH A GRADUAL PASSAGE TO IT | Arabic *taṣyīr^{an} ilay-hi 'alā l-tadriġ*, Latin *mutacione sui ad illam gradatim*.

THAT WHICH PASSES INTO ACTUALITY [...] DOES NOT INCREASE | (i) The first kind of movement – in broader sense – is the instantaneous one, *i.e.* that which happens «all at once» [Arabic *duf'at^{an} wāḥidat^{an}*, Latin *in uno instanti*]. As examples, al-Ġazālī gives (i.a) the blackening of a white body (for instance paper covered in ink) and (i.b) the instantaneous illumination of a «dark» [Arabic *muḏlam*, Latin

tenebrosum] place (for instance by instantaneously lighting a lamp).

IS LIGHTED | Arabic *yastanīru*, Latin *illuminatur*.

WITH AN ENDURING, STILL LIGHTING | Arabic *istinārat^{am} mustaqīrrat^{am} wāqīfat^{am}*, Latin *sic ut illuminatio maneat stabilis uno modo*. The requisite for this kind of ‘movement’ from darkness to light to be instantaneous is of course the absence of graduality and variation in the light provided to the dark environment: cf. indeed the opposite example of a natural, gradual lighting caused by sunrise.

THAT WHICH GRADUALLY PASSES [...] IT GRADUALLY CHANGES | (ii) The second kind of movement here considered is the gradual one, *i.e.* that which happens «gradually» [Arabic *tadrīg^{am}*, Latin *gradatim (vel paulatim)*]; double translation]. This second sort of movement receives more attention than the first one. It is explained as the gradual passage from a potency to an actuality, which happens when neither of the extremes is «pure» [Arabic *maḥḍa/maḥḍ*, Latin *puram/purum*]. The two examples given here mirror exactly those provided *supra* for the instantaneous kind of movement: (ii.a) the gradual blackening of a white body (for instance white paper gradually inked, as opposed to a stain forming immediately) and (ii.b) a dark place gradually lighted, as it happens for instance while the Sun is gradually rising at dawn.

IT ADVANCES GRADUALLY | Arabic *yatadarraḡu*, Latin *gradacio in exeundo*.

LUMINOUS | Arabic *nayyir*, Latin *lumen*.

BETWEEN THE WHITENESS AND THE BLACKNESS | Reading *bayna al-bayād wa-l-sawād*, as in D-Alt, for Dunyā’s printed text *bayna al-sawād wa-l-bayād*. The passage described is, as a matter of fact, that of a white body which gradually blackens, so that the direction of the qualitative change cannot be from blackness to whiteness, but rather from whiteness to blackness. The Latin text has in this case Dunyā’s wrong ordering: «inter nigredinem et albedinem» (MUCKLE 1933: 132.10).

HAPPENS ONLY IN THE TEN CATEGORIES | Arabic *innamā yaqā‘u fī l-maḡūlāt^t al-‘aṣār^t*, Latin *incidit in decem predicamenta*. There is no extra-categorical movement. As will be made clear in the following §317, however, only some of the categories are susceptible of it.

[§317] D305.13-306.7

Building on the conclusion of the preceding §316, the text clarifies that movement can happen only in four of the ten categories: (1) place (where), (2) quantity, (3) position, and (4) quality (the somewhat peculiar case of instantaneous substantial movements (5) will be treated *infra* at §318). While movement in categories (1), (2), and (3) cannot be instantaneous, the fourth, quality, admits of an instantaneous movement, but also of a gradual one.

A FIRST DIVISION OF THE MOVEMENT | Dunyā notices that the title is missing in *A*, and the same happens in the Latin edition.

THE LOCAL MOVEMENT | Arabic *al-ḥarāka al-makāniyya*, Latin *in motu locali*. The corresponding category is that of «where» [*ayna*]: cf. *supra*, *Metaphysics* I.1, §128, where the «place» [*makān*] was indeed explicitly mentioned in the explanation of what the category of *ayna* includes.

QUANTITY | Arabic *kammīyya*, Latin *secundum quantitatem*. For the treatment of the category of quantity cf. *supra*, *Metaphysics* I.1, §127 and §§129-130. The movement in quantity will be described in detail *infra*, §§319-320.

POSITION | Arabic *wad‘*, Latin *in situ*. For the treatment of the category of position cf. *supra*, *Metaphysics* I.1, §128 and §133. For the ‘positional’ movement of the skies in Avicenna cf. *supra* the commentary to *Metaphysics* IV.b.1.3, §258 (but see also *ivi*, §259 and cf. *Metaphysics* IV.b.2.1, §271; IV.b.3.1, §288 for further remarks on the topic).

QUALITY | Arabic *kayfiyya*, Latin *in qualitatem*. For the treatment of the category of quality cf. *supra*,

Metaphysics I.1, §127 and §§131-132.

AS FOR THE PLACE [...] LIKEWISE THE BODY | The local movement cannot be instantaneous, because space is divisible in potency *ad infinitum*: cf. *supra*, *Metaphysics* I.1, §§110-120, esp. §§117-120 on the divisibility.

A PART AFTER [ANOTHER] PART | Arabic *ǧuz^{xm} ba'd^a ǧuz^{zn}*, Latin *una pars post aliam*.

BEING IN THE PLACE | Arabic *al-kawn fī l-makānⁱ*, Latin *Similiter in generacione, et corrupcione est motus*. The Latin translators appear to have interpreted *al-kawn* as short for *al-kawn wa-l-fasād*.

FROM SITTING DOWN TO LAYING DOWN | Arabic *min^a l-ǧulūsⁱ ilā l-iḍṭiǧā^a*, Latin *de sedendo ad recumbendum*. In §128 *supra*, the category of position was explained in terms of the mutual configuration of the parts of a body.

AS FOR THE QUALITY [...] BLACKEN GRADUALLY | Cf. the examples of instantaneous and gradual transitions provided *supra*, §316.

[§318] D306.8-308.2

The paragraph denies the possibility of a gradual movement in the category of substance, providing a demonstration that substantial changes are instantaneous. Albeit *prima facie* somewhat awkward, this is a characteristically Avicennan position, finely described and discussed in MCGINNIS 2004 (with references to the rather ambiguous theoretical background provided on the topic by Aristotelian discussions on change in *Phys.* VI.5-6). A final note of this paragraph, apparently unrelated to the preceding reasoning, deals with the positional, rather than local, movement of the outermost sphere. Since that pericope of text fits so awkwardly with its close context, its presence here might perhaps be explained as the fruit of a displaced marginal gloss.

WITHDRAWING | Arabic *zā'il*, Latin *discedens*.

BY THE SPECIFICITY | A: «changes by virtue of what is from the specificity».

THE FURTHERMOST SKY DOES NOT HAVE A PLACE, AS IT WILL BE EXPLAINED | Cf. *infra*, *Physics* I.2, §332. On the issue of the positional movement of the sky (and especially of the outermost sphere) cf. HASNAWI 1984: 106; RASHED M. 1995: 302-345. See the list of parallel passages in Avicenna provided in LAMMER 2018: 340 fn. 110: *e.g.* Avicenna, *al-Samā' al-ṭabī'ī* II.3, §§13-16, ZĀYID 1983: 103.8-105.13; *K. al-Naǧāt* II.2.1, ed. DĀNIŠPĀŽŪH 1985: 206.6-207.8. Avicenna claimed originality for the distinction between movements in place and in position. Cf. LAMMER 2018: 341-342.

[§319] D308.3-13

The movement in the category of quantity (2) is of two kinds: (2.1) the physiological growth and decline of the living bodies, connected to food and nutrition and dealt with in the present paragraph, and (2.2) the more mechanical process of rarefaction and condensation, which does not involve nutrition.

BY MEANS OF THE NOURISHMENT | Arabic *bi-l-ǧidā'*, Latin *propter nutrimentum*. On the nutritive faculty of the vegetative soul cf. *infra*, *Physics* IV, §377. According to what is explained there, nutrition is necessary in order to restore in the body organic matter progressively dissolved by other agents.

BY MEANS OF THE GROWTH AND OF THE WILT | Arabic *bi-l-numuwwⁱ wa-l-dubūlⁱ*, Latin *secundum*

augmentum, vel detrimentum. The Arabic *dubūl* probably refers in the first place to the domain of plants, which is not farfetched given that the nutritive faculty is proper of the vegetative soul (see *infra*, §377). The semantic extension to the decrease in size that also befalls the animals is however clear.

THE RAREFACTION AND THE CONDENSATION | Arabic *al-taḥalḥul wa-l-takāṭuf*, Latin *secundum expansionem, vel constrictionem*. Cf. *infra*, §320.

DRAWS | Arabic *yastamaddu*, Latin *atrahit*.

IT ASSIMILATES TO IT | Arabic *yatašabbahu bi-hi*, Latin *quod assimilatur sibi*.

PERFECTION | Here: *tamām*.

DIMINISHES | Arabic *yanquṣu*, Latin *minuitur*.

TAKES THE ROLE OF | Arabic *yasuddu masadd^a*, Latin *restauretur*.

A BODY FROM WHICH SOMETHING IS PERPETUALLY DISSOLVED | Arabic *ḡism^m yataḥallala min-hu ‘alā l-dawāmī šay^m*, Latin *corpore de quo aliquid resolvitur perenniter*. The text gives two possible reasons of the continuous dissolution of material from the living bodies, such as to render nutrition mandatory for them: (i) the «enclosing» (or maybe ‘chafing’) [*iḥtīfāf* (*iḥtīṭāf* A, maybe read by the Latin translators as *iḥtīṭāf*?)] of the air and (ii) the «liquefaction of the heat innate to it» [*idāba l-ḥarāra l-ḡarīziyya iyya-hu*]. Cf. the Latin translation of the passage: «per aerem continentem, qui subtrahit humiditatem suam, et per calorem naturalem qui resolvit ipsum» (MUCKLE 1933: 133,22-23).

[§320] D308.14-end of page

(2.2) The paragraph deals with the second kind of quantitative movement, that of rarefaction and condensation. The main difference with respect to the first kind of quantitative movement, treated in §319, is that rarefaction and condensation happen without addition of material from outside, or respectively without subtraction of matter from the condensed body.

TOWARD THE INCREASE | Arabic *ilā l-ziyāda*, Latin *in augmentum*. As the «rarefaction» [Arabic *taḥalḥul*, Latin *expansio*] is defined as a movement toward the increase, likewise the «condensation» [Arabic *takāṭuf*, Latin *constrictio*] will be described at the end of this paragraph as a movement «toward the diminishment» [Arabic *ilā l-nuqṣān*, Latin *in diminutionem*].

WITHOUT HELP FROM OUTSIDE | Arabic *min ḡayrⁱ madad^m min ḥārīḡ^m*, Latin *sine aliquo addito extrinsecus*.

IT GETS BIGGER | Arabic *yakburu*, Latin *crescens*.

A MEASURE | Arabic *miqdār*, Latin *spacium*.

VESSEL | Arabic *inā*, Latin *vasis*. The example of the breaking of the vessel helps to visualize with ease the expansion of water when heated, since what was at first sufficient to contain it becomes suddenly too small to be able to encompass its (obviously greater) measure. Cf. the Latin text: «sicut aqua cum calescit, crescit, sed si claudatur os vasis, non tamen dilatatur vas, sed frangitur» (MUCKLE 1933: 133,27-29).

FOOD | Arabic *ṭa‘ām*, Latin *cibus*. The second example of rarefaction is linked to the expansion of food in the stomach. Despite the connection with nutrition, it has nothing to do with the first kind of quantitative movement described in §319 above, because it does not entail the growth of the nourished body, but merely the (mechanical) inflation of the belly after the ingestion of food.

THE MATTER DOES NOT HAVE A MEASURE [...] IS AN ACCIDENT FOR IT | The analysis of the phenomena of rarefaction and condensation leads to conclude that «matter» [*hayūlā*] has not a fixed measure, and that measure is thus accidental to matter. Cf. *supra*, *Metaphysics* I.1, §109, for a different formulation of an analogous doctrine, and see also *infra*, *Physics* II, §347, for an application to the elemental bodies.

RANDOMLY AND IN WHICHEVER WAY | Arabic *ǧuzāfⁱⁿ wa-kayfa kāna*, Latin *non quantumlibet nec quomodolibet*. Although accidental, the differentiation in measure of matter is not entirely arbitrary, but is only up «to a known limit» [Arabic *ilā ḥaddⁱⁿ ma'lūmⁱⁿ*, Latin *usque ad terminum precognitum*]. After these words, the Latin translation adds «et ex causa cognita» (MUCKLE 1933: 134.1-2), absent in Dunyā's Arabic text.

WITHOUT SEPARATION OF ANYTHING FROM IT | Arabic *min ǧayrⁱ ibānatⁱ šayⁱⁿ min-hu*, Latin *sine subtractione alicuius de illo*. For this meaning of *ibāna*, linked to the preposition *bayna* rather than to the sense of 'elucidation', cf. WEHR 106^a. Like rarefaction had been exemplified *supra* by means of the behaviour of heated water, the example of condensation given here is, symmetrically, that of frozen water.

[§321] D309.1-310.5

The second subdivision of the movement takes into consideration its possible cause, thus distinguishing between (a) accidental, (b) violent and (c) natural movements. For a diagram of the classification cf. the summarizing Table 41 given *infra* in the introduction to §322.

BY ACCIDENT | Arabic *bi-l-ʿaraḍⁱ*, Latin *per accidens*. (a) The accidental movement is that of a body which is moved not in itself, but because its container is moved, like water in a «mug» [Arabic *kūz*, Latin *vas*] when the mug is changed place. When the water is moved accidentally from a house to another house due to the movement of the mug, it does not change its «proper» [Arabic *ḥāṣṣ*, Latin *proprius*] place – that is, the mug itself – but only a more «common» [Arabic *ʿamm*, not translated in Latin] place – that is, the house. For parallel passages in Avicenna cf. *K. al-Šifāʾ, al-Samāʿ al-ṭabīʿī*, II.9, §13, ZĀYID 1983: 143.5-7 and see LAMMER 2018: 325 and fn. 65.

BY VIOLENCE | Arabic *bi-l-qasrⁱ*, Latin *per violentiam*. (b) As opposed to the accidental movement, the violent movement does change the proper place of the moved thing, but this happens for a reason external to the essence of the moved thing itself. The examples given are the motions performed by an arrow thrown by a bow, and by a stone thrown upwards. More generally, a violent movement happens when something external to the thing «pulls» [Arabic *yaǧḍubu*, Latin *atrahitur*] or «pushes» [Arabic *yaḍfaʿu*, Latin *impellitur*] it.

BY NATURE | Arabic *bi-l-ṭab^a*, Latin *per naturam*. (c) Finally, the natural movement changes the proper place of the moved thing and it is caused by the essence of the thing. The examples given are movements to what is elsewhere called the 'natural place' of each thing: for the natural places of the elements cf. *infra*, *Physics* I.2, §332, and Diagram 10.

SURROUNDING / SURROUNDED | Arabic *muḥīt / muḥāt*, Latin *continente / contento*.

THERE IS NO DOUBT [...] CALLED «NATURE» | The sensible mutual differentiation of the movements of the bodies shows that their being bodies *qua* bodies cannot explain by itself their motions. Every natural movement thus has a further cause, called «nature» [Arabic *ṭab^a*, Latin *natura*]. For a previous introduction of the same concept, in that occasion in *Metaphysics* but still in a kinematic context, cf. *supra*, *Metaphysics* IV.b.1.4, §260.

[§322] D310.6-end of page

Three kinds of souls – vegetative, animal, and angelical – are associated with the natural movements (that is, those due to the essence itself of the moving thing), which are either due to nature proper or rather to a will. This is a not trivial anticipation of material belonging to philosophical psychology,

which has no direct correspondence in the *DN*. Albeit textually troubled (see *infra* the commentary for further remarks), the excerpt can be interpreted as expressing a rather interesting further articulation of the causal classification of the movement started in the preceding §321, which can globally be summarized as follows.

TABLE 41. *Subdivision of local movement according to its cause*

‘common’ place	‘proper’ place			§321
(A) ACCIDENTAL	(B) VIOLENT	(C) NATURAL		
not due to the essence of the moving thing		due to the essence of the moving thing		
		↙ (C.1) NOT BY WILL	↘ (C.2) BY WILL	
	§322	(c.1.i) nature proper	(c.2.i) angelic soul	(I) UNIFIED
		(c.1.ii) vegetative soul	(c.2.ii) animal soul	(II) DIVERSIFIED

The naturality of the aforementioned ‘natural’ movements (see §321) is confirmed by the observation that the bigger naturally moves more, and more quickly, than the smaller, while – were all movements violent – the smallest body, offering the least resistance, would be the quickest.

MOREOVER, IT SUBDIVIDES ITSELF [...] «[SOUL] OF THE SPHERE» | Dunyā’s text is unsatisfactory, because it introduces a subdivision of natural movement (c) – «it subdivides itself into» [Arabic *yanqasimu ilā*, Latin *dividitur in*] – but then mentions only one of its internal articulations, *i.e.* (c.1) «that which is by virtue of something other than a will» [Arabic *mā yakūnu bi-ḡayr^r irādat^m*]. Since the second term of the subdivision must then be the movement by virtue of a «will» [*irāda*], a possible solution to the suspension of the sentence might be that of reading **wa-ilā mā yakūnu* (or: *kāna mā’a irādat^m*) (‘and into that which is together with a will’, which would correspond to subsection (c.2); cf. *supra* Table 41) for the pericope of Dunyā’s text which I have translated as «If [rather] it is together with a will», in Arabic *wa-in kāna mā’a irādat^m*. The origin of the mistake might be the attraction of the preceding hypothetical clause with *in* (*wa-in tuḥarrika*, «if it moves»). The Latin translation is indeed a witness of a similar solution, although it is hard to tell whether this is the fruit of an emendation *ope ingenii* or rather of a more correct Arabic antigraph: «Quod dividitur in id quod non est ex voluntate [...] et in id quod est ex voluntate [...]» (MUCKLE 1933: 134.30-31; 34). Globally, I interpret the passage as stating a quadripartition of the natural movement broadly taken (that is, of the movement that has its cause within the essence of the moving thing). This fourfold classification is produced by the intersection of the distinction between voluntary (c.2) and non-voluntary (c.1) natural motions with the distinction between movements whose species is «unified» [Arabic *ittahada*, Latin *sit unus*] (i) and movements addressed to different directions (ii).

IT IS PROPERLY CONTRADISTINGUISHED BY THE NAME OF «NATURE» | Arabic *yahtaşşu bi-smi l-ṭab*^d, Latin *hic dicitur proprie natura*. (c.1.i) The first case considered is that of non-voluntary movements directed *ad unum*, that is, toward one and only direction. This kind of motion deserves properly the name of ‘natural’ – which is the broader label of all the four kinds of movements here considered; cf. *supra*, §321 –, because it is produced by a «nature» properly taken. The example given is the classical one of the downward movement of the stone.

«VEGETATIVE SOUL» | Arabic *nafs^{an} nabāṭiyy^{an}*, Latin *anima vegetabilis*. (c.1.ii) Within the framework of the non-voluntary natural movements, that which is nonetheless addressed to more than one direction (thus not being determined *ad unum*) cannot be caused by a «nature» alone, but needs a «soul», specifically the vegetative one proper of the plants. For the treatment of the vegetative soul in the section of the *MF* explicitly devoted to psychology cf. *infra*, *Physics* IV.1, §§376-378.

«ANIMAL SOUL» | Arabic *nafs^{an} ḥayawāniyy^{an}*, Latin *anima sensibilis*. (c.2.ii) The voluntary movements addressed to many directions are caused by a sensitive soul, proper of the animals: on this soul and its faculties cf. *infra*, *Physics* IV.2, §§379-401. Under this heading, however, it seems here possible to include also the rational soul proper of man, since otherwise its movements would be left unspoken in the present framework.

«ANGELIC SOUL» OR «[SOUL OF] THE SPHERE» | Arabic *nafs^{an} malakiyy^{an} aw falakiyy^{an}*, Latin *anima angelica sive celestis*. The rhyming couple of relative adjectives *malakī* / *falakī* mirrors analogous expressions formed with the corresponding names (*malak* and *falak*): cf. *supra*, *Metaphysics* V, §297 and §313. The circumstance is relevant for al-Ġazālī’s outright replacement of the *falsafī* expressions ‘intellect’/‘intellectual’ with the corresponding (Qur’ānic, but more generally religious) notions of ‘angel’/‘angelic’ (see the Introduction, §1.7.2). JANSSENS 2019: 115 and fn. 117 remarks that the mention of the three kinds of souls is a Ġazālīan addition, although «this idea finds support in the *Aḥwāl al-nafs*»; cf. Avicenna, *Aḥwāl al-nafs*, ed. AL-AHWANI 1952: 49.2-5.

THE SKIN | Arabic *al-ziqq*, Latin *uter*. For analogous examples involving a «skin» held down in water cf. *supra*, *Metaphysics* IV.b.1.4, §260 (see the commentary *ad locum*, also for remarks on the Latin translation of the term and for parallel passages in Avicenna), and *infra*, *Physics* II.2, §338.

GOES UP | Arabic *yaş’adu*, Latin *emergit*. The hypothesis of an ascent of the skin in water due to the attraction of the air («draws it»), or conversely to the pressure of the water («pushes»), would immediately qualify the upward movement of the skin as violent (cf. *supra*, §321).

[§323] D311

The third division of the notion of (local or positional) movement proposed by the *MF* is the distinction between (a) circular and (b) rectilinear movement. Much like what happened in the second division as for the natural movement, the rectilinear movement is further subdivided in four kinds – corresponding to the four elements –, on the basis of the direction (to the surrounding surface of the cosmos [1] or to the middle of it [2]) and of the intensity of the movement toward that direction (to the utmost degree [i] or to an intermediate step [ii]). Moreover, after the quadripartition of the rectilinear movement, the circular movement is also integrated in the framework which focuses on the ‘middle’ (or ‘centre’ of the cosmos), thus producing a comprehensive tripartition, alternative with respect to the original bipartition between circular and rectilinear motions. The subdivision presented in this paragraph can be summarized as in the following Table 42.

TABLE 42. *Subdivision of movements according to their direction*

<i>bipartition</i>	(A) CIRCULAR	(B) RECTILINEAR		<i>quadripartition</i>
		↙ (1) TO THE SURROUNDING SPHERE [LIGHTNESS]	↘ (2) TO THE MIDDLE [HEAVINESS]	
<i>tripartition</i>		(b.1.i) fire	(b.2.i) earth	(I) TO THE UTMOST DEGREE
		(b.1.ii) air	(b.2.ii) water	(II) BENEATH THE UTMOST DEGREE
		↓	↓	
	(3) AROUND THE MIDDLE	(1) AWAY FROM THE MIDDLE	(2) TOWARD THE MIDDLE	

CIRCULAR | Arabic *mustadīra*, Latin *circularem*. (a) The circular movement is that of the «spheres» [Arabic *aflāk*, Latin *celi*].

RECTILINEAR | Arabic *mustaqīma*, Latin *rectum*. (b) The rectilinear movement is that of the «elements» [Arabic *ʿanāṣir*, Latin *elementorum*].

«LIGHTNESS» | Arabic *ḥifḥa*, Latin *levitas*. (1) «Lightness» is the property of that which moves rectilinearly toward the «surrounding [surface]» [*muḥīṭ*] (*i.e.* the inner surface of the outermost sphere) of the cosmos.

«HEAVINESS» | Arabic *ṭiqal* (or *ṭiqḥ*), Latin *gravitas*. (2) «Heaviness» is the property of that which moves moves rectilinearly toward the «middle» [*wasat* or *wast*] (or «centre» [*markaz*]) of the cosmos. For the opposition of *muḥīṭ* and *markaz* of a spherical cosmos as guaranteeing the differentiation of up and down cf. *supra*, *Metaphysics* IV.b.1.2, esp. §§252-253 (and Diagram 4).

TO THE UTMOST DEGREE | Arabic *ilā l-ḡāya*, Latin *id quod est ultimum*. (i) Fire and earth are at the utmost degree of respectively lightness and heaviness.

THAT WHICH IS BENEATH IT | Arabic *mā huwa dūna-hu*, Latin *id quod est intra* [sic pro *infra*?] *hec*. (ii) What is meant is of course not a local 'being under' (which would apply to air with respect to fire, but not to water with respect to earth), but rather being 'beneath' the utmost degree of intensity that qualifies movement of kind (i). Thus, the 'intermediate' elements of air (heavier than fire but lighter than water) and water (heavier than air but lighter than earth) are included under this label.

AROUND THE MIDDLE | Arabic *ʿalā l-wasat*, Latin *circa medium*. (3) Corresponding to the circular movement (a) (see *supra*).

FROM THE MIDDLE | Arabic *ʿanī l-wasat*, Latin *a medio*. (1) = (b.1) Corresponding to the «light» rectilinear movements (see *supra*).

TOWARD THE MIDDLE | Arabic *ilā l-wasat*, Latin *ad medium*. (2) = (b.2) Corresponding to the «heavy»

rectilinear movements (see *supra*).

[§324] D312.1-9

After the treatment of movement (§§316-323), the present paragraph introduces the second main topic of the First treatise of the *Physics*, i.e. place, by listing four properties that aim to describe it. For the Aristotelian conditions, or requirements, of what place is cf. *Phys.* Δ [IV] 4, 210^b34-211^a6; for their counterpart in Avicenna see *K. al-Šifāʿ, al-Samāʿ al-ṭabīʿī*, II.6, §2, ed. ZĀYID 1983: 115.4-6. On the issue cf. LAMMER 2018: 314 and fn. 27; 329 and fn. 76.

ITS NUTSHELL | Arabic *waǧīz^u-hu*, Latin *quod breuius de eo dici potest, hoc est*. The introductory statement of the section reveals most clearly the abridging, epitomizing nature of the *MF*, since it declares that the complete treatment of the «place» [Arabic *makān*, Latin *loco*] would be «long» [Arabic *ṭawīl*, Latin *prolixus*], but also immediately states the will of the author to deal with it 'in a nutshell'.

CONCORDANTLY | Arabic *bi-l-itifāq*, Latin *causaliter* (sic pro *casualiter*: cf. *supra*, *Metaphysics* V, §303, where the same Arabic expression is rendered in Latin with *casu*).

PROPERTIES | Arabic *ḥawāṣṣ*, Latin *proprietates*.

THE FIRST ONE OF THEM [...] IN ONE OF THE TWO | (1) The first property of «place» is that movement starts and finishes in it.

THE FIRST ONE OF THEM | Duniyā remarks: *kaḏā fi-l-aṣṭayni*, which I take as a 'sic'.

THE SECOND ONE [...] THE AIR HAS GONE OUT | (2) The second property of place is that each place can only accept one body at a time. The example given is the substitution of water with vinegar, or of air with a water, in a mug.

THE THIRD ONE [...] NOT ELSEWHERE | (3) The third property is that place accepts up and down (or conversely, that up and down find themselves within what we call «place»). It is worth noticing, with LAMMER 2018: 329 fn. 76, that the treatment of the requirements of 'place' in the *Physics* of the *Šifāʿ* (see *supra* the introduction to the present paragraph) fails to mention Aristotle's condition «that every place must have an above and a below». By contrast, such a requirement is made clear in the *DN* and in the *MF* that reuses its material, as the third property here listed attests.

THE FOURTH ONE IS THAT THE BODY IS SAID TO BE IN IT. | (4) The fourth property – which seems implied by (2); see *supra* – mentions the fact that every body is in a place.

[§325] D312.9-313.4

(a) From the fourth property listed *supra* (§324), it can be elicited that place is not matter, since matter is described as the receptacle of forms (cf. *supra*, *Metaphysics* I.1, §104), while place is the receptacle of bodies. (b) Place cannot either be identified with the form, because the form of every body is inseparable from it, while the body leaves the place when it moves (cf. the first property listed *supra*, §324). (c) A third candidate to the role of place of the body is the measure of the 'distance' (space) occupied by the body itself, either in the plenum alone (c.1), or also in the void (c.2). (a-b) For the Aristotelian dismissal of matter and form as suitable candidates to the role of place, and its Avicennan reprises, cf. ARISTOTLE, *Phys.* Δ [IV] 2, 209^b17-210^a13; AVICENNA, *K. al-Šifāʿ, al-Samāʿ al-ṭabīʿī* II.5, §2, ZĀYID 1983: 112.3-6 and II.9, §1, 137.5-10; *K. al-Naǧāt* II.2.10, ed. DĀNIŠPĀZŪH 1985: 233.10-13 ≈ *al-Hikma al-ʿArūḏiyya* II.2.8, 133.20-22; *DN*, ed. MEŠKĀT 1952: 14.8-10; and cf. the discussion by LAMMER 2018: 313-314 and fn. 25; 333-334 and fn. 89; 345. (c) As for the idea of place as extension or space,

implied in position (c), and its internal subdivision into (c.2) advocates of the void and (c.1) supporters of an extension ideally void, but in fact always filled with bodies, it is useful to quote the *locus parallelus* in Avicenna, *K. al-Šifāʿ, al-Samāʿ al-ṭabīʿī* II.6, §11, ZĀYID 1983: 116.16-18 (to be seen in connection with the further parallel passages in *K. al-Naǧāt* II.2.10, ed. DĀNIŠPĀŽŪH 1985: 233.13-15 ≈ *al-Ḥikma al-ʿArūḍiyya* II.2.8, 133.22-24; *DN* III.6, 14.11-15.10; *al-Ḥikma al-mašriqiyya* III.9, 26.7.9, as indicated by LAMMER 2018: 383 and fn. 236).

However, the advocates of the extension [*aṣḥāb al-buʿd*] are of two schools [*ʿalā madḥabaynī*], among which are (c.1) those who deny that this extension remains unoccupied without something filling it, instead requiring that it is not left behind by what fills it at all, unless with something that subsequently fills it, as well as (c.2) those who do not deny that, instead allowing that this extension is sometimes void and sometimes full – and these are the advocates of the void [*aṣḥāb al-ḥalāʿ*].

As clarified with abundance of detail by LAMMER 2018: 386-387, the first position (c.1) corresponds to that of the Baṣrian Muʿtazila and of Greek atomism (both theoretical stances in need of void to allow for the movement of the atoms), while the second position (c.2) is the one expounded by John Philoponus: for a very clear text in this regard cf. PHILOPONUS, *In Phys.*, 579.5-9, transl. Furley in FURLEY-WILDBERG 2014, and see the ample discussion provided in LAMMER 2018: 374-382, esp. 380.

MISTAKE | Arabic *ǧalaṭ*, Latin *error*.

FOR THE MATTER'S BEING RECEPTIVE OF A THING AFTER [ANOTHER] THING | Arabic *li-kawnī l-hayūlā qābil^{mn} li-šay^{mn} baʿd^a šay^{mn}*, Latin. Cf. Avicenna, *K. al-Šifāʿ, al-Samāʿ al-ṭabīʿī* II.6, §3, ZĀYID 1983: 115.11, to the effect that matter can (wrongly) be taken to be place because it is «susceptible of successive replacement» [*qābil li-l-taʿāqub*]; Aristotle's hypotext is *Phys.* Δ [IV] 4, 211^b29-212^a2 (see LAMMER 2018: 331 and fn. 81).

ERROR | Arabic *ḥaṭaʿ*, Latin *error*.

FACTION | Arabic *fariq^{mn}*, Latin *quidam*; *alii*.

THE MEASURE OF THE DISTANCE WHICH IS BETWEEN THE TWO EXTREMES OF THE BODY | Arabic *miqdār al-buʿd allādī bayna ʿarafay l-ǧismⁱ*, Latin *mensura spacii quod est inter extremitates continentis corporis*. The adjective *continentis*, although seemingly presupposing the Arabic **[l-ǧismⁱ] l-muḥūṭⁱ* or *al-hāwī* (cf. *infra*, §334), must not be taken in the technical Aristotelian sense of an inner surface, because this would erroneously anticipate here the fourth candidate to the role of body, and with it the actual solution given by Aristotle and accepted by Avicenna (and by al-Ġazālī as the latter's faithful *expositor*: cf. *infra*, §332). Rather, what is at stake here is the third candidate to the role of «place», *i.e.* (c) the «extension» [*buʿd*] or 'space'. Cf. the two closely related parallel passages in AVICENNA, *K. al-Šifāʿ, al-Samāʿ al-ṭabīʿī* II.6, §4, ZĀYID 1983: 115.12f; II.6, §5, 116.6-7 (see LAMMER 2018: 382-383), and Aristotle's presentation of place as extension in *Phys.* Δ [IV] 4, 211^b7: ἢ διάστημα τι τὸ μεταξύ τῶν ἐσχατέων [Arabic *buʿd mā fi-mā bayna l-ǧayāt*] (cf. LAMMER 2018: 369; 384).

BETWEEN THE TWO EXTREMES OF CONCAVE OF THE MUG | Arabic *bayna ʿarafay muqaʿarⁱ l-kūzⁱ*, Latin *spacium quod est inter extremitates concavitatis urcei*. The expression *muqaʿar al-kūz* mirrors the *muqaʿar falak al-qamar* («the concave of the sphere of the Moon») regularly used to describe the sublunary world (cf. *supra*, *Metaphysics* IV, §245; *Metaphysics* V, §303). As will be made clear in the following §332, where the Aristotelian and Avicennan solution to the problem of place will be finally expounded, the reason why the mug and the sphere of the Moon are «place» for what they contain is not the one suggested here, *i.e.* that they contain a certain «extension» of 'space' (but rather, that their inner surface delimits a place in proper sense).

BETWEEN THE TWO EXTREMES | The Arabic *bayna ʿarafay* [...] (plus genitive), «between the two extremes», might erroneously lead one to think of a linear distance, while it is important to remark

that the «extension» [*bu'd*] or space here considered is conceived by all means to be three-dimensional. The parallel expression *al-bu'd al-tābit bayna aṭrāf-hī* («the stable extension between its [*scil.* of the body] extremes») used by Avicenna, *K. al-Šifā'*, *al-Samā' al-ṭabī'ī* II.6, §5, ZĀYID 1983: 116.6-7, with its usage of the plural *aṭrāf* instead of the dual *ṭarafayni*, seems in this regard more accurate (cf. LAMMER 2018: 384: «the extension in question is spread out in between the limits of the body and is entirely equal to the body in terms of size in all three dimensions»).

A FACTION SAID: «THE ASSESSMENT [...] IN THE PLENUM» | (c.1) This further «faction» [*farīq*], a subdivision of the advocates of place as extension, actually represents the characteristic doctrinal stance of Philoponus, according to whom place is an underlying spatial extension, similar to void but never actually emptied of the bodies that fill it (cf. the introduction to this paragraph for the relevant discussion). For the refutation of this first subsection of position (c) cf. *infra*, §§326-328 (roughly corresponding to Avicenna, *al-Samā' al-ṭabī'ī*, II.7).

THE ADVOCATES OF THE VOID | Arabic *aṣḥāb al-ḥalā'*, Latin *qui tenent sententiam de inhani*. Cf. *infra*, §329, for the analogous expression *arbāb al-ḥalā'*. (c.2) See the introduction to this paragraph and the commentary to §329 *infra* for the identification of these thinkers with the Mu'tazilites of Baṣra.

IS EMPTIED | Arabic *yafruḡu*, Latin *exinhaniri*.

AN INFINITE VOID BEYOND THE SURFACE OF THE WORLD | Arabic *ḥalā'^{am} warā'^ā saḥḥi' l-ʿālamī lā nihāyat^a la-hu*, Latin *ultra superficiem mundi inhanitatem infinitam*. The possibility of an extracosmic void space was entertained by both the Pythagoreans and the Stoics, but does not seem to be discussed in Avicenna's *al-Samā' al-ṭabī'ī* (cf. LAMMER 2018: 390 fn. 260). In the *MF* as well, this cursory reference is the sole mention of the problem, while the following refutation will be focused on the denial of the intracosmic void («in the interior of the world» [*Arabic fi dāḥilī l-ʿālamī*]) The Latin reading *eciam ultra mundum inhanitatem* (MUCKLE 1933: 136.22) should certainly be emended in *intra mundum*, on the basis of the Arabic text and of the required sense of the passage (also confirmed by the presence of *etiam*, which would have no purpose if the text repeated here the notion of an extracosmic void, already affirmed *supra*).

TO INVALIDATE THE ASSESSMENT OF THE POSSIBILITY OF THE VOID | Arabic *ibṭāl taqḍīr imkān al-ḥalā'*, Latin. Cf. *infra*, §§329-331 (roughly corresponding to Avicenna, *al-Samā' al-ṭabī'ī*, II.8).

[§326] D313.5-end of page

The paragraph introduces the refutation of the aforementioned position (c.1) (see §325), that is, the refutation of the idea that extension, or space, can be a suitable candidate to the role of place. The strategy of refutation is to deny in the first place that there might exist a spatial extension different (or distinguishable) at all from the body itself of which that extension should be the 'place'. An objector – of Philoponian allegiance – might argue that such an extension can nonetheless be mentally conceived, by eliminating all the (bodily) objects that normally fill it. This reasoning has however the form of a hypothetical the antecedent of which is a (natural) impossible (that this is actually the case will be demonstrated in the following §§327-328). Therefore, the consequence which seems to derive from it simply does not follow, and the existence of an underlying extension cannot be granted through this line of reasoning. What remains is thus the 'positive' argument against its existence, based on the fact that there is nothing through which the alleged 'extension' might be distinguished from the simple extended materiality of the body itself. On all this cf. LAMMER 2018: esp. 378 and fn. 21, and the bibliography quoted therein.

AS FOR THE FIRST SCHOOL OF THOUGHT | Arabic *ammā l-maḏhab al-awwal*, Latin *qui tenent enim quod locus sit spacium*. That is, position (c.1) listed above (§325), and namely the (Philoponian) position

according to which there is a spatial extension underlying all the cosmos, mentally conceivable as void but actually always filled with bodies.

IT IS SOUND ONLY [...] IT DOES NOT [INDICATE IT] | For this kind of ‘metaphysical’ argument against the (Philoponian) conception of an extension ideally, or imaginatively, distinguishable from the corporeal extension of the body itself, cf. AVICENNA, *al-Samāʿ al-ṭabīʿī* II.7, §8, ZĀYID 1983: 122.13-15 and his *al-Ḥikma al-mašriqiyya* III.10, 28.17–19. The synthesis of the argument provided by LAMMER 2018: 394 proves useful also for the argument of the *DN* and the *MF* which is here at stake: «[...] there is, and can be, only one extension, viz., the one inhering in matter – and this is the corporeal extension of the body. Even if there were a second extension over and above the first, it could not be identified due to its own supposed immaterial nature, so that, again, we only get one extension, viz., the one inhering in matter – and this is the corporeal extension of the body».

IT IS [...] SOUND | Arabic *yastaqīmu*, untranslated in Latin (this might indicate the presence here of a lacuna, because the Latin sentence appears suspended).

DOES NOT INDICATE | Arabic *lā tadullu*.

THAT [MAY] ENTER INTO | Arabic *madāḥil*.

«IF WE SURMISED THE EXIT OF THE WATER [...] WOULD REMAIN» | The argument attributed here to the anonymous objector can be traced back to Galen (*apud* Themistius: cf. *infra* for the relevant text) and to a further elaboration by Philoponus (*In Phys.*, 574.13-575.3, transl. Furley in FURLEY-WILDBERG 2014), according to whom it is legitimate to argue by means of a (physically) impossible hypothesis, removing «in thought» [χατ’ ἐπίνοια] the bodies which in reality always fill the underlying extension whose existence Philoponus, and the objector here, are willing to demonstrate. This epistemological method *via* impossible hypotheses is very well-studied in scholarship: cf. WIELAND W. 1967: 123 fn. 15; MARTIN 1999; KUKKONEN 2014; LAMMER 2018: 377-378 and fn. 219. For the formulation of this argument in favour of extension in Avicenna’s discussion of the various candidates for place in his *K. al-Šifāʿ* cf. *al-Samāʿ al-ṭabīʿī* II.6, §5, ZĀYID 1983: 116.6-7 (quoted in LAMMER 2018: 383):

Moreover, if we imagine water or some other body as removed and inexistent in the vessel, it follows from that that the fixed extension between its limits [*al-buʿd al-ṭābit bayna aṭrāf-hi*] exists and that, furthermore, that [extension] exists whenever these [things] exist together with it.

THIS WOULD NOT BE A PROOF [...] DOES NOT FOLLOW FROM IT | The answer given by Avicenna in the *DN*, and by al-Ġazālī following him, to the argument built on the impossible hypothesis of the removal of a body from a place without substitution of another body has a close antecedent in the critique advanced by Themistius against Galen’s argument recalled above. Cf. THEMISTIUS, *In Phys.*, 114.7–21, tr. by Todd (quoted in LAMMER 2018: 379):

But let us hypothesise that when the fluid was removed [from a vessel], no other body flowed in: a separate extension therefore remains within the surface [of the vessel]. But the hypothesis is illogical, all-wise Galen, for it hypothesises the very object of our inquiry [...] You fabricate for yourself a picture of just what you want – that a separate extension exists – without proving that it exists. In general terms, you conceive of something impossible [ὄλως τε οὐδὲν δυνατὸν ἐννοεῖς] [...] In fact, this is the only way that [Galen] will get his wish to leave an extension in which there are bodies now, but not at another time. But this is impossible, and not what Galen intends: for an extension can never manage to subsist without a body – instead, the bronze that forms the hollow surface [of a vessel] would sooner implode than remain without body.

A somewhat similar critique to this one by Themistius, addressed however against Philoponus’ rather than Galen’s version of the argument, is to be found in SIMPLICIUS, *In Phys.*, 1334.26-34: cf. KUKKONEN 2014; LAMMER 2018: 378 fn. 219. For Avicenna’s own argument against the admissibility of Philoponus’ ‘impossible hypothesis’ cf. *al-Samāʿ al-ṭabīʿī* II.9, §11, ZĀYID 1983: 141.18 ff.; 142.1 ff. (quoted in LAMMER 2018: 399-400):

The existence of a certain extension that determines the measure follows in the imagination only due to an elimination of body under the condition [*bi-šart*] of preserving the bodies surrounding it which measure the determined extension. [...] How could one know that this imagination is not corrupt [*fāsid^m*], such that what follows upon it is absurd, and whether it is correct [to say] that this assumption is possible, such that what follows upon it is not absurd?

As explained with finesse by LAMMER 2018: 399, Avicenna's argument is that «if we want to affirm in our imagination the existence of an extension by removing a body from a container [...] this is only possible upon the further condition that – contrary to what would actually happen in concrete reality – the surrounding bodies are preserved and do not collapse and implode. [...] [I]t is not enough simply to eliminate the body in question; we also have to assume that what usually follows upon such an elimination is prevented from happening. This further assumption, though, may jeopardise the validity of the whole thought experiment, for there is nothing that guarantees that by adding this further assumption we have not fabricated our own false results». This line of reasoning is perfectly in keeping with the further example of fallacy due to the assumption of an impossible hypothesis added in the *DN* and the *MF*, namely the arithmetical example concerning the impossible evenness of number five. In that case, indeed, it is immediately clear that assuming the possibility of dividing the five into two equal halves would indeed make it even, but only at the (impossible) cost of changing its nature – so that the five would no more be five. Shifting the attention from the mathematical domain to the physical world, Avicenna – and al-Ġazālī following him – suggest that assuming the existence of an extension separate with respect to the body that occupies a certain place is likewise unwarranted, in that it might inadvertently assume the *demonstrandum*, thus fabricating precisely what ought to be demonstrated. In logical terms, the physical impossible seems thus to be equalled to a logical impossible, so that the opponent who maintains the notion of the underlying spatial extension is portrayed as claiming a derivation of his thesis *ex impossibile* – a circumstance that cannot but make his position look untenable.

PROOF | Arabic *ḥuġġa*, Latin

EVEN THOUGH IT WERE TRUE | Arabic *wa-in kāna šādiq^m*, Latin *quamvis sit verum*.

IT IS NOT TRUE WITHOUT THAT IMPOSSIBLE | Arabic *lam yakun šādiq^m dūna dālīka l-muḥāl*, Latin *non est verum absque illo impossibili*.

[§327] D314.1-8

Having criticised in the preceding §326 the very hypothesis of a spatial extension underlying every body, on the basis that such a hypothesis is built on the erroneous imagination of a natural impossible (that is, the elimination of every body from a place without that 'place' actually collapsing), the present paragraph and the following §328 are directly aimed at stating the actual impossibility of such an underlying, self-subsisting three-dimensional extension. The demonstration is based on the impossibility of the interpenetration of bodies, which entails in turn the impossibility of the interpenetration of the material extension (proper of physical bodies) with any sort of immaterial extension (whose formal features would be indistinguishable from those of the material kind of spatial extension). The reasoning is developed in the present and the subsequent §328; for a thorough discussion of Avicenna's treatment of the problem, with special reference to the *al-Samā' al-ṭabī'ī* of his *K. al-Šifā'*, cf. MCGINNIS 2006^b: esp. 56-69.

THE EXTENSION OF THE BODY | Arabic *bu'd al-ġism*, Latin *spacium [...]* corporis.

ANOTHER EXTENSION | Arabic *bu'd āḥar*, Latin *aliud spacium*. That is, the kind of immaterial extension whose existence is avowed by Philoponus and the supporters of position (c.1).

THE INTERPENETRATION [...] DO NOT INTERPENETRATE | Extensions – of whatever nature they might be – do not interpenetrate because the bodies are impenetrable precisely for their being extended (see *infra* in this same paragraph: «it has no cause but the fact that [the body] is endowed with an extension»), and not for any other factor or accident befalling them. Thus, if bodies are impenetrable *qua* extended, also an immaterial extension – such as the one envisaged by the Philoponians – would not be able to interpenetrate with a material one – such as the bodily one. Hence, the extension of every body is already occupied by the material extension of that body, without any place whatsoever for a further extension insisting on the same corporeal entity.

INTERPENETRATION | Arabic *tadāḥul*, Latin *introitu*.

[§328] D_{314.9-315.2}

The paragraph explains with concrete examples – mainly added by al-Ġazālī (see JANSSENS 2019: 115) – what had been clarified *in abstracto* in the preceding §327. Just as two bodies – for instance water and air – cannot interpenetrate each other occupying the same place – for instance a chest, or box –, likewise this reciprocal impenetrability holds true for a body, on the one hand, and any underlying immaterial extension, on the other hand. Therefore, if there is a body in a certain place (as experience tells us there always is), there cannot be an immaterial spatial extension in the same place. If however the two extensions were said to exist simultaneously in the same place, then one should be distinguishable from the other on the basis of some kind of accident. However, this cannot be the case, and thus the assumption of two extensions leads inevitably to the assumption of an infinite number of coextended extensions, which is an (already Aristotelian) absurd.

WHAT IS BETWEEN [...] WHAT IS NOT [AIR] | As noticed by JANSSENS 2019: 115, the concrete example of the cubits of air in a 'box' (as Janssens renders *ṣundūq*) is added by al-Ġazālī with respect to the *DN*.

CHEST | Arabic *ṣundūq*, Latin *vasis*.

TWO EXTENSIONS | In Duniyā's edition the text seems to be an erroneously separated *bu'd an*, but the correct reading is certainly the dual *bu'dāni* (the verb is in the singular, but this is a regular structure as it precedes the noun).

IF THEN WITH «INTERPENETRATION» [...] A NON-EXISTENCE | If one of the assumed extensions is, or becomes, «non-existent» [Arabic *in'adama*, Latin] as soon as it occurs together with the other one in the same place, the resulting situation is not but a «non-existence» [*in'idām*] of that extension, which is therefore truly 'void', null for explanation. A somewhat similar statement is famously applied by Aristotle's *Phys.* Δ [IV] 8, 216^a26 to the notion of void, which is said to be void in itself.

duality is not understood but after the separation

AS IT WAS DEMONSTRATED BEFORE | Arabic *ka-mā sabaqa burhān^u-hu*, Latin *sicut probatum est in precedentibus*. The previous occurrence of the example of the «two blacknesses» and the identification of the accident as principle of individuation clarify that this backward reference points to two related passages of the preceding discussion, both similarly involved with the determination of a *principium individuationis*: cf. *supra*, *Logic* II, §17 and *Metaphysics* I.2, §141.

THEN, WHEN THE TWO EXTENSIONS [...] THIS IS IMPOSSIBLE. | Since the two purported extensions – the material one of the body, and the alleged immaterial one that should constitute its 'place' – are mutually indistinguishable, one could as well assume that there are infinitely many extension coinciding over the same body, but this is manifestly absurd. The background of this argument is directly Aristotelian: cf. *Phys.* Δ [IV] 8, 211^b19-25 (cf. MORISON 2002: 121-132; LAMMER 2018: 315, 369).

WHICH DISTINCTION | Arabic *ayyⁿ farqⁿ*, Latin *et sic non differt*.

[§329] D315.3-end of page

As aptly noticed by LAMMER 2018: 384, «for Avicenna, the analysis of the void is an indispensable part of the discussion of place, as the void just is the greater context of any analysis of place, if conceived as an extension», and this is also why «he integrates his full discussion on the void into his general discussion of place» in the *al-Samā' al-ṭabī'ī* of his *K. al-Šifā'*. The present paragraph and the following §§330-331 are the vestige of this Avicennan choice in the *MF*, and they thus follow the same structure adopted in the *Physics* of the *Šifā'*, although in the characteristically more condensed fashion of the *DN*. On the centrality of the discussion of void in Avicenna's treatment of place throughout his philosophical *summae* see also LAMMER 2018: 388 (with a note on the similar structure of the relevant discussion in the *DN*, as well). The Aristotelian background of this kind of discussion is provided by the refutation of the void in *Phys.* Δ [IV] 6-9, which is usually seen in scholarship as complement and partial emendation of the more cursory – and somewhat confused – arguments given against void in *Phys.* Δ [IV] 4, within Aristotle's proper discussion of place: see LAMMER 2018: 368-369.

WHAT WE HAVE MENTIONED [...] OF THE EXTENSIONS | The most recent attempts at characterizing Avicenna's conception of place insist quite much on the notion that Philoponus' position (c.1) and that of the (Greek and Muslim) atomists who supported the void (c.2) are ultimately coinciding in that they both support 'extension' as a candidate for place, so that refuting one contributes to refuting the other: cf. LAMMER 2018: 380 and fn. 228 (on Philoponus' interchangeable use of *κενόν*, *χώρα*, *τόπος*, and *διάστημα*), and esp. 387 and fn. 246 (on Avicenna's partially analogous interchangeable use of *ḥalā'*, *bu'd* and *makān* in *al-Samā' al-ṭabī'ī* II.8).

THE VOID FALLS IN THE ESTIMATIONS [...] A THING LIKE THE AIR | This psychological reading of the possible origin of the notion of void in terms of a misguided interpretation, and undue extension, of the concept of air due to a slip of the estimation has an interesting parallel in Avicenna's *Risāla li-ba'd al-mutakallimīn ilā l-Šayḥ fa-ağāba-hum* (registered as an authentic work in GUTAS 2014^a: 446 under the title of *R. fī l-Wus'a* [Epistle on the Extension] and the *siglum* GP4): see AVICENNA 1953: 158.25-159.11. Cf. also AVICENNA, *K. al-Šifā'*, *al-Samā' al-ṭabī'ī* II.6, §11, ZĀYID 1983: 117.1-5. For the quotation of the relevant passages and a discussion cf. LAMMER 2018: 327-328 and fnn. 70-71.

IN THE ESTIMATIONS^{1,2} | Arabic *fī l-awḥām*^{1,2}, Latin *in opinionem eorum*¹, *in opinionibus*².

IS PLANTED | Arabic *yanjarisu*, Latin *radicavit*.

THE SUPPORTERS OF THE VOID | Arabic *arbāb al-ḥalā'*, Latin *auctores sentencie de inhanitate*. Cf. *supra*, §325 for the analogous expression *aṣḥāb al-ḥalā'*. The parallel passage from Avicenna's *Risāla fī l-Wus'a* concerning the theological misconception of air as void gives a further argument for the identification of the *arbāb al-ḥalā'* mentioned here (and the *aṣḥāb al-ḥalā'* of §325) with the Baṣrī Mu'tazilites, whose avowal of the existence of the void is by the way well-established in scholarship: cf. DHANANI 1994: 62-71. For a clear discussion cf. LAMMER 2018: 327 and fn. 70.

IT HAS AN INDIVIDUALIZED MEASURE | Arabic *la-hu miqdār^{um} maḥṣūṣ^{um}*, Latin *illi est mensura propria*.

SELF-SUBSISTING | Arabic *qā'im bi-naḥsⁱ-hi*, Latin *existens per se*.

DIVISIBLE | Arabic *munqasim*, Latin *divisibile*.

WE DO NOT INTEND [...] BY VIRTUE OF THE SIGN OF THE AIR | (1) The first argument given here against the void ultimately consists in denying that void, as described by its advocates, can actually be anything else than a body. The three features of measure, self-subsistence and divisibility attributed to the void by its supporters (in order to be able to conceive it) are indeed the same that characterize the body *qua* body, so that void would end up being a body – not visible, but a body nonetheless, much

like air.

IS WIDE | Arabic *yattasi'u*. In particular, the attribute of being extended and 'wide' is characteristic of the body *qua* body: cf. also *supra* the demonstration of the impenetrability of bodies and extensions in §§327-328. The Latin rendition is periphrastic: «et quod duo cubita verbi gracia huius inhanitatis possunt subintrare loco duorum cubitorum pleni, nec plus; si autem minus, non coequabuntur».

THE PURE NEGATION | Arabic *al-nafy al-mahḍ*, Latin *privacio vero pura*.

THE SECOND ONE [...] THEN THE ANTECEDENT IS IMPOSSIBLE | (2) The second argument advanced against the void is an application of one of the forms of the conjunctive hypothetical syllogism described *supra*, *Logic* IV, §46, coinciding with the so-called *modus tollens*: given a hypothetical proposition as first premise ('if *p*, then *q*'), and the denial of its consequent as second premise ('but not *q*'), the denial of the antecedent necessarily follows ('then not *q*'). Since moreover the consequent *q* is articulated into two parts (denial of rest and denial of motion in the void), the remainder of this paragraph and the following §330 are devoted to the demonstration of the impossibility of rest and movement in the void, respectively.

WE ONLY SAID THAT THE REST IN THE VOID [...] AFTER THE NATURE | Concerning this argument against rest in the void, and the following ones against movement in it (see *infra*, §330), Avicenna – and al-Ġazālī following him – build on Aristotle's well-known proofs of *Phys.* Δ [IV] 8. In particular, the remote origin of the present argument against the possibility of rest in the void due to the latter's homogeneity is in ARISTOTLE, *Phys.* Δ [IV] 8, 215^a19-22. For a series of parallel passages in Avicenna's works cf. LAMMER 2018: 405 and fn. 298.

HOMOGENEOUS | Arabic *mutaṣābiha*.

ANOTHER SUITABLE SPOT | Arabic *mawḍi' mulā'im*, Latin *alius locus conveniens*.

SEPARATION | Arabic *iftirāq*, Latin *discessio*.

[§330] D316.1-24

The paragraph presents two arguments against the possibility of movement in the void. This would be impossible (2.2.i) because of the homogeneity of the vacuum, which prevents from being able to conceive in it in any way a direction rather as opposed to another direction and (2.2.ii) because a medium with no density, such as void, would lead to untenable consequences (much like those caused by the supposition of a body devoid of 'inclination': cf. *supra*, §262). As opposed to other Avicennan *summae* – and namely the *Šifā'*, the *Naḡāt*, the *al-Ḥikma al-'Arūḍiyya* and the *al-Ḥikma al-mašriqiyya* – in the *DN*, and in this specific section of the *MF* following it, there is no mention of a further argument specifically addressed against circular motion in the void, which is added by Avicenna himself with respect to Aristotle's proofs against the void. This argument, which is known as the collimation argument, has been described by MCGINNIS 2007 and ZAREPOUR 2020: 388-392 with respect to the *al-Samā' al-ṭabī'i* of the *K. al-Šifā'* (and see also the brief mention that LAMMER 2018: 405 and fn. 299 makes of it in his survey of Avicenna's arguments against the void). Strikingly, such argument does not appear here in the *MF*, in what could be seen as its more natural context, but was rather expounded *supra* in *Metaphysics* I.6, §164, in the context of a refutation of the infinity of spatial extension (cf. *supra* the commentary to §164 for further details).

ONE OF THEM IS WHAT WE HAVE MENTIONED [...] THE VIOLENCE | (2.2.i) This is the counterpart regarding movement of the argument against rest in the void given *supra* (§329): cf. ARISTOTLE, *Phys.* Δ [IV] 8, 214^b32-215^a1, and see LAMMER 2018: 404 and fn. 297 for an explanation and a series of parallel passages in Avicenna (*al-Samā' al-ṭabī'i* II.8, §§9-10, ZĀYID 1983: 127.19-130.2; cf. also *Uyūn al-ḥikma* II.6, 23.13-24.15; *DN* III.9, 20.7-21.4; *al-Hidāya* II.1, 153.4-6; *al-Ḥikma al-mašriqiyya* III.10, 29.13-16). It pertains

specifically to the natural movement – case (a) – but it is said to apply «likewise» [] in the case of «violence» [] (b). In Avicenna, as well as in D-Altristotle (see in particular *Phys. Δ* [IV] 8, 215^a1-6), the separation of the case of violent movement with respect to the natural one is more clearly perceivable than in the *MF*: cf. the parallel passages provided in LAMMER 2018: 405 fn. 301 (*al-Samā' al-ṭabī'ī* II.8, §15, ZĀYID 1983: 132.7-13; *Uyūn al-ḥikma* II.6, 24.7f.; *DN* III.9, 21.2f.; *al-Hidāya* II.1, 153.5f.). THE SECOND ONE [...] NOT NECESSITATE [IT]? | (2.2.ii) The second, long argument against movement in the void is based on ARISTOTLE, *Phys. Δ* [IV] 8, 215^a24-216^a26. Cf. the explanation provided by LAMMER 2018: 405 («natural motions of natural bodies vary in speed in accordance with the density of the traversed medium. Since the void as a medium has no density, the comparison of the speed of a natural motion in the void to that in other media leads to absurd results») and the list of parallel passages he provides *ivi* at fn. 300 (*al-Samā' al-ṭabī'ī* II.8, §§11-14, ZĀYID 1983: 130.3-132.6; cf. also *Uyūn al-ḥikma* II.6, 24.8-15; *DN* III.9, 21.6-22.10; *al-Hidāya* II.1, 154.1-155.2; *al-Ḥikma al-maṣriqiyya* III.10, 30.6-18).

THINNER | Arabic *araqqa*, Latin *tenuior*.

BY VIRTUE OF [SOME] FLOUR | Arabic *bi-daḡiqⁱⁿ*, Latin *per farina*. The opposition is between the two concepts of «thinness» [Arabic *riqqa*, Latin *tenuitatis*] and «thickness» [Arabic *taḡāna*, Latin *spissitudinis*].

MORE SUBTLE | Arabic *alṭaf*, Latin *subtilior*.

OBSTRUCTION | Arabic *man'*, Latin

THE MOVEMENT [IN THIS MATERIAL] WOULD BE IN AN HOUR | If I interpret correctly what JANSSENS 2019: 115 (somewhat confusedly) writes, the example was recognized by him to be al-Ġazālī's addition. *Ivi*, fn. 118, Janssens adds a reference to Avicenna's *al-Samā' al-ṭabī'ī*, 117.1-4. For the argument on inclination [*mayl*], quite close to the present one, cf. *supra*, *Metaphysics* IV.b.1.4, §262.

[§331] D316.25-317.14

After the (Avicennan) critique of the merely estimative (and not rational) origin of the notion of void (§329), and the presentation of a set of (Aristotelian) arguments against the possibility of rest (§329) and movement (§330) in such a void extension, the present paragraph addresses four natural proofs against the existence of intracosmic vacuum: (3.a) the floating of a cup (assimilated to that of a ship); (3.b) the suction performed by the cupping tumblers of the medical copper; (3.c) the retainment of water in a clepsydra; and (3.d) the lifting of a mortar by means of an accurately predisposed long-necked bottle, or phial.

NATURAL MARKS | Arabic *min al-'alāmāt al-ṭabī'īyya*, Latin *de racionibus naturalibus*.

WHEN A CUP OF IRON [...] IMMERSSED IN IT | (3.a) JANSSENS 2019: 115, who renders the word *ṭās* («cup» in my translation, Latin *vas ferreum*) as 'finger bowl', notices that the example, relative to the reason why concave bodies in which water does not enter float, is an addition by al-Ġazālī. *Ivi*, fn. 118, he also admits not to have found Avicennan parallels for this example.

IS THROWN | Arabic *ulqīya*, Latin *prohiciatur*.

CLINGS TENACIOUSLY | Arabic *mutaṣabbīṭ*, Latin *h(a)eret adhuc*.

WOULD NOT SUPPORT IT | *lā yusā'idu-hu*, Latin *aer non consentiret*. The Arabic understood subject, made explicit in the Latin translation, of both this and the next sentence is the air.

THE RISE FROM ITS DOMAIN | I intend the «rise» [*su'ūd*] or elevation from the domain of the water.

IF IT SEPARATED FROM IT | That is, if the air «separated» [*infaṣala*] from the cup.

ADHERED | Arabic *istamsaka*, Latin *vellet adiungi*.

SEPARATING AIR | Arabic *munfaṣil*, Latin *separati* (intending the Arabic participle as a passive one).

THEY SINK | Arabic *rasaba*, Latin *submergeretur utraque*.

THE TUMBLER OF THE CUPPER [...] BEING CUPPED | (3.b) The example involves a reference to the medical practice of cupping, performed by a practitioner (the «cupper» [*hağğām*]) on a patient («the one being cupped» [Arabic *mağğūm*, Latin *hominis ventosandī*]) by means of an apt «tumbler», cup or glass [*kūba*]. The hot *kūba* exerts a «suction» [*maşş*], extracting [*tuhriǧu*] (in Avicenna's and al-Ġazālī explanation) the air, and thus attracting the skin of the patient. cursory references to the practice and to its possible relevance for Avicenna's natural philosophy are in LAMMER 2018: 408 («the related use of hot cupping glasses is a well-attested medical procedure in both Antiquity and the Middle Ages»), 411, 413 (attribution of the practice, or at least of a precise knowledge thereof, to Avicenna's disciple al-Ma'sūmī. LAMMER 2018: 413 also makes the important contention that «Bağdādī Mu'tazilites likewise referred to cupping glasses as well as to clepsydrae and phials in support of their contention that the void cannot exist», referring in turn to Ibn Mattawayh, *al-Taḍkira*, I.30, ed. GIMARET 2009: 50.13 ff. and 51.6-8, as well as DHANANI 1994: 76-80. The Latin translation of the beginning of the passage is problematic: «similiter fit in vase ventosa omino» (MUCKLE 1933: 140.22), since *ventosa* ('suction cup') looks like the translation of *kūba*, which must however also correspond to *vase* (*ventosa*, feminine, cannot be taken as an adjective for *vas*, a neutrum noun, and in that function would need to be corrected in **ventoso*, which looks however unlikely). The term *omino*, for its part, could be a corruption of the adverb *omnino*, or a more serious misreading for a voice of *homo*. Given the rendition of *mağğūm*, 'the one being cupped', as *homo ventosandus*, it would be reasonable to conjecture an original Latin text like **in vase ventosantis hominis*, which could have been very easily corrupted in the tradition due to its intrinsic difficulty.

CLEPSYDRA | Arabic *sarrāqa al-mā'* (lit. 'water thief, in the feminine), Latin *in vase illo, in quo retinetur aqua*. A description of the mechanism of the ancient and medieval device called in Greek κλεψύδρα is to be found in DHANANI 1994: 79 fn. 81: «The Arabic term *sarrāqatu l-mā'* meaning 'stealer of water' is an almost literal translation of the Greek *klepsudra* which literally means 'stealer of liquid'. This device was used to transport liquids. It had a wide body with perforations at the bottom and a narrow neck with an opening which could be plugged by the thumb. The clepsydra would be immersed in the liquid to be transported and then the opening at the top would be plugged. The liquid in the clepsydra could now be transported and upon unplugging the opening, would flow out». The earliest description of the device is attested in Empedocles, Fragment B100 DK; cf. DIELS 1914: 76-77; FURLEY 1957; TIMPANARO CARDINI 1957; ARATA 1997: esp. 72 fn. 28, who recalls the presence of the clepsydra in Simplicius' commentary on Aristotle's *Physics*. A parallel passage to the one of the *DN* (ed. MEŠKĀT 1952: 23.2-24.6) from which this *locus* of the *MF* derives is to be found in AVICENNA, *K. al-Šifā', al-Samā' al-ṭabī'ī* II.8 §20, ZĀYID 1983: 134.6-8 (see LAMMER 2018: 407):

The proponents of the void [*al-qā'ilīna bi-l-ḥalā'*] have reached the point of exaggeration in its case when they attributed to it an attractive or moving power [*quwwa ḡādība aw muḥarrika*], even if [this time] in another sense, so that they claimed that the cause for the water's being retained in the vessels which are called clepsydrae [*sarrāqāt al-mā'*] and its being attracted into the instruments which are called pipes [*zarrāqāt al-mā'*] is only the attraction of the void [*ḡadb al-ḥalā'*], and that it, first, attracts what is denser and, then, what is more subtle.

HOLDS TOGETHER | Arabic *yatamāsiku*, Latin *retinetur*.

BEING TURNED UPSIDE DOWN | Arabic *tankīs*, Latin *quamvis* [!] *convertatur vas ore inferius*.

IT WOULD HAVE TAKEN AS A SUBSTITUTE | Arabic *istaḥlafahū*, Latin. In keeping with the meaning of this verb, I have interpreted the following خلف as *ḥalaf* «substitute» rather than as *ḥulf* 'difference'.

LIKEWISE, THE LONG-NECKED BOTTLE [...] BY VIRTUE OF ITS LIFTING | (3.d) The common example involving a *qārūra* («long-necked bottle» or 'phial', as is often translated, Latin *vas vitreum*) which is discussed in the Arabic scientific milieu, and in particular also in Avicenna, is actually different than the one proposed in the *MF*, and in the *DN* as its source. As a matter of fact, while here the long-necked bottle

is able to lift a mortar to which it is carefully made adherent, in the more common version of the experiment one has to suck out air from the phial, then close its opening with a finger, put the phial under water and only then lift the finger: that which happens then, and which calls for explanation, is that water flows into the phial, thus rising against its common physical behaviour (water being one of the heavy elements in traditional Aristotelian physics). For this version of the experiment cf. Avicenna, *al-Samā' al-ṭabī'ī* II.9, §§20-21, ZĀYID 1983: 145.16-147.13; *al-Hikma al-mašriqiyya* III.10, 31.11-23 (LAMMER 2018: 407 and fn. 307); for the use of the example in Avicenna and in al-Fārābī see also DAIBER 1983: esp. 45. The same example is also discussed by Abū Rayḥān al-Bīrūnī (d. 1048) in his well-known correspondence with the young Avicenna (Avicenna and al-Bīrūnī, *al-As'ila wa-l-ağwiba*, 47.5-7); but in order to prove exactly the opposite as what is meant here, *i.e.* the existence of an intracosmic vacuum: cf. GRIFFEL 2011^a: 68 and fn. 85 (on the correspondence, see now also HULLMEINE 2019). GRIFFEL 2011^a: 68 fn. 86 also recalls that the same opinion was attributed to Abū Bakr al-Rāzī (d. 925 or 935) and references to this effect PINES 1936: 46-48, 79-80. While the two versions of the example – the widespread one and the more peculiar one of the *DN/MF* – might seem at first glance rather different, this is mainly due to the very concise style of the latter, which omits *in toto* the description of the actions – sucking out air, closing the opening with a finger – that must be performed on the *qārūra* in order to ensure its 'attractive' force. Once having supplied these necessary preliminary cares, both phenomena – the rising of water and the lifting of the mortar – can actually be accounted for through the same mechanism, thoroughly explained by Avicenna in *al-Samā' al-ṭabī'ī* II.9, §20, ZĀYID 1983: 146.6-11, tr. MCGINNIS and very clearly reconstructed by LAMMER 2018: 419-421. The core idea of Avicenna's mature account, which might also be the implicit background of the example provided in the *DN* and the *MF*, appears to be that sucking out air from the phial forces the remaining air to increase its volume, while the finger closing the neck prevents new air from entering the phial and thus restoring the original volume of the air there contained. Thus, the unnaturally expanded air tends to regain its natural volume by attracting water inside the phial (in the more common version of the story), or – as it seems legitimate to assume – by trying to attract within it a solid body outside of it (the mortar, in the version expounded by the *DN* and the *MF*), thus effectively lifting it when the phial itself is lifted.

NEATLY | Arabic *muhandam^{am}*, Latin *sapienter*. That is, with attention and precision, carefully.

MORTAR | Arabic *hāwun*, Latin *vas ferreum*.

ARTIFICES | Arabic *ḥiyal* (sg. *ḥīla*). In Avicenna's *Risāla fī aqsām al-'ulūm al-'aqliyya* [*Epistle on the Divisions of the Intellectual Sciences*] ed. 'Aṣī 1989²: 112.5-11, a '*amal al-ḥiyal al-mutaḥarrika* («art of the mobile artifices») is mentioned among the secondary subdivisions of mathematics. In al-Fārābī's *Iḥṣā' al-'ulūm*, Chapter 1, ed. BŪ MALḤAM 1996: 79-92, a '*ilm al-ḥiyal* appears as a subdivision of the '*ilm al-ta'ālīm*.

[§332] D317.15-end of page

Only at the very end of the discussion devoted to place does al-Ġazālī – who is following here closely the structure of the *DN* – give the solution to the original problem (cf. *supra*, §324), by presenting the Aristotelian definition of place as the correct one. In keeping with Aristotle's own method in the *Physics*, and with Avicenna's reworking of it in all his *summae*, the overall argumentative strategy consists here as well in proceeding by elimination of the unsuitable candidates to the role of place. Unlike Aristotle's text, where the four candidates are presented altogether at the beginning and then eliminated one by one, in the *DN* and the *MF* only the three wrong candidates – (a) matter, (b) form, and (c) extension – are presented at first (§325). While (a) matter and (b) form are immediately discarded (§325) on the basis of the aforementioned requirements of the notion of «place» (§324), the notion of extension and the linked one of void needed a longer refutation, achieved respectively

in §§326-328 (c.1) and §§329-331 (c.2). Having cleared the field of all unsuitable candidates, it thus remains to propose the fourth alternative, *i.e.* the Aristotelian notion of place as the inner surface of the containing body (d), which is necessarily the correct one because no other option has survived the process of elimination. Cf. LAMMER 2018: 381-382. The paragraph, and with it the entire First treatise of *Physics*, is then concluded with a brief note concerning the fact that the world altogether lacks a place, and a presentation of the reciprocal places of the elementary spheres within the sublunary world (for this aspect cf. again *infra* the end of *Physics* II, esp. §356).

WHAT IS FIRMLY ESTABLISHED | Arabic *mā istaqarra*. Cf. *infra* for Latin.

THE OPINION OF ARISTOTLE | Arabic *ra'y Aristātālīs*, Latin *quod aristoteles* [sic!] *statuit*. For the explicit nominal quotations of Aristotle in the *MF* (and the *DN*) cf. Introduction, §1.6.1 and Tables 8-9.

ON WHICH ALL HAVE AGREED | Arabic *huwa* [scil. *ra'y Aristātālīs*] *allādī aǧma'a 'alay-hi al-kull*, Latin *et omnes tenent*. Alongside with the preceding *istaqarra*, which designates the 'firm establishment' of Aristotle's opinion on place, this affirmation of universal agreement on said opinion seems particularly exaggerated from a historical point of view, since much of the post-Aristotelian discussion on place was actually a harsh critique of the notion of it as 'internal surface' proposed by Aristotle: cf. on this LAMMER 2018.

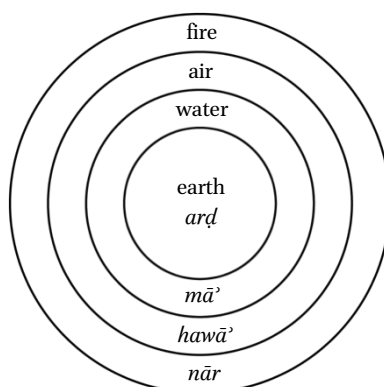
THE SURFACE OF THE CONTAINING BODY [...] THE CONTAINED [BODY] | Arabic *sath al-ǧism al-hāwī, a'nī sath al-bātin al-mumāss li-l-mahwā*, Latin *superficies corporis continentis, scilicet, superficies concava in qua locatur contentum*. Cf. ARISTOTLE, *Phys.* Δ [IV] 4, 212^a6-6a: τὸ πέρασ τοῦ περιέχοντος σώματος <καθ' ὃ συνάπτει τῷ περιεχομένῳ>. Avicenna gives very faithful Aristotelian definitions of place not only in the *DN*, which is the direct basis of this Ġazālīan statement, but also elsewhere in his *summae*: cf. for instance *K. al-Naǧāt*, II.2.10, ed. DĀNİSPĀŽŪH 1985: 244.8f («the limit of the containing [body] in contact with the limit of the contained [body]», transl. in LAMMER 2018: 308).

THE FOUR AFOREMENTIONED MARKS | That is, the four features of «place» listed *supra*, §324. The Aristotelian definition of place as internal surface of the surrounding body is correct because it meets all those four requirements.

MATTER | Here: *hayūlā*.

AS FOR THE FIRE [...] ON THIS ORDER. | For the idea, on which the «order» [*tartīb*] here envisaged is based, that each element is the place for the subsequent and lower element in the series cf. ARISTOTLE, *De caelo* IV 3, 310^b8-16 (ed. GUTHRIE 1971: 346-347). For a representation of this structure cf. the following Diagram 10.

DIAGRAM 10. Standard places of the four elements in the sublunary world



Treatise II

[§333] D318.1-319.4

The beginning of the Second treatise of the *Physics* of the *MF* clarifies that the subject-matter of the discussion will now be the simple bodies. Before treating at large the main topic, *i.e.* the four sublunary elements, the present paragraph discusses the particular kind of non-composite bodies represented by the heavens. In contrast with Aristotle's emphasis on aether as fifth element (quintessence), no mention of it is made here (exceptions to this conspicuous absence are however to be found *infra*, *Physics* II, §351; *Physics* III, §362 and §370, and will be discussed at their place). Here, with an Avicennan move, al-Ġazālī's text rather states that the matter of each one of the skies is unique, just like the form of each of them. According to JANSSENS 2019: 115, the section corresponding to Dunyā's pages 318-319.18 – roughly corresponding to my §§333-334 – «might have been inspired by the opening lines of DN c. 13 (DN 27,4-5), but is more likely to have been composed by al-Ghazālī».

ON THE SIMPLE BODIES, AND ON THE PLACE SPECIFICALLY | È giusto tradurre avverbialmente *ḥaṣṣat^{an}*?

THE SUBDIVISION OF THE BODY [...] IS NOT CONCEALED | For the distinction between (A) «simple» [*basīf*] and (B) «composed» [*murakkab*] bodies cf. already *supra*, *Metaphysics* IV.a.3, §248. Here, a distinction of the simple bodies in incorruptible – (A.1) the skies – and corruptible – (A.2) the elements – is added.

IT WAS ALREADY SAID BEFORE [...] IN *METAPHYSICS* | For the indestructibility and incorruptibility of the skies cf. *supra*, *Metaphysics* IV.b.2.3, §§275-276 (see in particular the denial of their «tearing apart» [*inḥirāq*] in §276); for their circular motion see *Metaphysics* IV.b.1.2, §§252-255 (and *Metaphysics* IV *passim*) together with *Physics* I, §323; for their multiplicity and the differentiation of their natures cf. *Metaphysics* IV.b.3.2, §289; for their being moved by will cf. *Metaphysics* IV.b.2.1, §§270-271; and for the reconduction of that will to a soul capable of conception (*taṣawwur*; see here the corresponding verb «conceive» [*tataṣawwaru*]), rather than to an intellect, see *Metaphysics* IV.b.2.2, §§272-274.

WE ADD HERE TO THESE | Following Kurdī's reading *hahunā* (cf. BĠŪ 2000: 173,12), while Dunyā links the particle *hā* to the preceding verb *nazīdu*, as suffix pronoun.

THEIR MATTERS – I MEAN THEIR *HYLAI* – | Arabic *mawādd^e-hā, a'nī hayūlayāt^e-hā*, Latin *materie eorum scilicet, hyles eorum*. This is the sole case in the *MF* in which the two concurrent terms to designate matter – the originally Arabic *mādda* and the Greek calque *hayūlā* – are used together in the text, thus forcing a variation in my English translation (which normally selects «matter» for both Arabic words). The choice of *hylai* – as transliteration of the Greek plural ὕλαι – is motivated by the acknowledgment of the Arabic calque, however maintaining the original ending of the Greek word. With a similar aim of providing a complete version of the Arabic text, the Latin translators have interestingly transliterated the Greek ὕλη, however adding the case-ending of the nominative plural of the (Latin) third declension (-es) and thus effectively assimilating the word into technical Latin. The importance of this phrase as confirmation of the synonymous use of *mādda* and *hayūlā* in the *MF* is also remarked upon by ALONSO 1963: 235 fn. 4 *bis*, who translates *hayūlayāt* by means of the same Latinized term adopted by Gundissalinus («hyles», *ivi*).

COMMON | Arabic *muštaraka*, Latin *communicantes*.

JUST LIKE THEIR FORMS ARE DIFFERENTIATED | The proper formulation of the idea is added here by al-Ġazālī, but JANSSENS 2019: 115 and fn. 119 references the *De caelo et mundo* of the *K. al-Šifā'* for the notion that in the celestial bodies there is «no common matter to receive a form» (cf. ed. QĀSIM 1969:

30.16-31.3). For an interpretation of Avicenna's doctrine on the matter of the heavens cf. LAMMER 2018: 200: «It is important to realise that for Avicenna, there is no "form of aether" alongside the four sublunary elemental forms of fire, air, water, and earth. Thus, *neither do they consist of the same fifth element* (even though they consist of the same kind of prime matter as do also all sublunary elements) nor is any such element required for explaining the circular motion or the incorruptibility of the celestial bodies» (emphasis added). For the incorruptibility of the skies, indeed achieved without mention of aether, cf. *supra*, *Metaphysics* IV.b.2.3, §276; for their circular motion, likewise independent from the notion of aether, see *Metaphysics* IV.b.1.2, §§252-255.

IF THEIR MATTER WERE COMMON | *i.e.*, the matter of the skies.

INDIVIDUALIZATION | Arabic *taḥaṣṣuṣ*, Latin *apropriacio*.

BY CHANCE | Arabic *bi-l-itṭifāq*, Latin *casu*. Cf. the verb *ittafaqa* ('would happen') just *infra*.

[§334] D319.5-19

After the brief treatment of the simple bodies constituted by the heavens, the bulk of the Second treatise of the *Physics* is devoted to the other kind of simples, that is, the elements. This paragraph presents a table of contents of the following seven «allegations» concerning the elements, the elemental qualities, their mutual transformations and their relationship with the celestial bodies.

WE WILL ALLEGE | Arabic *naddaṭ* (or *naddaʿà*) (VIII stem of *daʿā*).

IT IS INEVITABLE [...] LIKE THE EARTH | (1) For the first allegation, concerning the four opposing qualities that characterize the elements, cf. *infra*, §§335-337. The Aristotelian characterization of the elements was added here by al-Ġazālī with respect to the corresponding place of the *DN*; JANSSENS 2019: 116 and fn. 120 says however that «it might have been derived from the *ʿUyūn*», referencing the edition by BADAWĪ 1954: 33.1-2 and 33.7-8. In the Latin translation the order of presentation of water and earth is reversed with respect to Dūnyā's Arabic text: «necessario dividuntur in calidum, siccum sicut est ignis, et in calidum, humidum, sicut est aer, et in frigidum, siccum, sicut est terra, et in frigidum, humidum, sicut est aqua» (MUCKLE 1933: 142.14-17).

THE HEAT, THE WETNESS, THE DRYNESS, AND THE COLDNESS ARE ACCIDENTS IN THEM, AND NOT FORMS | (2) For the accidentality of the elemental qualities cf. *infra*, §338.

IT IS CONCEIVABLE THAT THE FIRE TRANSFORMS [...] HEATS UP | (3) For the third allegation, which deals with the idea that the elements are susceptible of qualitative transformation, cf. *infra*, §§339-346.

THAT SOME OF THESE ELEMENTS ARE TRANSMUTED IN SOME OTHERS | (5) The notion that the elements are also susceptible of transforming into one another – «are transmuted» [*yanqalibu*] – is dealt with in the fifth allegation (and not the fourth, as one would infer from the order of presentation of the topics in this paragraph): cf. *infra*, §§349-350. The inversion in order in this preliminary table of contents is readily explained by a stylistical consideration, *i.e.* the greater ease of immediately connecting the elemental transformation (5) to the transformation of the elemental qualities (3). It is worth noticing, however, that the Latin translation follows the ordering of this table of contents also in the actual treatment of the topics, as opposed to Dūnyā's Arabic text: cf. MUCKLE 1933: 148.26-149.29 (Latin *sententia quarta* corresponding to Arabic fifth allegation, here §§349-350) and *ivi*: 149.30-150.22 (Latin *sententia quinta* corresponding to Arabic fourth allegation, here §§347-348).

THAT SOME OF THESE ELEMENTS [...] OVER IT | (4) The notion that the elements, as such, have no fixed measure is dealt with in the fourth allegation (cf. *infra*, §§347-348), intermediate between the two allegations dealing with qualitative and natural transformations of the elements.

THAT THEY RECEIVE AN INFLUENCE FROM THE CELESTIAL BODIES | (6) The sixth allegation, which concerns the elements' susceptibility of the influence of the skies – a specific case of the general influence of

the supralunary world on its sublunary counterpart – see *infra*, §§351-353.

THAT IT IS INEVITABLE THAT THEY ARE IN THE MIDDLE OF THE CELESTIAL BODIES | (7) The seventh allegation, concerning the place of the elements, is dealt with in §§354-356.

[§335] D319.20-320.14

(1) The first allegation, whose treatment starts in this paragraph, consists in determining four fundamental features common to all sublunary bodies – hotness and coldness, wetness and dryness – and in describing the secondary sensible characteristics deriving from them. In the present paragraph the four features, or primary qualities, are illustrated by means of their physical consequences. Moreover, the specifically tactile qualities produced by the four principal features – and specifically by dryness and wetness – are expounded (cf. also *infra*, *Physics* IV.2, §383).

TABLE 43. *Physical properties and tactile qualities deriving from the four primary qualities of the sublunary bodies*

	<i>primary qualities</i>	⇒	<i>physical properties</i>		<i>tactile qualities</i>	
1	WETNESS <i>ruṭūba</i> <i>humiditas</i>	⇒	frangibility <i>inkisār</i> <i>frangi</i>	'plasticity' <i>see infra comm.</i>	softness <i>līn</i> <i>levitas</i>	smoothness <i>malāsa</i> <i>applanatio</i>
2	DRYNESS <i>yabūsa</i> <i>siccitas</i>	⇒		'rigidity' <i>see infra comm.</i>	hardness <i>ṣalāba</i> <i>durities</i>	roughness <i>hušūna</i> <i>asperitas</i>
3	HOTNESS <i>ḥarāra</i> <i>caliditas</i> · <i>calor</i>	⇒	scattering <i>tafriq</i> <i>dividendo</i>	lightness <i>hiffa</i> <i>levitas</i> <i>see infra §336</i>		
4	COLDNESS <i>burūda</i> <i>frigiditas</i>	⇒	coagulation <i>ta'qīd</i> <i>constringendo</i>	heaviness <i>tiql</i> <i>gravitas</i> <i>see infra §336</i>		

HOTNESS | Arabic *ḥarāra*, Latin *calore* (*supra* also *caliditas*). As explained *infra* in this paragraph, «hotness» is defined in terms of the physical «scattering» (or separation or dispersion) [*tafriq*] of the parts of the body interested by heat. In the following §336, the attribute of «lightness» will be linked to hotness, as well (cf. *infra*).

COLDNESS | Arabic *burūda*, Latin *frigiditate*. As stated *infra* in this paragraph, and in perfect symmetry to the case of hotness, «coldness» is defined in terms of the physical «coagulation» [*ta'qīd*] of the parts of the body interested by the cold. In the following §336, the attribute of «heaviness» will be linked to coldness, as well (cf. *infra*).

WETNESS | Arabic *ruṭūba*, Latin *humiditate*. A thing is 'wet' when it is «easy» [Arabic *sahla*, Latin *facilia*] or «quick» [Arabic *sarī'a*, Latin (again) *facilia*] to «the reception of the shape» [Arabic *al-qabūl li-l-šakl*, Latin *ad recipiendum [...] formam*], as well as to its «abandonment» [Arabic *tark*, Latin *admittendum* (clear error of the Latin edition for *amittendum*)]. This quality can be perhaps summarized with terms like 'plasticity' or 'malleability' (see *supra* Table 43), although it is important

to notice that wetness does not only make a thing easy to mould in shape, but also easy to lose that shape (as opposed to what happens with a malleable metal such as gold).

DRYNESS | Arabic *yabūsa*, Latin *siccitate*. By contrast, a thing is ‘dry’ when it is «difficult» [Arabic *‘asira*, Latin] as for the reception and the abandonment of the shape (inflexibility or rigidity; see *supra* Table 43). This also translates as a difficulty in the reciprocal «conjunction» [Arabic *ittiṣāl*] of the parts of the dry substance, which can remain disaggregated even if «in reciprocal contact» [Arabic *‘inda al-tamāss*, Latin *cum sibi aplicantur*] (as opposed to what happens with any wet substance). For the association of these four fundamental features of the sublunary world to the four elements cf. the next paragraph (*infra*, §336).

LIKE THE DUST | For *turāb* used as synonym of *arḍ* cf. also *supra*, *Metaphysics* IV.b.1.1, §250.

SUSCEPTIBLE OF BLENDING | Arabic *qābila li-l-mizāğ*, Latin *receptibilia sunt commixtionis*. Cf. *infra*, *Physics* III.1, §§357-359.

INTERACT | Arabic *tatafā‘ilu*, Latin *ad invicem sint agenda*.

PROXIMITY | Arabic *muğāwara*, Latin *vicinitas*. The *muğāwara* is counterposed here to the mixture [Arabic, Latin *complexacio*].

FRANGIBILITY | Arabic *inkisār*, Latin *frangi*. The breakability of the physical substances is caused by the «force» [šadda] of the composition between wetness and dryness.

SOFTNESS | Arabic *līn*, Latin *levitas*. The Latin translation seems inaccurate, because the intended sense of the Arabic *līn* appears to be that of softness, as opposed to the «hardness» mentioned immediately afterwards. It might be important to notice, however, that while Latin *levitas*, with long *ē*, only indicates ‘lightness’, its homograph *lēvitas*, with short *ē*, means ‘smoothness’ – one of the possible senses of *līn*, better captured however by the Arabic *malāsa* (listed *infra* in the text among the tactile qualities produced by wetness). Since *malāsa* is rendered into Latin with the awkward and rather unusual form *applanatio*, it is reasonable to suppose that the Latin translators saw *līn* and *malāsa* as roughly synonymous terms – hence the difficulties they arguably experienced in the rendition of both words.

HARDNESS | Arabic *ṣalāba*, Latin *durities*.

THE NATURAL SMOOTHNESS | Arabic *al-malāsa al-ṭabī‘īyya*, Latin *applanatio naturalis*.

THE NATURAL ROUGHNESS | Arabic *al-ḥuṣūna al-ṭabī‘īyya*, Latin *asperitas naturalis*.

THE ROOTS | Reading *uṣūl*, in the plural, instead of Dunyā’s singular *aṣl*. The plural is not only grammatically more natural in the context, but is also attested by BĪĠŪ 2000: 174.13 and by the Latin translation (*radices*).

ARE ATTACHED TO THEM | Arabic *yalḥaqu-hā* or *yulḥiqu-hā* (in BĪĠŪ 2000: 174.13 more precisely in the feminine, *talḥaqu / tulḥiqu*), Latin *secuntur*.

THESE BODIES | Reading *ağsām*, as in BĪĠŪ 2000: 174.13, for Dunyā’s *aqsām*. The reading is also confirmed by the Latin translation, which has here *corpora*.

[§336] D320.15-321.10

The paragraph introduces the combination of the four fundamental qualities described above (§335) in order to determine the nature of the four Aristotelian elements (cf. also their anticipation *supra*, §334). Each element is defined by the concurrence of two qualities, that is, one among hotness and coldness, and one among wetness and dryness (Table 44). The elements may or may not be endowed with certain sensible qualities (Table 45). Hotness is associated with lightness, coldness with heaviness (see *supra*, §335 and Table 43).

TABLE 44. *The four elements, based on the combination of primary qualities*

	HOT	COLD
WET	air	water
DRY	fire	earth

TABLE 45. *Secondary sensible qualities the elements do not possess*

	ODOUR	FLAVOUR	COLOUR
FIRE			X (Lat)
AIR	X	X	X
WATER	X (Lat)	X (Ar)	
EARTH	X		

THE ODOUR | Arabic *rā'īḥa*, Latin [*sine*] *hodore*.

THE FLAVOUR | Arabic *ṭa'm*, Latin *saporem*.

THE COLOUR | Arabic *lawn*, Latin *calore* [sic pro *colore*]. For the psychological treatment of these sensible qualities cf. *infra*, *Physics* IV.2.1, respectively §384 (olfaction), §386 (taste), and §§387-392 (sight).

THE AIR HAS NO COLOUR | The Latin translation adds after these words a further denial of the coloration of fire, absent in the Arabic: «nec ignis» (MUCKLE 1933: 143.15). The statement of the Latin version is however in keeping with the affirmations provided in the specific treatment of the elemental sphere of fire, which is said to be colourless: cf. *infra*, *Physics* III, §363. The denial of the coloration of fire is maintained by Avicenna in his *K. al-Šifā', Meteorologica*: 71.4-14 (cf. LETTINCK 1999: 81) and it also appears in al-Kindī's *On the Cause of the Blue Color that is Seen in the Air in the Direction of the Sky, and is Thought to be the Color of the Sky* (ABŪ RĪDĀ (II) 1953: 103-108; cf. LETTINCK 1999: 275; and for al-Kindī's epistle see now ADAMSON 2006).

THE WATERS AND THE AIR HAVE NO FLAVOUR | Only the Arabic text gives the indication that water is devoid of flavour. Compare the Latin translation: «nec aer saporem» (MUCKLE 1933: 143.15-16).

THE AIR DOES NOT HAVE AN ODOUR, WHICH IS NOT IN THE STONE EITHER | While the Arabic text only denies that air and earth – *via* its subspecies «stone» – have an odour, the Latin text attributes the same feature to 'pure water': «nec aer, nec aqua pura, nec petra habet hodore» (MUCKLE 1933: 143.16-17). Globally, it seems that the Latin translators read an Arabic text quite different than Dunyā's edition in this passage, which thus appears a *locus criticus* worthy of further philological attention. For a *conspectus* of the differences see also *supra*, Table 44 in the introduction to this paragraph.

THE TACTILE QUALITIES | Arabic *kayfiyyāt malmūsa*, Latin *qualitates tactibiles*.

THE PRIMARY MIXTURE | Arabic *al-iḥtilāṭ al-awwal*, Latin *inter prima* (scil. *elementa*; likely misunderstanding of the Latin translation, which struggles also elsewhere on the rendition of the Arabic phrase: see in particular the commentary to *Metaphysics* V, §302). Cf. also *infra*, *Physics* III.2, §360.

LIGHTNESS | Arabic *ḥiffa*, Latin *levitas*. For the ambiguity of the Latin *levitas*, which is also used to translate the Arabic *līn* («softness») cf. *supra*, §335.

HEAVINESS | Arabic *ṭiqal*, Latin *gravitas*. For the opposition of the two notions of lightness and heaviness cf. also Table 43 in §335 *supra*, and the mention of the two concepts within the treatment of movement in *Physics* I, §323 (with lightness corresponding to upward, and heaviness to downward, motion: see also Table 42). Dryness and lightness/heaviness increase proportionally («in the same measure» [Arabic *kullamā*, Latin *quanto autem plus...tanto maior*]), so that the fire (hot-dry) is the lightest element, and the earth (cold-dry, see *infra*) is the heaviest one, while wet elements (air and water) have an intermediate status between lightness and heaviness.

TO GATHER TWO QUALITIES FOR EVERY BODY | The combination or 'gathering' [*iḡtimā'*] of two of the four

fundamental qualities in each simple element gives rise to four characteristic couples: «hot-dry» [Arabic *ḥārr yābis*, Latin *calidum siccum*] (= fire), «hot-wet» [Arabic *ḥārr raṭb*, Latin *calidum humidum*] (= air), «cold-wet» [Arabic *bārid raṭb*, Latin *frigidum humidum*] (= water), «cold-dry» [Arabic *bārid yābis*, Latin *frigidum... siccum*] (= earth). Cf. *supra*, Table 44. For Aristotle's original deduction of the number of the elements on the basis of the possible combinations of the four primary qualities cf. *De gen. et corr.* II 3, 330^a30^b7.

FARTHER REACHING | Arabic *ablaḡ*, Latin *in quorum ultimitate*.

THEREFORE, THE COMPOUNDS [...] TO THEM | The four elements represent the utmost degree of possession of the four fundamental qualities, in the aforementioned combination of two features per element. Thus, all the other compounds of the sublunary world are intermediate between the four extremes given by the elements, and they are the closer to the purity of their natures the hotter or colder, drier or wetter they are.

GETS CLOSE TO THEM | Arabic *yuḡāribu-hā*, Latin *est propinquius eis*.

[§337] D321.11-22

The paragraph, which concludes the First allegation of the Second treatise of the *Physics*, discusses the attribution of the primary quality of hotness to the air, giving what we would now call the evaporation of the water as a physical sign of the air's possession of it. However, there is no regular gradient of increasing hotness of the air from the earth up to the sphere of fire, but rather the intermediate air between the lowest and the highest portions is colder than the other two layers. In conclusion, the text shortly addresses the coldness of the earth, which is required by its manifest heaviness.

IT IS HELD | Arabic *ḥubisa*, Latin *tenetur*.

IT BECOMES HOT | Arabic *ḥamiya*, Latin

RISING | Arabic *mutaṣā'id*, Latin *ascendens*.

YES, WE PERCEIVE [...] ADJACENT TO IT | The coldness of the air of the lowest stratum of the atmosphere – the one «adjacent to our bodies» [*yuḡāwiru abdān^a-nā*] – is explained on the basis of an exhalation from water («vapours» [Arabic *abḥira*, Latin *vapores*]). For the layers of air and their respective degrees of moisture and warmth cf. *infra*, *Physics* III.2, §362. On the meteorological consequences of vapourous exhalations cf. *infra*, *Physics* III.3, §§364-369.

IT IS BLENDED | Arabic *yamtaziḡu*, Latin *commixti sunt ei* (the subject being the preceding *vapores*).

MIX UP | Arabic *ihṭalaṭat*. See *supra* for the Latin rendition.

TO THE EARTH | This portion of Arabic text is illegible in (my copy of) Dunyā's edition, and I have thus reconstructed the correct reading *li-l-arḍ* from BīḡŪ 2000: 175.4.

IS REDUCED | Arabic *taqullu*, Latin *minuitur*.

IT RISES | Arabic *tartaḡi*, Latin.

IS THE OPPOSITE | Arabic *tunāqiḍu*, Latin [*partem*] *contrariam*.

THEY ARE THE MOTHERS OF THE BODIES | Arabic *ummahāt*, Latin *matres*. For *umm*, «mother», in the sense of 'element' in Arabic and Hebrew cf. in the first place the preliminary indications given by WOLFSON 1947: 387; 390-391 and fn. 70. For some remarks on the oscillations in the Arabic terminology used to designate the (Aristotelian and Stoic) elements – but also in some cases their primary qualities (hot, cold, dry, wet: cf. *supra*, §§335-336 and *infra*, §338 for the discussion on Avicenna's sharp distinction between the two) –, including the case of the word *ummahāt*, cf. CRONE 2016: esp. 116 and fn. 34. The term *ummahāt* for 'elements' appears by the way well-attested in Šī'i theology: cf. for instance WALKER 1993: 54 and 58-59.

[§338] D321.23-322.21

(2) The second allegation states the accidentality of the four primary qualities of the elements, as opposed to the school of thought that sees them as (substantial) forms of the elements themselves. On the issue cf. STONE 2008; MCGINNIS 2013^a: esp. 86-89.

AS A GROUP BELIEVED | The «group» [Arabic *qawm*, Latin *quidam*] of those who maintained that the four primary qualities are substantial «forms» [*ṣuwar*] of the elements is probably to be identified with the line of interpretation which STONE 2008: 107 and fn. 41 traces back to Porphyry (see CAG IV.1, *Isagoge*, ed. BUSSE 1887: 9.16-18; *In Cat.*, ed. BUSSE 1887: 99.6-10), and which appears also instantiated, perhaps more to the point, by Philoponus (see CAG XIV.2, *In De gen. et corr.*, ed. HAYDUCK 1901: 271.3-2, where «fire qua fire» [τὸ πῦρ ἢ πῦρ] is said to be the ‘extremely hot’). Cf. MCGINNIS 2013^a: 86 and fn. 44. Cf. also *infra*, §340, for a further reference to a ‘group’ of philosophers having the same essential conception of the primary qualities of the elements.

BUT IF THEN THE FORM OF THE WATER [...] FOR THE REMOVAL OF ITS FORM | The passage gives further examples of the absurd consequences of considering the primary qualities with which the elements are endowed as the constitutive, substantial forms of the elements themselves. As a matter of fact, this would entail that cold elements be substantially destroyed by heat (instead of simply become hot, which is what actually happens, for instance in the case of water). Analogously, the nature of air held in the middle of a body of water – for instance in a submerged «skin» [*ziqq*] – would be suppressed due to its lack of the upward-moving lightness that (under the account of the opponents) would be constitutive of its substance.

A TRUE NATURE INHERING IN THE MATTER | Arabic *ḥaqīqat^{um} ḥāllat^{um} fī l-hayūlā*, Latin *quaedam creatura (!) veniens in hyle*. The Latin mistake *creatura* for *ḥaqīqa* clearly presupposes the misreading *ḥaliqa*. WHICH IS NOT PERCEIVED [...] FROM THAT NATURE | The Avicennan move made here by al-Ġazālī comes from the necessity of addressing the problems faced by the Peripatetic doctrine of mixture when it comes to explain the sensible properties (secondary qualities, such as colour and odour, or lightness and heaviness) enjoyed by the the blend (cf. STONE 2008: 107-108). As well clarified by Stone, Avicenna’s ‘solution’ to the problem largely consists in treating secondary qualities just as the primary qualities now reduced to the rank of mere accidents of the true (and occult) nature of the elements: «This problem is now solved, in a manner of speaking, by the fact that heat and dryness have no closer – and therefore no more distant – a connection with the true differentia of fire than do levity and bulk [...] This “solution,” however, alleviates the mystery as to why, say, water is heavy only by generating an equally intractable mystery as to why it is moist. Both are results of the same nameless occult faculty» (STONE 2008: 116-117). For examples of sensible qualities pertaining to the elements cf. also *supra*, §336 and Table 45.

[THE NATURE OF THE ELEMENT] IS ONLY KNOWN BY MEANS OF ITS ACTION | The true nature of the element – that is, its substantial form, which provides its differentia – is occult to us, and can only be known [*urifa*] by means of the «action» or effect [*fi’l*] it «produces» [*taf’alu*], i.e. the accidental sensible qualities of the element: cf. on this rather crucial issue (and Avicennan innovation) the enlightening remarks by STONE 2008: esp. 118-119.

INDEED, IT PRODUCES IN ITS BODY [...] AND A PROPER QUANTITY | Cf. the parallel passage in AVICENNA, *K. al-Šifā’, al-Kawn wa-l-fasād* 6, 129.15-130.1 (transl. STONE 2008: 117, modified):

Every one of the elements has a form by which it is what it is, and consequent to that substantial form are perfections [*kamālāt*] of the class [*bāb*] of quality, and of the class of quantity, and of the category of where. And there is proper to each one of them heat or cold [...] and dryness or moisture [...] and a natural measure of quantity, and natural motion and natural rest.

IN THE NATURE OF THE WATER [...] TO ITS NATURAL MEASURE | The elements have a natural measure to which their return, despite the fact that there is some «latitude» (MCGINNIS 2013^a: 89) to their measure – just like there exists some degree of latitude for their other qualities, which can vary without destroying the nature (substance, essential form) of the element itself. This argument as well is thus further proof for Avicenna's (and al-Ġazālī's) understanding of the primary qualities as accidental (and indeed for the Avicennan refusal to consider *any* given quality as constitutive or essential to the elemental bodies: cf. STONE 2008: 111). On the natural volume or size of physical substances cf. also the remarks by LAMMER 2018: 417-418.

IT RETURNS TO IT | I think it is better to interpret the subject of the sentence as referring to the coldness – and thus to read the Arabic verb in the feminine [*raddat-hā*], as in D-Alt, for the masculine of Dunyā's edition.

AS SOON AS THE ONE EXERCISING THE VIOLENCE IS INTERRUPTED | When the *qāsir* – that is, the body exercising the violent action – interrupts its action, the standard qualities of the elements come back to them, with what could be called an 'elasticity' of primary qualities.

BY COMPULSION | Arabic *qahr^m*, Latin *violenter*.

THEREFORE, EVERY ONE OF THESE FOUR [...] ARE ACCIDENTS | The conclusion of the paragraph restates the thesis of the accidentality of «the sensible qualities» [Arabic *al-kayfiyyāt al-maḥsūsa*, Latin *qualitates sensibiles*], to which belong not only the secondary sensible qualities like lightness and heaviness, or colour and odour, but also the four primary qualities of hot, cold, dry and moist.

[§339] D322.22-323.5

(3) The third allegation deals with the qualitative alteration of the elements. The example given is in particular the possibility of heating water up without it losing its nature of water. This engenders a discussion on the ways of producing heat in a body, which are (i) contact or contiguity with an already hot body, (ii) movement, and (iii) brightness.

ALTERATION AND CHANGE | Arabic *al-istiḥāla wa-l-taḡayyur*, Latin *conversionem, et permutacionem*.

THE HEAT CAN BE ORIGINATED FOR THREE CAUSES | The detailing of these three causes – (i) contact, (ii) movement, and (iii) brightness – is a Ġazālīan addition, as also stated in JANSSENS 2019: 116 («this idea is tacitly implied in DN c. 16, but not explicitly expressed»). For the analytic treatment of the three causes here distinguished (against the different explanation of them given by the opponents whose theses are presented in the following §340), cf. respectively *infra*, §§341-342 (first division (3.1) = (ii) heat by movement); §343 (second division (3.2) = (i) heat by contiguity); and §§344-346 (third division (3.3) = (iii) heat by brightness, seen as the assumption that luminous rays are hot).

IN THE CHURN | Reading *fi l-mimḥaḍ^d* as in BĪĠŪ 2000: 176.7 for Dunyā's في المحض. For the specific sense of *mimḥaḍ* (also in the feminine form *mimḥaḍa*) as «the vessel...or receptacle... [generally a skin,] in which milk is churned or beaten and agitated» cf. LANE: 2695^a s.v. Dunyā's textual choice, if it is not a mere misprint, might have been motivated by the fact that the Arabic root *mḥḍ* has indeed a primary sense connected to «milk that is pure» (LANE: 2692^b s.v. *maḥḍ*). The Latin rendition «lac masceatum» (MUCKLE 1933: 145.19, also confirmed by the reading of ms. Bernkastel-Kues, fol. 131th), although remarked upon by Muckle with a suspicious parenthetical *sic* (presumably because it is clearly not classical), might be the original one, as it can be explained in terms of a proto-vernacular form standing for classical Latin *mixtum*, in the sense of 'mixed', 'stirred' (or precisely 'churned') milk (compare the modern Spanish forms 'mezclar', 'mezclado' for 'to mix', 'mixed'), thus having quite precisely the meaning required by its – by the way rather technical – Arabic antecedent. In this

direction see also the explanation given by ALONSO 1963: 239 fn. 4-ter, where the Latin reading adopted (and directly attributed to the original translation by Gundissalinus, despite Muckle's edition actually displays a different text) is however *lac misculatum* (explained on the basis of an infinitive **misculare*, and precisely compared with Castilian *mezclar*). Alonso's Spanish translation of the Arabic refers however to the action of 'skimming' milk (Spanish 'desnatar') rather than churning it, and is globally far from literal: «como por ejemplo la leche que se calienta al desnatarla a causa del movimiento con que se bate» (ALONSO 1963: 239).

BRIGHTNESS | Arabic *ḍaw'*, Latin *luce*.

THE BURNING MIRROR | Arabic *al-mir'ā al-ḥarrāqa*, Latin *speculum adhurens*. Cf. *infra*, *Physics* II, §352 for a slightly more diffuse treatment of the same notion. For burning mirrors in the Arabic scientific tradition cf. RASHED R. 1990 (which focuses on Ibn Sahl, d. 1000) and the remarks on Avicenna's contemporary Ibn al-Haytām (d. 1039) in SABRA 1989 (II): xxxii-xxxiii and xlii-xliv; see also *ivi*: lvi for the distinction of optics proper from the technical analysis of burning mirrors; and *ivi*: lix, for the attribution to al-Kindī of two works concerning burning mirrors (cf. the list of writings in ADAMSON-PORMANN 2012: lix, numbers 227-228). Sabra consistently reports the Arabic *al-marāyā al-muḥriqa* (with the active participle of the IV form) as the name of these devices, so that the *ḥarrāqa* of this passage of the *MF* appears as an isolated exception; and indeed *infra*, in §352, the common *al-marāyā al-muḥriqa* is used in the *MF*, as well (the widespread form in Modern Standard Arabic seems to be, by contrast, the active participle of the I form, *ḥāriqa*). For another source of Arabic knowledge of the Greek theory of burning mirrors cf. the English translation of the Arabic version of Diocles' lost treatise Περὶ πυρέων in TOOMER 1976.

[§340] D323.6-21

The paragraph expounds the difficulties that the thinkers who deny the alterability of the primary qualities of the elements experience when it comes to explaining heating (or cooling) phenomena, and the alternative solutions they give to the three causes of heating detailed in §339 *supra*. Affirming that the elements cannot alter their primary qualities and remain themselves is tantamount to denying the accidentality of those qualities (cf. *supra*, §338).

A GROUP | Arabic *qawm*, Latin *quidam*. This «group» of thinkers is credited with the affirmation that 'cold' elements, such as water and earth, cannot heat up at all (without losing their own nature), while 'hot' elements, such as air, cannot cool down (failure to mention fire might be a rhetorical strategy used to prevent a self-weakening of the argument, given that cold fire appears indeed more difficult to picture than cold air). In the light of what preceded (§338), this seems precisely tantamount to the thesis – which can perhaps be traced back to Porphyry and Philoponus – according to which the elements 'substantiate in' (the terminology is in STONE 2008: 107) their primary qualities, which are thus constitutive and essential to them. Cf., in this regard, the reference to an analogous *qawm* of thinkers holding the doctrine of the formal (and thus substantial) status of the primary qualities in §338 *supra*.

INDEED, THEY HAVE APPARENTLY STRUGGLED WITH THESE DIVISIONS | Arabic *fa-takallafū li-hādīhi l-aqsāmī waǧh^{an}*. Alternatives in translation would include: «They were thus apparently reluctant [*takallafū*] about these divisions» or else «they have apparently taken upon themselves these divisions», due to the wide semantics of the Arabic *takallafa*. The Latin version: «et adinvenerunt modum quo probarent hoc» (MUCKLE 1933: 145.25) is far from literal and does not provide any hint as to the best meaning that should be given to the Arabic verb in this context. The rendition with the English 'struggle with', besides giving a clearer sense, allows however for uniform translation of the various

occurrences of the verb in this paragraph (cf. *infra*), and might thus be taken as the best translative solution.

DISJOINS ITSELF | Arabic *infaṣala*, Latin *separantur*.

DISGUISED | Arabic *mastūra*, Latin *opprimitur*. It is an interesting feature of Avicenna's qualitative physics that an elemental quality can become «disguised», and thus concealed, while being in principle always there.

THE HELP OF THE FIRE | Arabic *madad*, Latin *propter partes ignis vincentes*.

HAVING BEEN HIDDEN, NOT ANNIHILATED | Arabic *kamanat* (or *kaminat*), Latin *que fuerat oppressa, non remota*.

THE THING | Arabic *al-šay'*, Latin *lac*. The Latin reading *lac* [*vero non calefit per motum*] could be a reprise *ad sensum* of the preceding example of a thing heated through movement (churned milk, Latin *lac mascleatum*: cf. *supra*, §339). However, it is not impossible that the Arabic antigraph read *al-laban*, and that *al-šay'* is a corruption by trivialization of that original reading. It must be said however that a confusion of the two unpunctuated *rasm*s (اللين / الشيء) is not impossible also in the opposite direction (so that the Latin translators might have interpreted as *laban* an original undotted *šay'*, especially if the final *hamza* was written poorly in the antigraph). All in all, and despite the perfect acceptability of *šay'*/'thing', *laban/lac*/'milk' seems to me the *lectio difficilior*, worthy of further consideration in the making of a future critical edition of the *MF*.

A FINE [THING] | Arabic *latīf*, Latin

THEY APPARENTLY DID NOT SERIOUSLY APPLY THEMSELVES TO [UNDERSTAND] | Arabic *lam yuǧiddū waǧh^{an}*, Latin *ideo non invenerunt quomodo*.

THE CORRUPTION OF THEIR INFERENCE | Arabic *fasād istinbāt^h-him*, Latin *de destructione adinventionis eorum*. GUTAS 2014^a: esp. 214 technically translates the term *istinbāt^h* as 'discovery'.

[§341] D323.22-324.8

The paragraph presents the first division (3.1) concerning the origin of heat, which addresses critically the explanation given by the opponents presented in §340 *supra* concerning the production of heat through movement (ii). Their thesis that movement 'extracts' to the exterior particles of fire already present within the moving object is challenged by the empirical observation that moving substances (the melting lead of a thrown arrowhead; the water in a stirred skin) become homogeneously hotter, while their interior should become colder under the opponents' assumption.

BY VIRTUE OF THE TRANSFER OF THE HOT | Arabic *bi-ntiqā^h l-hārr^h*, Latin *cum ignis movetur ad exteriora*.

INDEED, WHEN THE ARROWHEAD [...] AS IT WERE | That «arrowheads» [Arabic sg. coll. *naṣl*] made of lead [Arabic *raṣās*, Latin *plumbea*] should melt when the «arrows» [Arabic sg. *sahm*, Latin *sagitta*] are shot seems of course very unlikely, as it would undermine the very purpose of shooting arrows (and of course the heat produced by the friction with the air is in no way as much as it would be needed in order to produce such an effect). The example reproduces however a rather curious Aristotelian idea about 'missiles' or 'projectiles' [Greek βέλη], which «burn so strongly that leaden balls are melted» [ἐκπυροῦται οὕτως ὥστε τήκεσθαι τὰς μολυβδίδας]: cf. ARISTOTLE, *De caelo* II 7, 289^a23-26. The peculiar notion that leaden balls could melt in the air due to their movement was quite widespread in antiquity, as it is well attested at least in Latin sources (Lucretius, Ovid, Virgil, Seneca; cf. GUTHRIE 1971: 180-181 n. a and COCCOLUTO 2006: 187-189), albeit not having received as yet an entirely satisfying explanation as for its genesis and rationale.

ITS INTERIOR WOULD INCREASE IN COAGULATION | Arabic *azdāda in 'iqād^{an}*, Latin *augetur intus frigiditas, et remaneret sicut erat*.

IF IT BROKE, [...] BY VIRTUE OF THE MOVEMENT | The Latin translation appears to be based on a different Arabic text: «si contingeret frangi capud [*sic pro caput*] terebelli dum perforat» (MUCKLE 1933: 146.13); *terebellus* is a late Latin diminutive form of *terebra*, 'drill'.

ITS INTERIOR IS HOTTER THAN IT WAS BEFORE THAT | That is, before the arrow was shot.

[§342] D324.9-325.1

The paragraph details three objections to the account of the origin of heat by movement (ii) reaffirmed in §341 with the example of the molten leaden arrowhead. The objections aim to reinforce the opponents' thesis that it is not movement that produces the heat, but rather particles of fire already present within the arrowhead – objection (a) – or in the contiguous air – objections (b) and (c). The answers globally deny the influence of fire (either aerial or intrinsic to the object) in the heating of moving objects, thus reaffirming the idea that movement itself is a cause for it.

«THE MOVEMENT MADE HOT THE PARTS [...] THEY HAVE BEEN RENEWED» | (a) The first objection is immediately dismissed as consisting in «an admission of the alteration» [Arabic *i'tirāfⁿ bi-l-istihāla*] which the opponents had denied: indeed, if the particles of fire can change from cold to hot, likewise the water itself can become hot, without the need of postulating another source for its perceived heat.

THE MOVEMENT | Reading *al-ḥaraka* for Dunyā's *al-ḥarāra* ('the heat'), which would introduce an unwarranted tautology in the text. The reading «movement» is by the way confirmed by the Latin translation: «Si autem dixerint quod partes ignis que intus erant *motus* fecit calidas» (MUCKLE 1933: 146.17-19, emphasis added).

WHICH WERE IN THEM | Arabic *fi-hā*, neutral plural probably referring *ad sensum* to the «arrowheads» (*naṣl* is a collective noun) mentioned *supra* in §341.

THAT THEY WERE EXISTENT | That is, the parts of the fire.

«THE ARROWHEAD MELTS FOR THE HEAT OF THE FIRE WHICH IS IN THE AIR [...] MOVEMENT IN IT» | (b) The second objection argues that the fire which melts the arrowhead is (and already was) in the air. Besides the basic fact that air is in any case colder than «unmixed fire» [Arabic *al-nār al-ṣirf*; Latin *puri ignis*], the answer dismisses the objection on the basis of a general principle according to which the longer is the influence, the greater is also the produced effect [Arabic *al-mu'attir yuḥtāḡu ilā zamānⁿ ḥattā yu'attir^a*, Latin *Agens enim eget tempore ad hoc ut agat*]. The counterobjection thus points out that a swift and quick movement through the air like the one performed by the shot arrow should produce less heat (and thus also less melting) than the mere stay in the air – just like staying in the fire burns and melts objects much more than a mere passage through it. Burning by air is thus simply counterfactual, and should accordingly be dismissed.

THAT WHICH LINGERS | Arabic *lābiṭ*, Latin *quod diu moveatur*.

THE [MERE] BEING | Reading *kawn* [*al-muta'attar*] for Dunyā's *ka'in*. The Latin translation of the passage is quite free but aptly captures the sense of the argument: «Mora igitur eius in aere sufficiens esset ad comburendum illud, quam velox eius transitus per aerem» (MUCKLE 1933: 146.27-29). Given the variant reading transmitted by A – *yu'attiru* for the participle *al-muta'attar* printed by Dunyā – another way of salvaging the text might be to read *ka-anna yu'attir^a* («as though...»), albeit the syntax would remain in that case somewhat unusual.

THAN A NIMBLE MOVEMENT | Arabic *min ḥarakatⁿ ḥafffatⁿ*, Latin *quam velox eius transitus per aerem*.

«WHEN [THE ARROW] MOVES [...] IT WOULD [ALSO] PREVENT THE ENTRANCE». | (c) The third and final objection argues that the moving arrow melts because it actually attracts the particles of fire dispersed in the air, drawing them to and within itself. The answer goes that this can only happen

through the «pores» [Arabic *masāmm*, Latin *pori*] of the arrow, from which however the fire could just as well, or actually more easily, escape than enter. The paradoxical result is that, under the opponents' assumption, the flying arrowhead should actually become colder rather than hotter. Moreover, if the fires were prevented from leaving the arrow because of the movement (thus keeping it hot as per the alleged empirical observation of melting lead which is always taken for granted throughout the discussion), they should have been all the more prevented from entering it coming from the air, thus For the registration of the word *masāmm* in Avicenna and its Latin translations – alternatively *meatus* or *pori* – cf. the lexical entry in *Liber quartus de naturalibus*, ed. VAN RIET 1989: 126 n. 281.

IT ATTRACTS THE FIRES OF THE AIR TO ITSELF | Arabic *yağtadību nīrān^a l-hawā^x ilā naḥsⁱ-hi*, Latin *attrahit ignes aeris ad se*. The plural form of *nār*, *nīrān*, substitutes here the more commonly used expression «the parts of the fire» [*ağzā' al-nār*] (cf. also *infra*, §343).

TOLERATE | Arabic *yaḥtamīlu*, Latin *sustinent*.

THE ESCAPE OF THE FIRE | Arabic *inḥilāt al-nār*, Latin *igni [etiam facilius est] evadere*.

THAN ITS PENETRATION | Reading *min tawalluğⁱ-hā* for Dunyā's *توطئها*. The correct reading with *ح* instead of *ع* is witnessed by A, although I follow Dunyā's emendation of the suffix pronoun *-hi* (as transmitted by A) in *-hā*, since it refers to the feminine *nār*, «fire».

[§343] D325.2-5

(3.2) The second division concerns the origin of heat by contiguity (i), explained by the opponents as due to the detachment of some parts from the fire and to their intermingling with the parts of water, which *per se* remain as cold as they were before (see *supra*, §340). The possibility of this kind of intermingling is not denied, but is considered in some sense to be superfluous, because it admits at some level the alteration in heat of the water.

ITS DISAVOWAL IS NOT POSSIBLE | Arabic *lā yumkinu inkār^x-hu*, Latin *negari non potest*.

THE MIXING | Arabic *ḥtilāt*, Latin

ONE IS NOT FAR EITHER FROM THE FACT THAT IT TRANSFORMS IN ITSELF | Arabic *lam yab^uud ayḍ^m an yastahīl^e fi naḥsⁱ-hi*, Latin *tunc verisimile erit ipsam converti in se*.

ONCE THE PERMISSION [...] IN IT OF THE PARTS OF THE FIRE | JANSSENS 2019: 116 notices that the wording of this notion is quite different in the *MF* than in the *DN*.

[§344] D325.6-15

(3.3) The third division deals with the third and last cause of heat listed in §339 *supra*, i.e. heat from brightness. In §340, the opponents denying the elemental qualitative transformation had reframed this claim by stating that luminous rays do not accidentally make something else hot, but rather they are in themselves a hot body. This is tantamount to predicating the primary quality of hotness of light (or brightness) itself. The present paragraph details the first three reasons why the opponents' claim is false: (3.3.1) luminous rays do not veil or shield the things they hit (as opposed to what fire does); (3.3.2) they spread in every direction, while fire goes only upwards; (3.3.3) light is instantaneous in motion, while elemental movements always take time.

THE ALLEGATION THAT THE RAYS ARE A HOT BODY | Arabic *da'wà kawn' l-šu'ā' ġism^{an} hārr^{an}*, Latin *sententia quod lux est corpus calidum*.

THE FIRST ONE [...] AS OPPOSED TO THE FIRE | (3.3.1) If rays were hot bodies, they would «shield» – in the sense of ‘cover’, ‘veil’, or ‘screen’ – the bodies they hit, *i.e.* they would be opaque (just like the terrestrial fire we are wont to; on the transparency of the higher fire tangent to the sphere of the moon cf. *infra*, §363). On the contrary, experience tells us that luminous rays do quite the opposite – they do not cover or shield any object, but rather they «make things visible» [Arabic *yazharu l-ašyā'*, Latin *manifestat res*].

LIKE THE FLAME OF THE FIRE | Arabic *ka-lahīb' l-nār'*, Latin *sicut flamma ignis*. The Latin translation repeats ‘flame’ [Arabic *lahīb*] also before the two other occurrences of ‘fire’ [*nār*] in section (3.3.1).

THAT THEY SHIELDED WHATEVER THEY FALL ON | Arabic *an yastir^a* (or *yastur^a*) *kullamā waqa'a 'alay-hi*, Latin *ut obtegeret omne illud super quod caderet*.

THE SECOND ONE [...] IN EVERY DIRECTION | (3.3.2) Since hotness and lightness were closely related in what precedes (*supra*, §336), and since lightness equals upward movement, attributing hotness to rays would force them to move only upwards, while light actually spreads uniformly in the lighted environment. A similar difficulty to explain the diffusion of light is also addressed *infra*, §345 (3.3.5), although in connection with the alleged corporeality of rays rather than with their heat.

THE BRIGHTNESS SPREADS | Arabic *al-ḍaw' yatafaššā'*, Latin *lux vero dispergitur*.

THE THIRD ONE [...] WITHOUT ANY VARIATION | (3.3.3) Despite the enormously greater distance that separates the observer from the Sun with respect to the lamp, the light of one and the other luminous source reach the observer's eye at the same moment. This instantaneous kind of motion would not be possible if the rays of light were a hot body, because every (local) movement of what is made of elements must occur in a time: cf. *supra*, *Metaphysics* IV.b.1.4, §263. On the lighting of a lamp as instantaneous kind of motion (in the broader sense of alteration, not in the narrower one of local movement) cf. *supra*, *Physics* I, §316.

THE ECLIPSE OF THE SUN IS DISPELLED | Arabic *inġilā' kusūf' l-šams'*, Latin *a sole removetur totalis eclipsis*. For the example of the eclipse in the metaphysical context of the determination of God's (causal and not temporal) knowledge of future particulars cf. *supra*, *Metaphysics* III.b.6, §§212-213.

[§345] D325.16-326.1

Continuing the criticism of the opponents' theory about luminous rays as hot bodies, the paragraph presents two further reasons against it, which focus in particular on the alleged corporeality of the rays, rather than on their hotness: (3.3.4) if light was made of hot bodies, they should get trapped in a house with shut windows, but this is not the case; (3.3.5) bodily rays could not account for the continuity of the brightness diffused in the atmosphere, unless their interpenetration with the body of air is assumed.

THE FOURTH ONE [...] THE SEPARATION FROM IT | (3.3.4) Assuming that the luminous rays are hot bodies, they should be blocked within a lighted house, which then should remain bright even when its windows are closed; but this is apparently not the case. The opponents could further object that the darkness is a further attribute pertaining to the rays, but this would be tantamount to say that their brightness was accidental. At this point, for a principle of economy, the accidental reception of brightness can be predicated of «earth» itself (perhaps used here as short for ‘the sublunary world’, rather than as the name of the element ‘earth’), without bothering to postulate a further entity – *i.e.* hot bodies that are accidentally bright.

SHINES | Arabic *ašraqa*, Latin *illuminetur*.

FROM THE WINDOW | Arabic *min razūnat^m*, Latin *per fenestram*. The word *razūna* is not attested in WEHR, although it is registered in BEHNSTEDT-WOJDICH 2012: 77 (number 201, s.v. *Fenster*), as Egyptian form with the meaning of ‘smoke outlet’ («Rauchabzug»), from Persian *rūzan* (or *rawzan*; cf. STEINGASS 594, s.v. روزن: «*rozan, rauzan*, A window; an aperture in the middle of the house for allowing the smoke to escape, a louvre-window; (in fortification) a loophole, an embrasure»). LANE 1079^b attests for Arabic the forms *rawzan* or *rawzana*, with the meaning of ‘hole’, ‘perforation’, ‘aperture’ or ‘window’, and classifies them together as an «arabicized word» coming from Persian. The *razūna* of the *MF* could thus be also seen as a misreading for *rawzana* (with a well-possible inversion of و and ز). Further in the text, Duniyā prints the masculine form *razūn*, which once again could be emended in *rawzan* following Lane’s indication (less likely, but not to be excluded *a priori*, is the hypothesis that it might instead be a plural form, ‘windows’). Orthographic concerns aside, and given the clear Persian background of the word, its usage in the text of the *MF* is to be seen as a further and clear hint of the Persian origin of the text, also witnessed by a characteristic linguistical patina (for a more conspicuous and explicit Persian insertion in the Arabic text of the *MF* cf. *supra*, *Logic* III, §27). AND THEN IT IS SUDDENLY BLOCKED ALL AT ONCE | Arabic *tumm^a sudda faǧʿat^m dufʿat^m wāhidat^m*, Latin *tunc si subito claudatur*. The Arabic text strongly emphasizes the sudden, unexpected action of blocking the window, as this is crucial to the idea of ‘trapping’ the (allegedly bodily) rays within the house, thus avoiding their «escaping» [*infilāt*].

BY VIRTUE OF THOSE BODIES | The direct substitution of «bodies» [*aǧsām*] for ‘rays’ might seem sudden, and the Latin version attests indeed the double translation *a radiis (corporibus)*.

THEY MAINTAINED | Arabic *zaʿumū*, Latin [*si autem*] *dixerint*. The sentence introduces a counterobjection attributed to the opponents who believe that rays are hot bodies, to the effect that the light of such bodies might have faded due to the closure of the window (hence the resulting darkness). This is however immediately rejected as an unacceptable solution *ad hoc*. The phenomenon of lighting is thus actually produced by the earth’s «encounter» [*muqābala*] with, and the «separation» [*mufāraqa*] from, the sun, without the need to postulate further hot bodies.

THE FIFTH ONE [...] OVER THE FACE OF THE EARTH? | (3.3.5) The fifth criticism advanced against the corporeality of light rays denies that such a notion could account for the basic empirical observation that light continuously permeates the environment. To do so, bodily rays should interpenetrate with the body of air, but interpenetration of extended bodies is impossible: cf. *supra*, *Physics* I.2, §§327-328.

SCATTERED | Arabic *mutafarraqa*, Latin *dispersa*.

FORM AN UNINTERRUPTED SEQUENCE | Arabic *yatawāšilu*, Latin *coniunguntur*. Cf. also *infra* the rendition of the active participle of the same VI stem, *mutawāšila*, as «uninterrupted» [Latin *coniuncta, continuatur*].

OVER THE FACE OF THE EARTH | Arabic *ʿalā waǧhⁱ l-arǧ^l*, Latin *super faciem terre*.

[§346] D326.2-end of page

The paragraph, which concludes the third allegation about the qualitative alteration of the elements (started back at §339), lists two further reasons against the (hot) corporeality of luminous rays: (3.3.6) should they be bodies, they would either detach from the sun (and the other sources of light), thus diminishing their matter over time, or else they would remain in the luminous source, without having the possibility to stretch over earth (as they however do); (3.3.7) rays as bodies would be reflected by hard things (like stone), while they are in fact reflected by soft ones (like water). The conclusion states that luminous rays (and hence light) are an accident of bodies, just like heat, so that the connection of brightness and heat in the same body is once more accidental, and not essential.

THE SIXTH ONE [...] IT TRANSFERRED [ITSELF] TO IT | (3.3.6) The sixth reason adduced against the conception of rays as hot bodies is probably the most difficult and convoluted of the seven ones listed. It deals with the place which the allegedly bodily rays would assume, at first (a) considering the hypothesis that they may detach themselves from the sun and the other luminous sources – but this would lead to the exhaustion of said sources, which is seen as counterfactual –, and then (b) considering the opposite idea that the luminous rays are always in and with the sun. This leads however to further difficulties concerning their presence in the air or conversely on earth, because if earth is illuminated such bodies should only be on it, while air should be devoid of them; but air cannot in turn be devoid of them, because otherwise a body moving in the air would not be illuminated by luminous rays (another counterfactual). The unspoken conclusion is presumably that the rays cannot have a place, and thus they cannot be physical bodies.

THEN THE ANSWER TO [THIS] HAS ALREADY COME BEFORE FROM TWO PASSAGES | Arabic *fa-qad taqaddama al-ğawāb ‘an-hu min mawḍi‘ayni*. The pericope of text presenting the twofold backward reference, up to the following «in its presence» [*fi muqābalatī-hā*], is not translated into Latin, due to a clear *saut du même au même* from the first to the second *fi muqābalatī-hā*.

WHERE WE HAVE SAID THAT [...] BEHIND THEM | Cf. *supra*, §344, criticism (3.3.1).

AND THAT THEY WOULD INTERPENETRATE THE BODIES OF THE AIR | Cf. *supra*, §345, criticism (3.3.5).

THE SEVENTH ONE [...] LIKE THE WATER | (3.3.7) The seventh criticism against the corporeality of rays argues that, were they bodily, they would not «reflect» [Arabic *in‘ikās*, Latin *reverberaretur*] on water – which, due to its wetness, is a soft material: cf. *supra*, §335 and Table 43 –, but rather on hard things such as earth (which is counterfactual).

THE BRIGHTENED BODY [...] OR OF THE CURVING | Light is an accident, and what is endowed with it («the brightened body») is able to transmit it to further bodies.

WHICH IS OPPOSITE TO IT | Arabic *yuqālibu-hā*, Latin *inter oppositum*.

DIAPHANOUS | Arabic *šaffāf*, not translated into Latin, which only reads: «cum fuerit inter ea corpus» (MUCKLE 1933: 148.21).

BY VIRTUE OF THE REFLECTION OR OF THE CURVING | Arabic *bi-l-‘aksī aw bi-l-in‘itāf*, Latin *propter reverberationem vel resultationem*.

WHENEVER THE THING RECEIVES [...] ANOTHER ACCIDENT | Just like light, heat as well is an accident, whose reception in a body is independent from light. The body which receives heat must be predisposed to it; independently, it might also be brightened (*i.e.* predisposed to the different accident of light or brightness). Cf. also *infra*, §351, for an important elaboration on this same notion.

[§347] D327.1-13

(4) The fourth allegation deals with the elements' susceptibility of increasing and diminishing in quantity without loss of their nature or substantial form (cf. also *supra*, *Physics* I.1, §320, and *Physics* II.2, §338, on the correlative notion of a non-fixated natural measure). The text adduces in particular some concrete physical examples for the accidentality of measure in matter, *i.e.* instances of natural materials increasing their dimension, or more specifically their volume, without losing *eo ipso* their nature. JANSSENS 2019: 116 qualifies this fourth allegation as «an elaborated version of the second part of DN c. 24 (DN 54,7 – 57)». In the Latin translation, the ordering of the fourth and fifth allegation is reversed with respect to the Arabic, so that the material of this and the following §348 is dealt with in Latin *sententia quinta*, while the subject-matter of the Arabic fifth allegation (*infra* §§349-350) is anticipated in Latin *sententia quarta*. This inversion is in keeping with the order of presentation of the topics in the 'table of contents' of this section, presented in §334 *supra* (cf. *ivi* the commentary

for Muckle's paging of the inverted allegations).

THEY RECEIVE | That is, the four elemental bodies.

WITHOUT THE ADDITION OF ANYTHING FROM OUTSIDE | Arabic *min ġayrⁱ ziyādatⁱ šayⁱⁿ min ħāriġⁱⁿ*, Latin *absque aliquo addito extrinsecus*. This specification clarifies that the accretion (and diminution) which is here at stake is certainly not physical growth or wilt, but rather rarefaction and condensation: cf. *supra*, *Physics* I.1, §§319-320. The example given is that of heated water (rarefied) and frozen water (condensed; contrary to this tenet, we now know however that the volume of solid ice is greater than that of liquid water, so that water when it freezes actually expands its volume).

ITS [STANDARD] EXTENT BEING [WHEN] IT IS TEPID | Arabic *wa-qadr^u-hu wa-huwa fātir^{um}*, not translated into Latin. For the idea that natural substances vary in quantitative measure as they do in other qualitative accidents, despite having some sort of natural measure attained in an intermediate state cf. also *supra*, *Physics* II.2, §338 (and see, for different aspects of the issue in Avicenna, STONE 2008: 111 and LAMMER 2018: 417-418). For an analogous example of rarefaction and condensation used to state the variability in size of the elements cf. also AVICENNA, *Ilāhiyyāt* IX.5, ed. QANAWATĪ-ZĀYID 1960: 413.

IT HAS ALREADY BEEN SAID BEFORE THAT THE MEASURE IS AN ACCIDENT IN THE MATTER | The accidentality of measure in «matter» [here: *hayūlā*] was already affirmed *supra*, *Physics* I.1.1, §320 (cf. also *Metaphysics* I.1, §109); cf. also *Physics* II.2, §338 (on the notion of a natural, but admittedly variable, standard measure of the elements).

STANDSTILL | Arabic *waqf*, Latin *semper stabilis*.

WE WILL NOW DRAW CONCLUSIONS | Arabic *nastadillu*, Latin *et hoc ostendemus iam*.

from the direct testimony [of the senses] | Arabic, Latin *sensibiliter*.

THE WINE SWELLS IN THE EARTHEN JUG | Arabic *fa-inna al-ħamr^a yantafihu fi l-dannⁱ* (reading *yantafihu* as in BIĠŪ 2000: 179.13 for Dunyā's *ينفتح*). Cf. also the Latin translation: «Vinum enim inflatur in langena» (MUCKLE 1933: 150.1).

UNTIL IT TEARS IT OPEN | Arabic *ħattā yušaqqiqa-hu*, Latin *adeo quod frangit eam*.

THE BULGY, LONG-NECKED BOTTLE WHICH IS CALLED 'CRIER' | Arabic *al-qumquma allātī tusammā al-šayyāħa*, Latin *olla enea* ('pot made of bronze'). For the example of the *šayyāħa* cf. also AVICENNA, *Išārāt*, II.24, transl. INATĪ 2014: 91: «Consider the case of the explosive sound of long-necked bottles [when placed over strong fire]», and see Inatī's remarks *ivi*: 194 fn. 31: «Text: *al-šayyāħa* (crying out or screaming). This is a reference to the explosion-like sound produced by such bottles if filled with water, completely sealed, and placed on a hot fire. Though no fiery particles enter them, the liquid in them becomes very hot and undergoes a qualitative change, contrary to the objector's view». Cf. also GOICHON 1951: 299 fn. 2. While in the text of the *Išārāt* the concrete example of the 'crier' appears thus to be used in order to explain heating without the necessary involvement of particles of fire (thus being more in line with the material treated in the *MF* within the third allegation of *Physics* II, cf. *supra*, §§339-346), its role here is that of guaranteeing the possibility for the elements to get a different measure than their original one through mechanisms of condensation and rarefaction, *i.e.* without external aid in the form of addition or subtraction of material. In this direction, the hermetic sealing of the *šayyāħa* («when its top is tightened» [*idā kānat mašdūdat^a l-ra'sⁱ*]) has not, in the first place, the task of preventing the entrance of fiery particles as sources of heat (as in the *Išārāt*: cf. however *infra*, §348), but rather serves to guarantee the absence of *any* intrusion of material from outside, thus showing that if the device explodes in its characteristic sound, or directly «breaks» [*inkasarat*], this happens because the water inside it has increased its volume all by itself, without any addition from outside.

[§348] D327.14-328.5

The paragraph presents two main objections to the doctrine of the accidentality of measure of the elements (*i.e.* to the idea that elemental bodies can change their size without losing their nature), addressed in particular against the demonstrative value of the example of the bulgy bottle called *ṣayyāḥa*, advanced in the preceding §347. (a) The first objection states that the device might break due to the entrance of fiery particles in it, while (b) the second one attributes to the upward movement of the fire the breaking itself. Both objections are rejected, and the accidentality of measure is conclusively reaffirmed.

«MAYBE [THE WATER] GOT BIGGER [...] WOULD NOT HAVE BROKEN» | (a) The first objection argues that the volume of the water contained in the *ṣayyāḥa* may have increased not for the expansion of water itself, but rather for the entrance in the vessel of fiery particles from outside (on this cf. *supra*, §347, for a partially parallel argument taken from Avicenna's *Iṣārāt*). The answer seems to echo the one given *supra*, §342, when discussing objection (c) against the origin of heat through movement (3.1). There as well, as a matter of fact, one of the arguments provided against the entrance of fiery particles in the heated object was that the presence of «pores» would likewise necessitate the exit of particles from the arrowhead. Likewise, assuming the entrance of fire in the *ṣayyāḥa* would mean to allow for the exit of water from it. If that were the case, however, the lost and added particles would be equivalent in volume, thus leading to the counterfactual and unwanted consequence that the vessel would not have broken.

«THE FIRE SEARCHED FOR THE UPWARD DIRECTION [...] IS RIPPED OPEN» | (b) The second objection against the increase in volume of the water tries to explain the breaking of the *ṣayyāḥa* by means of the upward movement of the fire. The answer retorts that in this case the «vessel» [*ināʿ*] would have been lifted upwards, following that motion, rather than being broken. Moreover, if the responsible of the breaking were the fire, every part of the *ṣayyāḥa* touched by it should break, while the device actually breaks in one single spot. This is readily explained on the basis of the pressure building inside the vessel due to the expansion of water, which finally breaks the bottle in its weakest point, wherever this is (that is, independently from the position in which the fire actually touches the boiling device).

THE LIFTING IS SOMETIMES EASIER THAN THE BREAKING | Arabic *rubbamā yakūnu l-rafaʿu aṣḥabū min al-kasr*, Latin *fortassis enim facilius est vas sursum elevari quam frangi*. The passage reinforces the main argument against the objector, anticipating a possible counterobjection to the effect that fire actually does not lift the container because, in fact, this always breaks before being lifted. However, in the case of a very strong but very light recipient its lifting should intuitively be easier than its breaking, and nonetheless the vessel – if anything – invariably breaks, and never levitates.

THE WATER EXPANDS IN ALL SIDES | Arabic *al-māʿ yanbasītu fī ḡamīṣ l-ḡawānīb*, Latin *aqua diffunditur ad omnes partes*. The expansion of a simple body like water is homogeneous in every direction: hence, the weakest part of the container will break first, notwithstanding which part of it is touched by the fire.

IS RIPPED OPEN | Arabic *yantafiqu*, Latin *rumpetur*.

THEREFORE, THE MEASURE [...] OF WHAT IS DETERMINED | While «measure» [Arabic *miqdār*, Latin] is in itself a mere «accident» [Arabic *ʿaraḍ*], the «nature» [Arabic *ṭabīʿa*, Latin] underlying it does not cease. This is to say that the elements may indeed change in size without losing their substantial form. The nature of each element produces, moreover, a «proper accident» – in this case, a proper measure –, which is the standard size assumed by each elemental body when not subject to external forces. Should such forces affect the element, its size can vary, although not *ad infinitum* (on the tangencies of this doctrine with the already Aristotelian and then Avicennan theory of the *minima*

naturalia cf. MCGINNIS 2013^a: esp. 81-83).

[§349] D328.6-329.3

(5) The fifth allegation deals with the mutual transformation of the elements. JANSSENS 2019: 116 recognizes al-Ġazālī's addition of some concrete examples to Avicenna's text in this point. Globally, this and the following §350 list five examples of elemental transformation, the first two of which are discussed in the present paragraph: (5.1) the transformation of air in fire in the bellows of the blacksmith; (5.2) the condensation of air in water when a glass container is placed in the snow.

THE AIR IS TRANSMUTED IN WATER OR FIRE, AND THE WATER IN AIR OR EARTH | I read *fa-yanqalibu l-hawā^{xi} mā^{xn} aw nār^{an}, wa-l-mā^{xi} hawā^{xn} aw arḏ^{an}* as in ms. *Y*, for Dunyā's printed text, which has *arḏ^{an}* to replace *nār^{an}*. The list of four possible transformations is of course not meant to be exhaustive (see *infra* the specification «and likewise the remaining [elements]»), but, as Dunyā prints it, it neither corresponds to the transformations actually treated in what follows, since the passage air → earth would remain unspoken in the following discussion (while the transformations air → water (5.2), water → air (5.3), and water → earth (5.4) are all taken into account). The reading of ms. *Y*, also attested by *A* and by the Latin translation, allows on the contrary to have all the items of this preliminary list covered in the actual discussion (since the passage air → fire (5.1) is the first one discussed *infra* in this paragraph). The Latin translation of this excerpt reads: «Aqua enim convertitur in aerem, et terram; aer vero in aerem et ignem», with an inversion of the two couples (transformations of water before transformations of air) with respect to the Arabic text of Dunyā's edition and of mss. *A* and *Y*. Moreover, the Latin text speaks of a transformation of air into itself, which cannot be right. In the light of the concordant readings of Dunyā, *A* and *Y*, the most reasonable solution would seem to emend the second part of the text in «aer vero in *aquam* et ignem», although the inversion in order with respect to the Arabic *vulgata* would still remain unexplained. This not straightforward textual situation is summarized in the following Table 46.

TABLE 46. *Textual comparison for the elemental transformations in the Arabic-Latin tradition of the MF*

	Dunyā	A	Y	Lat
1	air → water <i>al-hawā' → mā^{xn}</i>	air → water <i>al-hawā' → mā^{xn}</i>	air → water <i>al-hawā' → mā^{xn}</i>	air → air [!] [3] <i>aer → aerem</i>
2	air → earth <i>[al-hawā'] → arḏ^{an}</i>	air → fire <i>[al-hawā'] → nār^{an}</i>	air → fire <i>[al-hawā'] → nār^{an}</i>	air → fire [4] <i>aer → ignem</i>
3	water → air <i>al-mā' → hawā^{xn}</i>	air → water <i>al-hawā' → mā^{xn}</i>	water → air <i>al-mā' → hawā^{xn}</i>	water → air [1] <i>aqua → aerem</i>
4	water → earth <i>[al-mā'] → arḏ^{an}</i>	air → fire <i>[al-hawā'] → nār^{an}</i>	water → earth <i>[al-mā'] → arḏ^{an}</i>	water → earth [2] <i>aqua → terram</i>

A GROUP HAS ALREADY DISAVOWED THIS | Arabic *wa-qad ankara ḥādā qawm^{an}*, Latim *quamvis quidam negaverint hoc*.

IN THE BELLOWS OF THE BLACKSMITHS | Arabic *anna minfaḥ^a l-ḥaddādīna [...] fi-hi*, Latin *in perflatorio enim fabri*. (5.1) The first elemental transformation described is that of the air heated by the inflation of the blacksmith's bellows, which gets ignited and is thus transformed into fire.

THERE IS INDEED NO MEANING FOR «FIRE» BUT «BURNING AIR» | Arabic *wa-lā ma'nā li-l-nārⁱ illā hawā^{am} muḥtariq^{am}*, Latin *nichil enim est ignis, nisi aer adhurens*. The direct identification of fire with burning air may appear too strong, since it could seem to deny the existence of fire as a substantially different element from air, while the global sense of the passage requires that difference to guarantee that the transition described is a proper elemental transformation. However, this description of fire as burning air is repeated *infra*, *Physics* III.2, §363. The transformation of air into fire was already hinted at *supra*, *Metaphysics* V, §300.

A MUG OF GLASS | Arabic *kūz^{am} min al-zuḡāḡⁱ*, Latin *vas vitreum*. (5.2) The quite long passage that follows describes examples of transformation of air into water, hinting at phenomena which we would now classify as instances of condensation.

WERE SET TIDILY | Arabic *rukkiba [...] tarkīb^{am} muhandam^{am}*, Latin *posuerimus*. Cf. *supra*, *Physics* I, §331, for an analogous usage of adverbial *muhandam^{am}* in the context of a description of an experiment to be performed with a certain accuracy (in that case, that of the *qārūra*).

IN THE MIDDLE OF THE SNOW | Arabic *fi wasaṭⁱ l-talḡⁱ*, Latin *in medio nivis*.

IN THE PLACE OF THE COLD ONE | That is, of the snow.

THAT, HOWEVER, IS NOT FOUND WITH THE HOT | What is meant is globally the phenomenon which is here at stake, *i.e.* the formation of water drops from air alone. In the place of this sentence concluding with a full stop, D-Alt has a shorter but very clear text: «and yet [the water] does not enter [in it] at all» [*wa-lā yadhulu al-battat^a*].

IN THE EXCESSIVELY COLD COUNTRIES | Arabic *fi l-bilādⁱ l-mufriṭatⁱ l-burūdatⁱ* (or: *mabrūda?*), Latin *in terris frigidissimis*.

THE COLD SEIZES THE CLEAR AIR CLOSE TO THE EARTH | Arabic *istilā' al-bardⁱ 'alā l-hawāⁱ al-ṣāfiyyⁱ al-qarībⁱ min al-arḍⁱ*, Latin *frigiditas vincit aerem clarum proximum terre*. The meteorological phenomenon here described, which seems to be identifiable with frost or hoarfrost – the atmospheric moisture which crystallizes on ground, plants, *et simm.* –, is not described *infra*, in the treatise largely devoted to meteorology (cf. *infra*, *Physics* III, §367 for the closest passage on the topic, dealing *inter alia* with snow and hail). Another candidate fitting the description of the text might be the meteorological phenomenon of rime ice, similar to frost but due to freezing (supercooled) fog.

WHEN IT IS SERENE | Arabic *waqt^a al-ṣaḥwⁱ* (literally 'at the moment of the cloudlessness'), Latin *in tempore serenitatis*.

[§350] D329.4-23

Continuing the discussion on elemental transformation started in the preceding §349, the text lists here three further examples of it: (5.3) the transformation of water into air (evaporation); (5.4) the transformation of water into earth, which happens when rain hits spots of the earth endowed with a particular 'petrifying' faculty; and (5.5) the transformation of earth (specifically stones) into water (alchemical liquefaction). The reason why all these mutual transformations (summarized in the following Table 47) are possible is that the matter of the four elements is common, while forms come and go due to different causes, ultimately referring to the Giver of forms.

TABLE 47. *Elemental transformations*

→	AIR	WATER	EARTH	FIRE
AIR	=	(5.2) condensation		(5.1) ignition
WATER	(5.3) evaporation	=	(5.4) petrification	
EARTH		(5.5) liquefaction	=	
FIRE				=

THE VAPOUR RISES AS AIR | Arabic *taṣā'ada l-buḥār^u hawā^{xi}*, Latin *tunc vapor ascendens de ea fit aer*. (5.3) The transformation of the water in air is apparent in the common phenomenon of evaporation; for a preceding description of it in the text of the *MF* cf. *supra*, *Metaphysics* IV.b.3.3, §291, where the mediation of the fire – mentioned here as well as a condition – is emphasized.

AS FOR THE TRANSFORMATION OF THE WATER IN EARTH [...] HAS ALREADY BEEN SEEN | (5.4) The fourth transformation described, that of water in earth, is quite atypical but bears an important structural role in the system of Avicennan philosophy expounded in the *MF*. As explained by FREUDENTHAL 1991: 55, as a matter of fact, that of the transformation of water into earth was a crucial problem to solve in order to be able to account, at a macroscopic level, for the emergence of dry tracts of land – the continents – in an Aristotelian physics: «[w]hile erosion and subsequent overflowing easily accounted for the transformation of land into sea, the converse change was generally postulated without its efficient cause being indicated». While what is here at stake is mainly a matter of mineralogy, the main points of Avicenna's solution to the problem of the existence of dry land and mountains will emerge in what follows (see *infra*, *Physics* III, §361, on why dry land can emerge from water; and §373, on the existence of an unctuous moisture called oleosity, fundamental for Avicennan petrology).

A PETRIFYING, COAGULATING FACULTY | Arabic *quwwa muḥağğira mu'aqqida*, Latin *virtus indurans, et congelans*. Building on Aristotle's distinction of opaque (made of earth) and transparent (made of water) stones, Avicenna explains the formation of stones either through *tafḥūr* [Latin *conglutinatio*] of earth, or *ḡumūd* (cf. Latin *congelatio*, a term used however also to render the root 'qd of 'coagulation', as in this passage of the *MF*) of water. As FREUDENTHAL 1991: 58 puts it, and in perfect agreement with this passage of the *MF*, «congelation, the transformation of liquid into solid, is brought about...by a 'petrifying virtue', instanced by the alchemists' Virgin Milk, which is 'compounded of two waters which coagulate into a hard solid'»; cf. AVICENNA 1927: 18 ff. (English translation); 71 ff. (Arabic text).

LIQUEFACTION | Arabic *dawabān*, Latin *per dissolutionem*. (5.5) The alchemical transformation of hard stones into liquid accounts for, and exemplifies, the elemental transformation of earth into water. As seen *supra*, the alchemical background is also useful for explanation of the opposite passage from water to earth (5.4).

IN THE EXPERIENCE OF THE DISCIPLINE OF ALCHEMY | Arabic *fī l-tağribatⁱ min šinā'atⁱ l-kīmīyā'*, Latin *ex magisterio alquimie* (Hispanicized spelling). For the notion of *tağriba*, key in Avicennan empiricism, cf. *supra* the commentary to *Logic* IV, §62. For the analogies between (al)chemical explanations and the problem of the emergence of dry lands from the sphere of water cf. FREUDENTHAL 1991 and

FREUDENTHAL 2018. For the treatment of that problem in the *MF* cf. *infra*, *Physics* III.2, §361.

THE MATTER [OF THE FOUR ELEMENTS] IS COMMON | For the commonality of the elements' material substratum cf. *supra*, *Metaphysics* V, §298. For matter, the term there used is *mādda*, while here *hayūlā* is employed.

IS PERFECTED | Arabic *tatimmu*, Latin *perficiatur*.

[MATTER] DIVESTS ITSELF [...] IN THE [FORM OF THE] AIRNESS | Arabic *fa-taḥla'u šurat^a l-mā'yyatⁱ wa-talbasu l-hawā'yyat^a*, Latin *sic expoliatur forma aquea et infunditur ei forma aerea*. For the metaphor of matter clothing itself in the form (root *l-b-s*), here emphasized also by the opposite action of 'slipping it off' or 'divesting oneself of it' (root *ḥ-l-ʿ*), cf. also *supra*, *Metaphysics* IV.b.2.3, §276; *Metaphysics* V, §299.

THEN, THE FORM OF THE AIRNESS [...] FROM THE BESTOWER OF THE FORMS | The example employed is once again that of evaporation, discussed *supra* in §349 and already present in *Metaphysics* IV.b.3.3, §291. For a short but accurate explanation of the process of elemental change endorsed by Avicenna and reported here by al-Ġazālī cf. MCGINNIS 2013^a: 82-83 (and see also STONE 2008: 117-118). In AVICENNA, *K. al-Šifā', Ilāhīyyāt* IX.5, ed. QANAWATĪ-ZĀYID 1960: 411, a phenomenon of substantial change very similar to that which is here at stake is discussed, although the elemental transition there described is the fairly unusual one from water to fire, rather than the far more typical transformation of water into air (also used as paradigmatic example by MCGINNIS 2013^a: 83). For the role of the bestower, or giver, of forms [Arabic *wāhib al-ṣuwar*] in the attribution to aptly predisposed matter of the fitting substantial form cf. AVICENNA, *K. al-Šifā', al-Afāl wa-l-infi'ālāt* II.1 (QĀSIM 1969: 256.9-11; English translation in STONE 2008: 117, who however identifies the *wāhib al-ṣuwar* there mentioned with God, rather than with the tenth moving intellect – cf. *supra*, *Metaphysics* V, §302); *al-Samā' al-ṭabī'ī* 1.10 (MCGINNIS 2009: 65, §3); *Ilāhīyyāt* IX.5 (for the role played by the bestower of forms cf. esp. ed. QANAWATĪ-ZĀYID 1960: 413). JANSSENS 2019: 116 fn. 121 further quotes a passage from Avicenna, *al-Kawn wa-l-fasād* (see QĀSIM 1969: 190.12-16). An elegant and enlightening explanation for the physical necessity of introducing the metaphysical role of the giver of forms in order to explain, *inter alia*, elemental change is provided by MCGINNIS 2013^a: 87-88: «[S]ince the existence of substantial forms cannot be explained in terms of any sensible or natural properties (nor can elemental change be explained in terms of any physical change with respect to those properties), the existence of substantial forms must be accounted for by some agent outside the physical order acting through a process of metaphysical causation or emanation. Avicenna dubs this agent the Giver of Forms (and sometimes Giver of Powers)». For the metaphysical background of this doctrine in the *MF* cf. *supra*, *Metaphysics* V, §§300-302 (esp. §302 for the first occurrence of the phrase *wāhib al-ṣuwar* in the *MF*), also for further bibliography on this crucial Avicennan notion.

[§351] D329.24-330.23

(6) JANSSENS 2019: 116 says that the sixth allegation, corresponding here to §§351-353, «combines DN c. 25 (elaborated) and c. 20 (very slightly modified)». The section globally deals with the sublunary reception of supralunary influences. The most apparent of these celestial influences come from the Sun and Moon, whose effect is linked to both mechanic phenomena – such as the tides – and biological events – such as the ripening of fruits. The most general and important effect of the stars is however illumination and, through it, the diffusion of heat on earth. On the general topic of the «astrologization» of Aristotelian causality between the upper and the lower world cf. *supra*, *Metaphysics* IV.b.1.6, §267 (and see FREUDENTHAL 2000).

THESE INFERIOR [THINGS] ARE SUSCEPTIBLE OF BEING INFLUENCED BY THE CELESTIAL [THINGS] | Arabic *hādihi*

l-sufliyyāt qābilat^m li-l-ta'attur^t min al-samāwīyyāt^t, Latin *hec inferiora recipiunt impressiones a celestibus*. For a clear exposition of the concept of *ta'attur* (and conversely also of *ta'tir*) in the context of a *divisio entis*, cf. *supra*, *Metaphysics* IV.a.1, §246.

THE MOST APPARENT OF THE STARS | Arabic *aẓhar^m l-kawākib^t*, Latin *ex omnibus planetis manifestiores*.

THE RIPENING OF THE FRUITS | Arabic *naḍġ al-fawākih*, Latin *maturitas fructuum*. For the notion of the ripening of fruits as brought about by the Sun cf. already *supra*, *Metaphysics* V, §299.

THE RISING OF THE SEAS | Arabic *madd al-bihār*. More precisely describing the phenomenon of tides, the Latin text adds a reference to the converse process of falling of sea levels: «et effluxus marium et refluxus eorum» (MUCKLE 1933: 150.26-27). Elegantly, the further occurrence of the word *madd* (which I translated as «rising [of the sea]») is rendered in Latin with the simple *fluxus* (without prefixes), used as an umbrella term for the couple *effluxus* / *refluxus*.

WHOSE DETAILED EXPOSITION IS MADE KNOWN IN THE PARTICULAR BOOKS | Arabic *yu'arrafu taḥṣīl^m-hā fi l-kutub^t l-ġuz'īyyat^t*. The Latin version «que cognoscuntur per scienciam cuiusque in singulis» (MUCKLE 1933: 150.28.29) appears to translate the text of D-Alt: *tata'arrafu min 'ulūm^t-hi muḥaṣṣila ġuz'īyya*. Dunyā's text is particularly interesting for the hints it gives in the direction of a properly encyclopaedic organization of knowledge, in the sense of an actual system of interrelated books, to which it appears customary to refer when an exhaustive treatment of a given topic is not possible in one's own work.

THE BRIGHTNESS, AND THEN THE HEAT BY THE MEDIATION OF THE BRIGHTNESS | Arabic *al-ḍaw' tumma l-ḥarāra bi-wāsiṭat^t l-ḍaw'^m*, Latin *lux et calefactio, mediante luce*.

THE SUN'S BEING HOT, [HOWEVER,] DOES NOT FOLLOW | D-Alt reads, perhaps more plainly: «it does not follow from that that the Sun is hot». Heat comes indeed to earth «by the mediation» [*bi-wāsiṭa*] of the Sun's and the Moon's brightness, but this does not imply that hotness directly predicates of the celestial bodies. For Aristotle's insistence on the stars' being made of aether and definitely not fire, which cannot then be used to explain their brightness and heat, cf. *De caelo* II 7 (ed. GUTHRIE 1971: 176-181; see esp. 179: «The heat and light which they [*scil.* the stars] emit are engendered as the air is chafed by their movement»).

THE SUN, WHEN IT HEATS UP [...] MOVING UPWARDS | The reason why it is not necessary that the Sun is hot, despite the fact that it does produce heat in the sublunary world, is that there is no necessary homology in genus between the effect and the cause. Indeed, the Sun also produces for instance the upward motion of evaporating water, but this does not entail that, in order to do so, the Sun itself should in any sense be moving upwards. Likewise, the Sun's heating action does not necessitate the actual hotness of the body of the Sun. This line of reasoning seems very akin to the methodological principle evoked by Avicenna in his *Physics* to avoid the unwanted consequence that, since body is in place due to its corporeality, than place is a body. Cf. AVICENNA, *al-Samā' al-ṭabī'ī* II.9, §12 (transl. MCGINNIS 2009 (I): 210, also quoted, with modifications, in LAMMER 2018: 351-352):

[...] when something requires a certain status [*ḥukm*] or relation [*idāfa*] to something because of some description [*wasf*] it has, the required thing need not have that description as well. So it is not the case that when the body needs certain principles (not inasmuch as it exists, but inasmuch as it is a body), its principles also have to be bodies. When the accident needs a subject inasmuch as it is an accident, its subject [does not have to be] an accident.

Mutatis mutandis, from the passage one can reasonably infer that it is not either the case that when something is hot, the principle of its heat has to be hot, as well. For a very clear formulation of the general principle which is here at stake, cf. also *infra* in this paragraph the statement according to which «it does not follow by necessity [*lā yulzimu bi-l-ḍarūrat^t*] that the effect of the thing is of its [own] genus [*min ġins^t-hī*]».

THE CELESTIAL [THINGS] HAVE A FIFTH NATURE [...] AS IT WAS SAID BEFORE | Although one could have expected the reference to be to the long-winded cosmological discussion of *Metaphysics* IV, the

relevant passage rather appears *Physics* II, §333, on the matter of the heavens. Since the thesis there expounded was clearly that each of the skies has its own, unique matter, different from that of all the other celestial bodies, the present reference to a «fifth nature» [Arabic *ṭabī'a ḥāmisa*, Latin *natura quinta*] – clearly reminiscent of Aristotle's concept of aether – must be taken with some caution. The remarks made by LAMMER 2018: 200 fn. 289 concerning Avicenna's doctrine of heavenly matter prove here as well useful for explanation: «When Avicenna mentions aether (*al-aṭīr*) or a fifth body (*al-ḡism al-ḥāmī*) in his writings, which he admittedly does (however rarely), then he takes this to be a collective name for those bodies that are engaged only in circular motion, i.e., as a name for the bodies of the supralunary region. Thus, neither does the heavenly region as a whole nor each of the heavenly bodies consist of an element "aether"; each one of the heavenly bodies consists of a matter and a form, and this form is not the form of aether but one of the unique forms (or souls) of the celestial bodies: the form of the Moon (in case of the Moon), the form of the Sun (in case of the Sun), and so on». For direct references to *aṭīr* in the *MF* cf. *infra*, *Physics* III.2, §362 and III.4, §370.

MUTUALLY LOVING, INTERWOVEN, AND MUTUALLY HATING | Arabic *muta'āšiqat^m muta'āqīdat^m mutabāḡīḡat^m*, Latin *quaedam sunt appetentia se, et quaedam repugnantia, et abhorrentia se*. The sense of the passage – whose wording has, at least in this introductory statement, a deceptively Empedoclean allure to it – is that different accidents can predispose the matter in which they inhere to one another, calling in some sense each other to existence. To be more precise, this is to say that the presence of an accident in a receptacle is able to produce in that receptacle the conditions for the emanation, on the part of the Giver of forms, of the form of a *per se* entirely independent accident. An analogous doctrine of independently existing qualitative accidents (light, heat...) was already presented *supra* at the end of §346.

IS ACCOMPANIED | Arabic *yulāzīmu-hā*, Latin *comitatur* (for Muckle's erroneously spelled *commitatur*). GIVES TO THE SUBJECT-MATTER ITS PREDISPOSITION | Arabic *yu'ṭī l-mawḡū^a isti'dād^a-hu*, Latin *parat aptitudinem*.

CORRESPONDS | Arabic *yunāsibu*, Latin *convenit*.

[§352] D330.24-331.22

Building on the previously achieved conclusion about the concatenated origin of the accidents – heat from brightness, movement from heat (§351) –, the paragraph recalls that bodily action can be performed not only with contact, by proximity, but also at a distance, by opposition. This is the way in which brightness is transmitted, without the need to postulate extended bodily rays through the diaphanous body (cf. *supra*, §§339-346). The paragraph is concluded by a brief explanation on how burning mirrors work (the concentration of brightness produces more heat).

BY VIRTUE OF THE CONTIGUITY | Arabic *bi-l-muḡāwarat^t*, Latin *per propinquitatem (vicinitatem)* (double translation). (a) Examples of the first kind of bodily action, which happens in proximity and «by virtue of the contact» [Arabic *bi-l-mumāssat^t*, Latin *tangendo*] are (a.1) the cooling of a thing performed by a cold object contiguous to it and (a.2) the movement imparted by the «wind» [Arabic *al-rīḥ*, Latin *ventus*] to the objects it touches. For bodily action by contiguity and contact in the case of heat cf. *supra*, §339 and §343. For an explanation of the meteorological phenomenon of wind cf. *infra*, *Physics* III.4, §370.

BY VIRTUE OF THE OPPOSITION | Arabic *bi-l-muḡābalat^t*, Latin *per oppositionem*. (b) Examples of the second kind of action, which can happen at a distance, are (b.1) the formation of a spot of green colour («greenness» [Arabic *ḡuḡra*, Latin *viriditatem*]) on a «white wall» [Arabic *ḡā'it^{an} abyat^t*, Latin

albo parieti] hit by sunlight due to the intermission of a green object (maybe green glass?), and (b.2) the reflection of images in a «mirror» [Arabic *mir'ā*, Latin *speculo*].

LIKE THE REFLECTION | Arabic *ka-l-'aks'*, Latin *per resultationem* (cf. *infra* for the same rendition used for *radd* – or perhaps for *in'ikās*).

WHILE, IF IT WERE TOUCHING [THE MIRROR], IT WOULD NOT NECESSITATE IT | Duniyā's text *wa-law kāna mimmā sālim yūġību* is unacceptable. I propose to emend it by following the reading of BĪĠŪ 2000: 181.20-21: *wa-law kāna mumāss^{am} lam tūġib-hu* (indeed, it can be said in some sense that an object touching the mirror is not properly reflected in it). The genesis of the error is very well explainable on a palaeographical basis, as a mere mistake of segmentation of contiguous words. Compare indeed the following texts, written without diacritics for *tanwīn* and *tašdīd*, and their extreme similarity (which would be even increased in the case of absence of dotting for letters, as well):

(1) ولو كان مما سالم يوجب

(2) ولو كان مما سالم توجهه

To remain closer to the acceptable part of Duniyā's text, it would not be impossible to read *lam yūġīb*, in the masculine and without suffix pronoun, although BĪĠŪ's text – with the feminine accorded to the preceding *šūra* – is of course more straightforward. A further confirmation of the necessity of the correction comes from the Latin translation, which reads here: «Quod non fieret, si se contigerent» (MUCKLE 1933: 151.16-17).

IN THE SAME WAY, THE OPPOSITION [...] SINCE THAT IS IMPOSSIBLE | This passage explicitly includes the phenomenon of vision within effects obtained 'by opposition', and not by contact. As such, it has a perfect parallel in the section of the *MF* devoted to psychology, and specifically to the external senses: cf. *infra*, *Physics* IV, §§387-388. There as well, as a matter of fact, the mechanism with which eyes see is functionally compared with the reflection of forms (images) in a mirror. Comparison with §387, in particular, allows to determine that the «bright [thing]» [Arabic *al-muḍī'*] here mentioned is to be taken as the pole represented by the subject of vision (eye, mirror), and not as its object. Otherwise, indeed, the two cases designated in the text as (i) and (ii) would be coinciding, since both would entail the detachment of something – a «part» [Arabic *ġuz'*] in case (i), a «form» [Arabic *šūra*] in case (ii) – from the seen/reflected object. Rather, much like what will happen in §387, the text is willing here to deny both (i) an extramissive – case (1.1.5.b) in §387 – and (ii) an intramissive – case (1.1.5.a) in §387 – theory of vision. Cf. *infra*, commentary to *Physics* IV, §387, for further information. THE COLOURED [THING] | Arabic *al-mutalawwin*, Latin *corpus coloratum*.

THE EXTENSION OF A PART FROM THE BRIGHT [THING] | Arabic *imtidād ġuz' min al-muḍī'*. The Latin translation misunderstands *al-muḍī'*, interpreting it as variation of the preceding *al-mutalawwin*: «quod aliquid decolorato [*sic pro* 'de colorato'] corpore extendatur ad aliud» (MUCKLE 1933: 151.20-21). For criticism of extramission theory cf. *infra*, *Physics* IV.2.1, §§390-392.

IT PREDISPOSES [IT] TO THE HEAT | Reading *ista'adda li-l-ḥarārat'* instead of *li-l-ḥarakat'* as in Duniyā. Cf. the Latin translation: «per causam adaptatur calori, et fit calidum, et deinde per calorem aliquando aptatur motui» (MUCKLE 1933: 151.26-27).

IT ASCENDS | Arabic *yatašādīqu*, Latin *ascendet*.

CONCAVE AND CONIC | Arabic *muqa'ara maḥrūta*, Latin *concauum [...] et in modum pyraminis* (sic pro *pyramidis*). For a previous mention of, and some bibliographical information on, burning mirrors cf. *supra*, §339.

BY VIRTUE OF THE THE REPERCUSSION AND THE REFLECTION | Arabic *bi-l-radd' wa-l-in'ikās'*, Latin *per resultationem et repercussionem*.

[§353] D331.23-332.7

Concluding the reasoning on the relationship between the brightness of the Sun and the warmth experienced on earth, the paragraph discusses the reason why summer is hotter than winter.

IS...CORROBORATED | Arabic *yaqwī*, Latin *fit fortior*.

WITH THE PERFECTION OF THE OPPOSITION | Arabic *bi-tamāmī l-muqābalatī*, Latin *propter perfectionem oppositionis*.

«PERPENDICULAR» | Arabic *‘amūd* (literally: ‘column’), Latin *perpendicularis*. At this point, MUCKLE 1933: 152.10 reports a small figure of two orthogonal lines (\perp). The illustration – already present in the Latin ms. taken as basis of Muckle’s edition, but absent in the Arabic tradition, at least as represented in Dunyā’s and Kurdī/Biğū’s edited texts – is so simple as to appear trivial, but it is actually analogous to a better attested diagram (cf. *supra*, *Metaphysics* I.1, §107, Figure 3), which is probably to be considered authorial. For a conspectus of the illustrations occurring in the textual tradition of the *MF* cf. *Appendix 2*. The perpendicular which is here at stake goes from the (centre of the) Sun to Earth (notably, to the plane tangent to the surface of the Earth in the point of intersection of the line with the sphere).

[§354] D332.8-333.18

(7) The seventh allegation states that each of the elements has one and only one natural place, necessarily internal to the celestial spheres. JANSSENS 2019: 116 affirms that the material here reworked combines DN §15 e DN §14, without the reference to «‘shape’» of the latter.

AS IT WAS SAID BEFORE CONCERNING THEIR RECEPTION OF THE RECTILINEAR MOVEMENT | For the rectilinear movement of the elements and their «relation» [*nisba*] to two directions (up and down) see *supra*, *Physics* I.1.3, §323 and Table 42.

CONTIGUOUS OR REMOVED FROM ONE ANOTHER | Arabic *mutağāwirāni aw mutabā’idāni*, Latin *sive propinqui sive remoti*. The textual situation of the pericope of text following this phrase is somewhat complicated. After this sentence, D-Alt reads *hakaḍā* («like this», «in this way»), which introduces a figure, reported by Dunyā within the philological note by means of which he accounts for D-Alt’s variant readings (and thus not considered by Dunyā to be part of the text). The figure represents four circles, coupled in twos, as follows.

FIG. *h*.

An analogous diagram is reported by Biğū 2000: 182.21; it does not appear, however, in either the Latin translation (which does not present any correspondent for *hakaḍā*, either), or ms. *Y* (which however has the introductory *hakaḍā*). A first problem with the figure as it is transmitted is that it does not represent two worlds (as the text would seem to imply), but four. Moreover, the two couples of worlds that the illustrator might have envisaged are not represented with a greater or smaller reciprocal distance – as the phrase *mutağāwirāni aw mutabā’idāni*, unanimously attested by

manuscripts and editions, appears to imply. Thus, the figure does not seem to properly illustrate the text, and this is why, following Dunyā's edition, the Latin text and *Y*, I have decided to omit it in my translation. The introductory formula *hakadā* in both *A* and *Y* (and in BīġŪ) seems however to imply the presence of some sort of figure. Supplying such a figure without recourse to wild guessing would however require a further and more complete inspection of the relevant codicological material. On the figures of the *MF* cf. *Appendix 2*.

IT WOULD BE IMPOSSIBLE BECAUSE BETWEEN THE TWO THERE WOULD BE AN EXTENSION | Reading *kāna muḥāl^{mn} li-anna-hu yakūnu bayna-humā bu'd^{mn}* instead of Dunyā's printed text: *fa-huwa muḥāl^{mn} an yakūna bayna-humā bu'd^{mn}*. As a matter of fact, the text with the causal *li-anna-hu* is attested in both mss. *A* and *Y*, as well as in the Latin translation: «quoniam tunc esset inter eos spacium» (MUCKLE 1933: 152.27).

AN EXTENSION WHICH IS VOID | The best attested form of the text – in *A*, *Y* and BīġŪ – is *bu'd^{mn} wa-huwa ḥalā^{mn}*, although Dunyā prints *bu'd^{mn} huwa ḥalā^{mn}*; the Latin translation *spacium quod est inhanitas* seems closer to Dunyā's text, although it might also be a swifter rendition of the version of the text with the prefixed *wa-*. Much like the Latin version, the English translation I propose, although closer to Dunyā's text, would be an acceptable rendition of the variant reading, as well.

AND THE VOID IS IMPOSSIBLE | For the refutation of the void cf. *supra*, *Physics* I.2, §§329-331.

WE HAVE ALREADY CLARIFIED [...] FROM OUTSIDE | Cf. *Metaphysics* IV.b.1.2, §§254-255.

HENCE, WE SAY [...] [SHOULD] SEPARATE FROM ANOTHER. | After having determined the necessity for the natural places of the elements to be intrinsic to the surrounding cosmos (7.1), the text goes on to demonstrate in section (7.2) that each of the elements has one and only natural place. This conclusion is achieved by means of a mental experiment, which presupposes the existence of two candidates *a* and *b* for natural place of water. Hypothesizing a certain quantity of water to be in a third place *c*, different from the two candidates, then the water would either (a) move entirely to *a*, or (b) entirely to *b*, or (c) part to *a* and part to *b*. Options (a) and (b) both demonstrate the existence of one and only natural place for water (which would then be respectively *a* or *b*), while option (c) must be discarded because water – and with it all the elements – is «simple» [Arabic *basīṭ*, Latin *simplex*] and «homogeneous» [Arabic *mutašābih*, Latin *consimilis*]. Since water is a homeomerous body, the movement that applies to the whole must also apply to each one of its parts, so that independent motion of a watery particle with respect to another is in principle impossible.

WOULD TEND | Arabic *yaqṣudu*, Latin *inclinaretur*.

THERE IS NO[THING] SPECIFIED | Arabic *lā muḥaṣṣa^a*, Latin *non est aliquid quod apropiet*.

[SHOULD] SEPARATE | Arabic *yufāriqu*, Latin *feri separacionem*.

[§355] D333.19-334.9

The paragraph mainly reformulates point (7.1) given before (§354), restating the conclusion according to which the elements – whose rectilinear movement logically requires the determination of two directions – must be internal to the skies – whose surrounding bodies provide the necessary frame for determining said directions.

IN SEPARATE SPOTS | Arabic *fī mawāḍi^{ān} mutafarriqat^{ān}*, Latin *separata in locis diversis*.

AND THEIR NATURE IS LEFT FREE | Arabic *wa-ḥulliyat wa-ṭab'u-hā*, Latin *dimiserimus ea sue nature*. Cf. *supra*, *Metaphysics* IV.b.1.4, §261, for an analogous, peculiar Arabic expression (and cf. also *Logic* III, §31). Despite the fact that the expression printed by Dunyā is not entirely perspicuous, the sense of the passage seems to be that the elemental body, subdivided by hypothesis in two different places, must be left free to move in whatever direction, since this free movement would show its 'nature' –

and hence also its natural place.

INTO THAT WHICH CALLS FOR THE DIRECTION, AND THAT WHICH BRINGS THE DIRECTION | Arabic *ilā mā yastadī l-ġihat^a wa ilā mā yufidu l-ġihat^a*, Latin *in id quod petit partem, et in id quod dat partem*. The body providing the direction – shortly *infra* also paraphrased with the participle of the same root, *al-mufid li-l-ġihat^a* [Latin *dantis partem / datorem partis*] – is the surrounding body of the skies. For the determination of the surrounding surface of a sphere as necessarily entailed by the perceivable rectilinear movements of the sublunary world cf. the rich discussion provided *supra*, *Metaphysics* IV.b.1-2, §§250-255.

THE PLACE OF THE UNIVERSE IS THE PLACE IN WHICH THE PARTS OF THE UNIVERSE GATHER | For Avicenna's notion that the universe as such does not have a place, and the connected issue that the motion of the outermost sphere is positional rather than local, cf. the information gathered in the commentary to *Metaphysics* IV.b.1.3, §258, and more particularly *Physics* I, §318. While §258 actually attributes to the furthestmost sky a local movement – thus going against Avicenna's elaboration on the topic –, §318 is much clearer in expressing the idea the outermost sphere moves positionally not in a place. On that basis, then, the universe should not have a place, in contrast with what al-Ġazālī's text seems to state here. A possibility to avoid any doctrinal tension would be to interpret the text in a totally different way, *i.e.* reading *al-kull* as meaning «each» rather than 'the whole', 'all' (and then «the universe»), thus referring the entire sentence to the bodies, rather than to the world. However, it seems to me that the *usus* of the *MF* would have then required the use of *kull wāhid* rather than the simple *al-kull*. The corresponding Latin text reads here: «Locus igitur totius est locus ad quem conveniunt omnes partes totius» (MUCKLE 1933: 153.16-17). Although *totus* is not a common way of expressing the meaning of 'the world' in Latin, the text as it is does not seem to allow at all for the partitive interpretation of 'each', which would have rather required a form of *quisque*. A further option would be to intend *al-kull* as related to the preceding occurrence of the same term, designating «all» the parts of the elemental body. In this direction, the passage would translate to: «Therefore, the place of all [the body] is the place in which the parts of all [the body] gather», with *kull* meaning 'whole'. This would also seem in keeping with the Latin translation, although it does not seem to add anything to what had already been said concerning the notion of natural place of an elemental body.

IT DOES NOT LEAD TO THE IMPOSSIBLE WHICH WE HAVE MENTIONED | Namely, the existence of a void extension between the two worlds whose existence is presupposed: cf. *supra*, §354.

IT IS [ALSO] INEVITABLE [...] [THAT WHICH BRINGS THE DIRECTION] | I take the passage to mean that the elements – *i.e.* «that which requires the direction» [Arabic *al-mustadī l-ġihat^a*, Latin *acceptor*] – are inevitably contained into one another, although they cannot escape the bigger place which the skies, in their complex, provide for the sublunary world. Although somewhat free with respect to the Arabic text, the Latin translation seems to imply an analogous interpretation of the passage: «Et necesse est, ut intra datorem partis, sit acceptor, quia non potest esse extra illum». For the reciprocal containment of the elemental spheres cf. *supra*, *Physics* I.2, §332 and Diagram 10; and see also *infra*, §356. D-Alt reads however *al-mufid li-l-ġihat^a* instead of *al-mustadī l-ġihat^a*, sign of an opposite interpretation of the direction of the containment: in this regard, the text would not remark on the reciprocal containment of the elemental spheres, but rather on the mutual inclusion of the celestial ones (which of course has a solid textual basis, as well: cf. *supra*, *Metaphysics* V, §297 and Diagram 8). Under this reading, however, it would be more difficult to explain the clause «while it is not permitted that it is external with respect to it [*hāriġ^{an} 'an-hu*]», because of course some skies (providers of directions) *are* indeed external with respect to others – the sphere of the Sun is for instance external with respect to that of the Moon –, while all the elements (as 'receptors' of directions) are on the other hand internal to them. Duniyā's reading allows on the contrary to interpret the suffix pronoun of *'an-hu* as referring collectively to the (unmentioned but implicit) *al-mufid li-l-ġihat^a*, *i.e.* heavens, with much benefit for the overall intelligibility of the text.

ARE DISTINGUISHED | Arabic *tatamayyazu*, Latin *discernantur* (sic pro *discernantur?*).

[§356] D334.10-end of page

The paragraph, which concludes the Second treatise of *Physics* (started back at §333), mainly reformulates point (7.2) treated *supra* (§354), reaffirming the necessity for the place of every simple body (*i.e.* element) to be one, in order to avoid the unwanted consequence of a differentiated physical behaviour for the parts of a single simple, homeomerous substance. With the preceding §§354-355 and *Physics* I, §332, this text forms a unified reasoning on the natural places of the elements, which in rigorous Aristotelian terms must be contained into one another – earth in water, water in air, air in fire (and fire in the concave of the sphere of the Moon). This understanding of the mutual place of the elements will also constitute basis for the difficulty concerning the emergence of dry land, directly treated *infra*, *Physics* III, §361.

THESE BODIES ARE SIMPLE | (i) The first «root» or principle upon which the argument for the determination of the elements' natural place is construed is the elements' simplicity. For the distinction between simple and composite bodies cf. *supra*, *Metaphysics* IV.a.3, §248; for the simplicity of the elements, which constitutes the premise of the entire second treatise of the *Physics*, cf. in particular the introductory statements of §333 *supra*.

EVERY SIMPLE BODY HAS A NATURAL SHAPE, WHICH IS THE SPHERE | (ii) For the «sphere» [Arabic *kura*, Latin *sphericam*] as the «natural shape» [Arabic *šakl ṭabīʿī*, Latin *figuram naturalem*] of the simple bodies cf. *supra*, *Metaphysics* I.1, §132 (within the treatment of figures and shapes as instances of the category of quality). *Iuxta Physics* II, §332, the skies are also simple bodies, just like the elements; and indeed, they are spheric, as well (cf. esp. *Metaphysics* IV.b.3.1, §287).

ONE [SINGLE] NATURAL PLACE | Arabic *makān wāḥid ṭabīʿī*, Latin *unum locum naturalem*. (iii) The oneness of the natural place for each of the elements would seem to be the conclusion, rather than one of the principles, of the argument (and indeed the reason why it is so will be restated in the remainder of the paragraph). However, the determination of one and only one place for each element had already been anticipated *supra*, *Physics* I.2, §332, at the end of the general discussion on place. Cf. also Diagram 10.

IT HAS ALREADY BEEN CLARIFIED THAT THE VOID IS ABSURD | (iv) For the denial of void, which I take here as the fourth «root» of the determination of the elements' natural place, cf. *supra*, *Physics* I.2, §§329-331 (and cf. §354, for the use of this notion in the first formulation of the argument about the elemental *makān*).

CONCLUSION | Arabic *natiġa*, Latin *conclusio*. For *natiġa* as technical term of syllogistic cf. *supra*, *Logic* IV, §36.

WHEN IT IS DEVOID OF THE VIOLENT [FORCES] | Arabic *idā ḥalā min al-qawāsir*, Latin *si dimissus fuerit sine violentia*. I take *qawāsir* as the plural of *qāsir*, 'violent': cf. indeed the reading *min ġayrⁱ qāsir^m* attested by *A* in this place, and see *supra*, §338.

TURNING | Arabic *yatawaġġahu*, Latin *erit ei facies* (etymologically from *waġh*, 'face').

SCATTERING | Arabic *iftirāq*, Latin *separentur*.

WHEN IT IS DEVOID OF THE TWO LIMITS | Arabic *idā ḥalā min al-ḥaddayni*, Latin *cum simplex dimissum fuerit inter* [*< *bayna? >*] *duos terminos*.

Treatise III

[§357] D335-1-17

The Third treatise of the *Physics* of the *MF* is subdivided into five sections, called ‘speculations’. The general topic is given by the mixture of the elements and the resulting non-living mixed compounds, with special reference to the structure of the elemental spheres, to meteorological phenomena, and to the formation of minerals (the mixtures giving rise to living, ensouled creatures will be treated *infra* in *Physics* IV). The present paragraph introduces the first speculation, which deals with the general features of the mixture.

BLEND | Arabic *mizāğ*, Latin. For the terminology of mixture and blend in Arabic philosophy cf. the important clarifications by STONE 2001 (and cf. also STONE 2008).

MIXED | Arabic *tamtaziğ*, Latin

SOME OF THEM ACT ON SOME OTHERS | For the typically Avicennan emphasis on the ‘activity’ – rather than the potential presence – of the elements in the mixture cf. in particular *infra*, §358, with the direct – but strongly repurposed – quotation of Aristotle to this effect.

SETTLES DOWN | Arabic *yastaqirru*, Latin *quiescat*. Cf. immediately *infra* «settling down» [Arabic *istiqrār*, Latin *haec*].

«MIXTURE» | *imtizāğ*, Latin.

BREAKS | Arabic *yaksiru*, Latin *diminuat*. A turn of phrase with *kasara* which helps to determine the semantics of this ‘breaking’ might be *kasara min hiddatⁱ-hi*, with the meaning of ‘blunt the edge’, ‘temper’, ‘tone down’, ‘curb’ (WEHR 968^a). Of course, also the meaning of ‘destroy’, still allowed by the semantics of the basic verb *kasara*, is somehow relevant in this context, albeit perhaps too strong (because the mixture attains a medium of qualities with respect to the ingredients, not entirely destroying their original attributes).

WHICH WE HAVE CLARIFIED TO BE ACCIDENTS FOR THE FORMS | Cf. *supra*, *Physics* II.2, esp. §338 (and secondarily also §340).

FOR THEIR BALANCE DUE TO THE INTERACTION | Arabic *li-ta‘ādulⁱ-hā bi-l-tafā‘ulⁱ*. The Latin translation «propter *diminucionem* suam ex accione unius in aliud» (MUCKLE 1933: 154.16-17, emphasis added) appears to be based on a misreading of the text of *A* as reported by Dunyā, *li-tanāqudⁱ-hā bi-l-tafā‘ulⁱ* («for their mutual contrariety due to the interaction») as *li-tanāquṣⁱ-hā* («for their decreasing»). According to the following §359, however, the «balance» [*ta‘ādul*] here attributed to the mixture cannot in any case be perfect, and will then have to be understood as a relative concept: the mixture will be in an equilibrium with respect to the much more ‘unbalanced’ situation of the unmixed elements, characterized by an extreme degree of the primary qualities (cf. *supra*, *Physics* II, §§335-336).

AS FOR THE FORMS [...] PERMANENCE OF THE INTERACTION | For the identification of the «potencies» [Arabic *quwā*, Latin *virtutes*] that remain in the blend with the «forms» [Arabic *ṣuwar*, Latin *formae*] of the elements cf. *infra* the commentary to the direct nominal quotation of Aristotle in §358.

THAT WOULD BE A CORRUPTION, NOT A BLEND | For the (already Aristotelian) concern to carefully distinguish between «corruption» [Arabic *fasād^{mn}*, Latin *corruptio*] and mixture [Arabic *mizāğ^{mn}*, Latin *complexatio*], cf. in particular *infra*, §358 and relative commentary.

FOR THE COLLISION OF THE [RECIPROCAL] INFLUENCES | Arabic *bi-taṣādumⁱ l-ta‘īrātⁱ*, Latin *per succedentes continue impressiones*.

A [MERE] CONTIGUITY | Arabic *tağāwur^{mn}*, Latin [*essent*] *vicine*.

[§358] D335.18-336.7

The paragraph contains a nominal quotation of Aristotle, and an interpretation in active sense of the permanence of the potencies of the elements in the mixture required by his *De generatione et corruptione*. The crucial conceptual difference between mixture and corruption is underlined and argued for.

WHERE ARISTOTLE SAID [...] BUT THE ACTIVE POTENCIES | Scholars agree that Aristotle presented at least four criteria for the obtainment of proper μίξις (cf. WOOD-WEISBERG 2004: 683; MCGINNIS 2013^a: 85-86): (1) potentiality (the elements are *potentially* in the mixture; cf. *De gen. et corr.* I 10, 327^b29-31); (2) recoverability (the elements can emerge again from the mixture; cf. *De gen. et corr.* I 10, 327^b23-29); (3) uniformity (the mixture is homoeomerous; cf. *De gen. et corr.* I 10, 328^a9-11); (4) equilibrium (the ingredients' powers balance each other in the mixture; cf. *De gen. et corr.* I 10, 328^a28-30); WOOD-WEISBERG 2004 also list two further criteria not mentioned by McGinnis because less relevant for Avicenna, *i.e.* (5) alteration and (6) incompleteness. As also witnessed by this passage of the *MF*, Avicenna understood the criterion of potential presence of the elements in the mixture [(1)] in the seemingly paradoxical sense that the elements are *actually* present in the blend, or, more precisely, that what remains in the blend are «the active potencies» [Arabic *al-quwā al-fā'ila*, Latin *virtutes agentes*]. As explained by MCGINNIS 2013^a: 88, this is to say that the power [*quwwa*] of the elements is in the mixture inasmuch as their «species form» remains in the mixture: for this notion in the *MF* cf. also *supra*, §357, where al-Ġazālī equals the «forms» of the elements as cause for the elemental qualities with the «potencies» that remain in the mixture. For further discussion on Avicenna's peculiar interpretation of the relevant passage in Aristotle (*De gen. et corr.* I 10, 327^b29-31), perhaps mediated by some kind of textual slip in the Greek-Arabic translation of Aristotle's text, see MCGINNIS 2013^a: 88 and fn. 51 and STONE 2008: 112-113. Precisely the theoretical issues implicit in Avicenna's establishing of the ingredients of the mixture as actually present in it – against the only potential presence that Aristotle had required – are addressed by Averroes in a criticism advanced against Avicenna's doctrine in the *Middle Commentary* to Aristotle's *De generatione et corruptione*: cf. on this CERAMI 2018: 211-212.

ARISTOTLE | Duniyā prints the shortened form *Aristū* instead of the longer form *Aristūṭālīs* attested by A. BĪĠŪ 2000: 184.13 reads the shortened form, as well. For an overview of the explicit nominal quotations of Aristotle in the *MF* and the *DN* cf. Introduction, §1.6.1. MUCKLE 1933: 154.25 has «aristotiles (*sic*)», whose irregular spelling would probably need to be normalized in a proper critical edition of the Latin text.

HE DREW INFERENCES | Arabic *istadalla*.

THE BLEND IS NOT A CORRUPTION | Arabic *anna l-mizāġ^a laysa fasād^m*, Latin *complexio non est corruptio*. EQUAL | Arabic *mutakāfiya*, Latin *equalia*. Although WEHR 996^b does not attest the VI form of the verb (and hence neither the corresponding participle), the word is typically Avicennan in use: cf., albeit in a very different context, Avicenna, *Ilāhīyyāt* I.6, where the expression *mutakāfi al-wuġūd* occurs.

THE PREVAILING^{1,2} | Arabic *al-ġālib^{1,2}*, Latin *vincens¹, victorem²*.

THE PREVAILED UPON | Arabic *al-maġlūb*, Latin *victum*.

THERE IS NO MEDIATION BETWEEN THE SUBSTANCES | Arabic *lā wāsiṭat^a bayna l-ġawāhir^r*, Latin *non est medium inter substancias*.

AND THE FORMS ARE SUBSTANCES WHICH DO NOT RECEIVE INCREASE OR DIMINISHMENT | D-Alt has a *fa-* instead of *wa-* at the beginning of the second part of the sentence, according to which the translation of the passage would be instead: «and the forms are substances, so that they do not receive...». This might be a better text insofar as the substances in themselves are not subject to increase and diminishment, and not only the forms *qua* a specific kind of substance. The corresponding passage

of Avicenna's *DN* (ACHENA-MASSÉ 1958 (II): 44) has in this place a backward reference to *Metaphysics*, which the editors (*ivi*: 242 n. 21) identify as pointing back to ACHENA-MASSÉ 1955 (I): 106-107, and in particular to the idea there expressed that forms, as substances in general, do not have a contrary. This passage corresponds in the *MF* to *Metaphysics* I.1, §124 (to be seen in connection with the following discussion of contraries in *Metaphysics* I.3, §153). For the substantiality of form in the *MF* cf. *supra*, *Metaphysics* I.1, §§104-105.

IS FIRMLY BELIEVED | Arabic *yu'taqadu*, Latin.

[§359] D336.8-19

The paragraph argues to the effect that while blends can mentally (more precisely: in the estimation) be articulated into (i) perfectly balanced and (ii) inclining toward one of their constituents, in physical reality blends in perfect equilibrium (i) are actually impossible. As also noticed by JANSSENS 2019: 117, the notion of the impossibility of a balanced mixture is absent in the *DN*, and thus constitutes an addition by al-Ġazālī.

BALANCED | Arabic *mu'addal*, Latin *equalem* (used *supra* also for the entirely different term *mutakāfi*: cf. §357).

INCLINING | Arabic *mā'il*, Latin *inequalem*.

IN [ANY] SPOT | Reading [*fī*] *mawḍi'īn* as in D-Alt for Dunyā's *mawḍū'*.

[§360] D336.20-337.8

The second speculation of the third treatise deals with the internal structure of the elemental spheres, a subject-matter which is programmatically labelled as «primary mixture» of the elements. More in detail, the present paragraph analyzes the stratification of the lowest element, earth, distinguishing three (or four, under a different interpretation: cf. *infra*, §362) layers within it. All the internal stratifications of the elements discussed in §§360-363 are summarized *infra* in Table 48, in the introduction to the commentary on §363.

REGARDS THE PRIMARY MIXTURE | Arabic *fī l-iḥtilālī l-awwal'*, Latin *de prima commixtione*. Cf. also *supra*, *Physics* II.1, §336.

ABOUT WHOSE ATTRIBUTES AND SIMPLICITY THE SPEECH HAS COME BEFORE | On the «attributes» [Arabic *ṣifāt*, Latin *proprietas*] of the elements, *i.e.* their accidental qualities determined by their substantial form, cf. *supra*, *Physics* II, esp. §335-338 and *passim*; for their «simplicity» [Arabic *basāṭa*, Latin *simplicitas* (!)], which is the logical premise of the entire second treatise of the *Physics* of the *MF*, cf. in particular the remarks in *incipit* and *explicit* of that treatise, at §333 and §356 respectively. Rather than to a «speech», the Latin translation refers to a scholarly disagreement on the issue: *dissensio est*.

THE EARTH HAS THREE LAYERS | Arabic *an yakūna la-hu ṭalāt' ṭabaqāt'īn* [Dunyā: 'alā ṭalāt' ṭabaqāt'īn, *A an takūna ṭalāt' ṭabaqāt'īn* = BİĞÜ 2000: 185.2], Latin *quod terra est tres tunice*.

THE INFERIOR LAYER [...] UNMIXED DUST | (a) = (4.4) in §363, Table 48. The presentation of the internal articulations of the elemental sphere of «earth» [*arḍ*] starts from the most internal stratum, that is, the centre of the earth (the absolute down, and the centre of the universe itself). Unsurprisingly, this

nuclear sphere must be formed by pure earth – in the text «unmixed dust» [Arabic *turāb^{an} širf^{an}*, Latin *terra pura*] (for *turāb* used as synonym for *ard* cf. also *supra*, *Metaphysics* IV.b.1.1, §250) –, because it is earth *qua* earth that possesses the (secondary) quality of heaviness in the utmost degree (cf. *supra*, *Physics* II.1, §§335-336).

ABOVE IT THERE IS A LAYER [...] SIMILAR TO THE CLAY | (b) = (4.3) in §363, Table 48. The second layer of earth is mixed with water, an element which does not receive a proper treatment within the discussion of the internal articulations of the elemental spheres (but cf. (3.1) in §363, Table 48). This combination produces a material «similar to the clay» [Arabic *šabah al-ṭīn*, Latin *similis luto*]. For *ṭīn*, ‘clay’, as the product of the composition between water and earth cf. already *supra*, *Metaphysics* IV.a.3, §248; IV.b.1, §249; IV.b.1.6, §268.

GETS MIXED UP | Arabic *taḥṭaliṭu*, Latin

THAT WHICH IS OCCUPIED BY THE SEA | Arabic *mā yastawli ‘alay-hi al-baḥr*, Latin *eam quae mari tegitur*. (c.1) = (4.1) in §363, Table 48. In rigorous Aristotelian terms, earth covered by water would actually be the standard, since elements are spherical and water is lighter than earth: cf. *infra*, §361, for further discussion.

THAT WHICH IS UNCOVERED BY IT | Arabic *mā tankašifu ‘an-hu*, Latin *eam quae est detecta*. (c.2) = (4.2) in §363, Table 48. Formally, dry land and land covered by the sea are both the superficial stratum of the earth (hence the initial indication of three layers rather than four); however, from the treatment of the internal structure of air in §362 it seems inferable that the strata of earth are globally considered to be four, which would lead to distinguish here more sharply between case (c.1) and case (c.2). I have adopted this latter, stronger articulation in the summarizing Table 48 (*infra* in §363).

[§361] D337.9-21

The problem, typical of Aristotelian physics, of the emergence of dry land (which should in principle not exist, because covered by the lighter element of water) is addressed and solved, not without an appeal to divine providence. On the problem in Avicenna and in Arabic philosophy cf. FREUDENTHAL 1991; FREUDENTHAL 2018.

A LOWLAND | Arabic *wahda*, Latin *palus*.

A HILL | Arabic *rabwa* (or *rubwa*), Latin *tumulus*.

DOES NOT RESEMBLE | Arabic *laysat bi-mušākila*, Latin *non commeabilis*. The Latin translators might have taken the root of the active participle of the III stem *mušākila* in the basic sense of the root *š-k-l*, that is, shape or figure, and they might thus have intended their rendition *commeabilis* (properly ‘permeable’) to mean something like ‘shapeable’. Cf. indeed the further occurrence of the same root in the II stem, with the meaning of «it is shaped» [Arabic *yatašakkalu*, Latin *figuretur*]. The idea conveyed by the Arabic text is indeed that the earth has not the same shape (*i.e.*, a perfect sphere) of water and air, but is rather subjected to swellings and depressions. That this is the sense of the passage seems also confirmed by the reading of *Y*, which has here *laysat bi-mušākila ka-l-mā’ wa-l-hawā’*, which would be best translated as «it is not shaped like the water and the air».

RAISE | Arabic *yanšubu*, Latin.

IT REMOVES THE VARIATION FROM ITSELF | *Prima facie*, the text is problematic, because it would seem that the removal of the «variation» [*tafāwut*], in the case of the shape of the earth, contrasts with the *explanandum*: should the earth be perfectly spherical, like water and air, there would be no dry lands. Indeed, the Latin text has here *recurvitatē* (‘being curved’) in the place of a rendition of *tafāwut*. The Arabic text could however be salvaged if taken to mean that in general the earth tends to being spherical, like water and air, but is then prone to retain a gibbous form (with a «raised» part [Arabic

murtafa', Latin *a superioribus terre*] and a «lowered» [Arabic *munḥafaḍ*, Latin *ad inferiora*] one), unlike water and air. Alternatively, one could surmise that *tafāwut* is an error for a word closer in meaning to Latin *recurvitas*, such as e.g. **taqawwus*.

THIS IS THAT WHICH THE DIVINE PROVIDENCE REQUIRES | Al-Ġazālī's providential argument for the existence of tracts of land not covered by seas is quoted in French translation in DUHEM (IX) 1958: 105; see also *ivi*: 126 (on Johannes de Sacrobosco's affirmation of the life of animals as the final cause of the emergence of dry land), 129 (on Michael Scot), 131 (on Campanus of Novara), and 133 (on Robertus Anglicus) for Scholastic reprises of the very same Ġazālian argument *ex providentia Dei*. The reference to a 'divine wisdom' through which the emergence of continents can be explained is already in the *DN*, although Avicenna's formulation is slightly more cursory than al-Ġazālī's one in the *MF* (cf. in particular ACHENA-MASSÉ (II): 45.29-31: «et c'est bien la sagesse divine, afin que les animaux parfaits aient accès à l'air et puissent respirer»). Despite discussing precisely this passage of the *DN*, FREUDENTHAL 1991: 56 fails to notice the presence of this providential argument in Avicenna as well. Such an appeal to providence weakens, in a way, the merely scientific solution of the problem of dry land which Avicenna aims to give in the corresponding section of his *K. al-Šifā'*, and on which FREUDENTHAL 1991 aptly insists. As a matter of fact, Avicenna's geological/alchemical explanation of orogenesis secures, at a different level of analysis, Aristotle's metaphysical conception of an eternal world against the objections of opponents particularly sensitive to the problem of erosion in the physical world (seen as logically incompatible with its past eternity), while the recourse to providence opens again the field, at least in principle, to the affirmation of an act of creation on the part of anti-eternalist opponents, unwilling to give up on such a crucial tenet of their faith (since both solutions could at that point be considered analogously *ad hoc*). Since al-Ġazālī clearly belongs to such a wave of thinkers (cf. also the Introduction for his repeated statements in anti-eternalist direction, even within the *MF*), his *reportatio* of the providential argument he found in his Persian source is unsurprising. By contrast, it is historically very interesting that the *DN* did offer a more nuanced (less 'scientific' and less 'Aristotelian', as it were) account of this particular geological problem, on which al-Ġazālī could happily build. On these grounds as well, one could argue that the text of Avicenna's Persian *summa* did represent a particularly fertile ground for a theologian's attempts at *falsafa*, in that it is an Avicennan text far keener on giving religious connotations to otherwise perfectly rational arguments than, for instance, the *Šifā'* (on this issue, especially with reference to Qur'ānic quotations *et simm.* in the *DN*, cf. again the Introduction, §1.9). On further providential affirmations in Arabic *milieu* akin to Avicenna's and al-Ġazālī's ones, cf. FREUDENTHAL 1991: 53 and 68 fnn. 23-24 (especially on the Brethren of Purity and on al-Bīrūnī). Freudenthal ultimately traces these ideas back to the Stoic notion of a 'geological' providence, involved in the emergence of dry tracts of land or «continents».

NOURISHMENT | Arabic *īgtidā'*, Latin *pasci*. Cf. the entire Latin text, with a double translation: «animalia enim composita nobilia egebant pasci aere ad conservacionem (permanendum) sui spiritus» (MUCKLE 1933: 155.34-156.1).

EXCESSIVE FOR THEM | Arabic *ġāliyya 'alay-hā*, Latin *ut terrenitas dominaretur in eis*.

TO BE PERFECTED | Arabic *yutammu*, Latin *ad hoc ut perficiatur*.

[§362] D337.22-338.9

Four layers of air – and thus four strata of the atmosphere – are distinguished in the present paragraph. Despite being hot in itself, air is characterized by a non-gradual variation in heat: the layer closest to earth is warmer than the higher one due to the action of sunlight-induced heating on earth, while the highest layer – contiguous to fire – is (regularly) the hottest. Just as the first two layers are characterized by the presence of vapours, this last stratum is described by the smoke it contains (on these issues concerning different strata of air cf. already *supra*, *Physics* II.1, §337). In

describing the internal articulations of air, the text of the *MF* introduces thus the two fundamental exhalations of vapour and smoke (cf. esp. *infra*, III.3, §364), which form the basis of Aristotelian meteorology and whose effects in the genesis of meteorological phenomena will be treated extensively in *Physics* III.3 (§§364-369) and III.4 (§§370-372) respectively.

AS FOR THE AIR, IT ALSO HAS FOUR LAYERS | Actually, the earth was said to have three layers, not four, so that the adverb «also» [*ayd^{mn}*] could feel out of place here. However, the number of four in the case of the earth can be reached if one considers as separate strata the superficial layer covered by the sea, and that of the lands above sea level: see (c.1) and (c.2) above (respectively (4.2) and (4.1) in §363, Table 48). A direct cognate of the Latin *tunic(a)e* ('layers'), which appears in the Latin translation of the *MF* for the Arabic *ṭabaqāt*, is used in order to refer to the strata of the atmosphere in Restoro d'Arezzo's cosmographical treatise *La composizione del mondo*, II.vii, 1, ed. MORINO 1976. There however the layers of air are said to be three, rather than four as in the *MF* (cf. *ivi*: «de le tre toneche de l'aere»).

THE LAYER WHICH [IMMEDIATELY] FOLLOWS [...] CONTIGUOUS TO IT | (a) = (2.4) in §363, Table 48. With respect to the intrinsic coldness of earth, the layer of air immediately contiguous to it is warmer than expected. This is because earth is heated by sunlight – although, as abundantly explained *supra*, neither the rays (*Physics* II.3, §§339-346) nor the Sun (*Physics* II.6, §§351-352) are in themselves hot –, and the warmth thus «passes on» [*tata'addà*] to the contacting air.

ABOVE IT THERE IS A LAYER [...] DUE TO ITS DISTANCE | (b) = (2.3) in §363, Table 48. The layer above the one contiguous to the surface of earth is colder than the lowest one, which represents a noteworthy irregularity in the scale of increasing heat that usually accompanies the increase in lightness of the elements. Much like its inferior counterpart, this stratum as well is wet, because the action of evaporating water is still perceivable at this level. On the irregular gradient of heat of air from earth up to the higher layers of the atmosphere cf. already *supra*, *Physics* II.1, §337.

ABOVE IT [...] DO NOT RISE UP TO IT | (c) = (2.2) in §363, Table 48. The third stratum is composed of «clear air» [Arabic *hawā^{am} ṣāf^m*, Latin], not mixed neither with the heat nor with the vapour coming from the inferior strata of the atmosphere.

ABOVE IT THERE IS A SMOKY LAYER [...] THEY BURN | (d) = (2.1) in §363, Table 48. The fourth stratum is «a smoky layer» [Arabic *ṭabaqa duḥaniyya*, Latin], contiguous to the sphere of fire (see *infra*, §363). The air at this level is so hot that sometimes it burns: cf. also *infra*, III.4, e.g. §370.

TEND TO THE WORLD OF THE AETHER | Arabic *taqṣidu 'ālam^a l-aṭīrⁱ* (cf. Greek αἰθήρ).

I MEAN OF THE FIRE | If we are not facing a very weak sense of 'aether', this identification of quintessence and fire is *prima facie* quite problematic. A weak sense of 'aether' is actually attested in Avicenna (cf. *supra* the commentary to *Physics* II.6, §351). However, while it seems indeed possible to employ the word *aṭīr* in order to embrace the different supralunary matters of the heavens, this large use does not seem extendable to the point of comprising sublunary elements like fire. Since the sphere of fire is contiguous to the sphere of the Moon – and thus to the cosmic spheres made globally and *lato sensu* of 'aether' –, a possible solution of the problem would be to intend the phrase as referring to the highest points of the sublunary world, and thus precisely to those parts of the sphere of fire which are in contact with the supralunary world. In this stretched sense, the reference to «fire» would not be meant to strictly identify it with *aṭīr*. On the contrary, it would merely specify that the text is not saying that air rises *out* of the sublunary world (which would be impossible in an Aristotelian physics), but that it ascends to those regions of the sphere of fire which are closest to the sphere of the Moon. This interpretation might be supported by the clearly 'sublunary' account that follows, according to which the «smokes» [*adhīna*] «are propagated» [*muntašira*] up in the air, then they «ascend» [*tataṣā'idu*] again, they presumably reach the sphere of fire, and there they «burn» or ignite [*tahtariqu*].

Moreover, the Latin version of this passage is quite interesting in its own right: «fumositates enim terre elevantur in aerem, et conantur ascendere ad celum empireum scilicet igneum. Sunt ergo in superiore tunica aeris quasi expectantes quousque ascendant, et igniantur» (MUCKLE 1933: 156.14-17). In particular, the identification of the *‘ālam al-atīr* with the Empyrean Heaven [*c(o)elum empireum*] of Christian theology is a striking example of the cultural acclimation performed by the Latin translators on the text of the *MF*. Within this terminological, but also conceptual, shift, the gloss *scilicet igneum* assumes the weaker function of a linguistic explanation of the preceding term *empireum* (which indeed derives from the Greek ἐμπύριος), rather than of a (more problematic) extralinguistic statement on the nature of aether (and conversely of fire); cf. indeed the *Glossa ordinaria. Liber Genesis*, I, 1, in *PL*, CXIII, 68 on *empyreum*: «id est, igneum vel intellectuale, quod non ab ardore, sed a splendore dicitur». The doctrinal value of the gloss, which – like much subsequent tradition – characterizes the Empyrean by means of its luminousness (*splendor*), is by the way in contrast with the following statements of the *MF* concerning the absence of light of the sphere of fire (see *infra*, §363). Thus, the substitution of *atīr* with *empireum* is in a sense a brilliant, although of course unwarranted, solution on the part of the Latin translators (Aristotelian αἰθήρ is indeed luminous: cf. *e.g.* THORP 1982), but it leads on the other hand to a confused doctrinal stance (because *iuxta* the text itself which is being translated, the ‘Empyrean’ cannot be fiery, supralunary, and luminous). For a reconstruction of the complicated history of the notion of the Empyrean Heaven see NARDI 1967; cf. also FIORAVANTI 2011.

[§363] D338.10-end of page

The paragraph, which concludes the second speculation of the Third treatise of the *Physics*, deals with the sphere of fire, which is formed by one colourless and lightless stratum. The internal articulations of the elemental spheres as described in §§360-363 can be summarized as in the following Table 48.

TABLE 48. *Internal structure of the elemental spheres*

	<i>element</i>		<i>layers</i>	<i>§§</i>
1	FIRE	1.1		§363
		2.1	smoky layer (contiguous to 1.1)	§362
2	AIR	2.2	clear air	§362
		2.3	cool wet air (mixed with 3.1)	§362
		2.4	warm wet air (mixed with 3.1, contiguous to 4.2)	§362
3	WATER	3.1		
		4.1	covered by water (= 3.1)	§§360-361
		4.2	dry land	§§360-361
4	EARTH	4.3	similar to clay (mixed with 3.1)	§360
		4.4	unmixed dust	§360

LIKE THE AIR, OR FINER THAN IT | Reading *ka-l-hawā^x wa-alf min-hu*, as in *Y*, for Dunyā's *ka-l-hawā^x luṭf^m* (and cf. *A*: *aw ašadd^t luṭf^m min-hu*). I take the passage to mean that the fire is not luminous and coloured, but rather invisible like the air is invisible, or even subtler and finer (and thus also even less visible) than air itself. Cf. in this direction the Latin translation: «nec habet lumen sicut nec aer, sed est subtilior eo» (MUCKLE 1933: 156.18-19). For a previous denial of fire having a colour cf. the Latin translation of the beginning of *Physics* II.1, §336.

LIKE THE ABLAZE FIRES HAVE | Arabic *kamā li-l-nirānⁱ l-mušta'ilat^t* (*A* 'alā *l-arḍ^t ka-l-nirānⁱ*), Latin *sicut ignes accensi in terra* (for which cf. the Arabic reading of *A*, however not acceptable in that order).

THE COLOUR OF THE LAMP [...] BECAUSE IT IS DIAPHANOUS | The passage argues that the colour we perceive in terrestrial fire is not intrinsic to fire as element – which is in itself «diaphanous» [*šaffāfa*] –, but is rather the product of the interaction between fire as such and smoke. Indeed, only fire «adulterated» [*mašūba*] by smoke receives a colour. Moreover, also earthly fires can be so strong as to become transparent: in this case, one sees within the flame an «empty hole» [Arabic *al-tuqba al-ḥālīyya*, Latin *quasi fenestra vacua*] which is only «void, or air» [Arabic *ḥalā' aw hawā'*, Latin *inhanitas, et aer*]. Both these latter descriptions would seem rather imprecise, since fire is clearly not air (*iuxta* its own nature of element), while void in itself has been deemed in what precedes to be impossible (cf. *supra*, *Physics* I, esp. §§329-331). The text, thus, must not be interpreted technically here.

THE COLOUR OF THE LAMP AND ITS BRIGHTNESS | Reading *lawn^u l-sirāḡ^j wa-ḍaw^x-hu*, as in *D-Alt*, for Dunyā's *lawn^u l-sirāḡ^j ḍaw^x-hu* (which would translate to 'the brightness of the colour of the lamp', but the two notions of *lawn* and *ḍaw*' are presented as distinct in the remainder of the sentence).

FROM THE CLINGING OF THE CLEAR FIRE TO THE DARK SMOKE | Arabic *min tašabbuṭⁱ l-nārⁱ l-šāfiyyatⁱ bi-l-duḥānⁱ l-muḏlimⁱ*, Latin *ex permixtione ignis clari cum fumo tenebroso*.

IT IS BURNING AIR | For the identification of fire with «burning air» cf. *supra*, *Physics* II.5, §349.

[§364] D339.1-9

The Third speculation deals with meteorological phenomena originating from the vapour. The present paragraph presents the basic distinction of Aristotelian meteorology between vapour – the exhalation that the Sun volatilizes from wet material – and smoke – the corresponding dry exhalation. In conclusion, a list of vaporous meteorological phenomena, which will be treated in the following §§365-369, is provided.

IN THE ATMOSPHERE | Arabic *fi l-ḡawwⁱ*, Latin *in hoc spacio usque ad ignem* (periphrastic rendition, for which cf. also *supra*, *Metaphysics* V, §302).

MATTER | Here: *mādda*.

VOLATILIZES | Arabic *ša'adat*, Latin *facit ascendere*.

A VAPOUR FROM THE WET, AND A SMOKE FROM THE DRY | Arabic *min al-raṭbⁱ buḥār^m wa-min al-yābisⁱ duḥān^m*, Latin *de humido [...] vaporem, et de sicco fumum*. For the two exhalations cf. Aristotle, *Meteor.* I 3; and see LETTINCK 1999: esp. 32-65 for a general discussion of their reception in Arabic meteorology. For the Aristotelian Greek terminology corresponding to the Arabic one cf. LETTINCK 1999: 495-496: Greek ἀναθυμίασις corresponds to the generic term 'exhalation', alternatively rendered in Arabic as *buḥār*, *duḥān* or rarely *wahaḡ* ('blaze', 'glare'); Greek καπνός corresponds to *duḥān*, while Greek ἀρμίς (and cognates) is commonly translated as *buḥār*.

FROM WHAT | Reading *'ammā* (*'an + mā*) instead of Dunyā's misprint *'ā*.

THE CLOUDS | Arabic *al-ġaym*, Latin *nubes*. Cf. Greek νέφος (see LETTINCK 1999: 496). Cf. *infra*, §365.

THE RAIN | Arabic *al-maṭar*, Latin *pluvia*. Cf. Greek ὑετός (see LETTINCK 1999: 497).

THE SNOW | Arabic *al-talġ*, Latin *nix*. Cf. Greek χιὼν (see LETTINCK 1999: 497).

THE HAIL | Arabic *al-barad*, Latin *grando*. Cf. Greek χάλαζα (see LETTINCK 1999: 497). Hail, together with rain and snow, will be treated *infra* in §367.

THE RAINBOW | Arabic *qaws quzaḥ^a* or *quzaḥⁱⁿ*, Latin *hiris*. Cf. Greek ἶρις (see LETTINCK 1999: 496). While *quzaḥiyya* can designate in Arabic the 'iris' of the eye, the verb *qazzaḥa*, in the II form, means 'to embellish': cf. WEHR 891^b. For an explanation of the Arabic name for 'rainbow' as deriving from a pre-Islamic god of storm and thunder (and thus a demon in the subsequent Islamic culture) cf. MANDOSIO 2018: 524 and fn. 360; see also, *ivi*, Mandosio's remarks on the Latin transliteration *cazcuza* and on the concurrent calque *arcus daimonis/daemonis* in Arabic-Latin versions of Aristotelian meteorological material. For the treatment of rainbows in the *MF* cf. *infra*, §368.

THE HALO | Arabic *hāla*, Latin *rota que apparet in circuitu lune*. The Arabic *hāla* is to be seen as transliteration of the Greek ἄλωϛ, also at the basis of the English «halo», nowadays used to designate a family of optical phenomena caused by the light of the Sun (or the Moon) reflected by ice crystals in the atmosphere. *Hāla* as rendition of ἄλωϛ appears in Ibn al-Biṭrīq's Arabic translation of Aristotle's *Meteorology* alongside the term *istidāra* (cf. LETTINCK 1999: 261); *dā'ira*, 'circle', which shares the triliteral root with *istidāra*, is employed in the Arabic translation of Theophrastus' meteorological treatise (LETTINCK 1999: 251) and in Pseudo-Olympiodorus (LETTINCK 1999: 267); cf. also LETTINCK 1999: 495 for an overview of the differentiated Arabic terminology. While Aristotle clearly admits of solar and lunar haloes in the same right (cf. *Meteor.*, III.2, 371^b23-27), the periphrastic Latin rendition of the Arabic text of the *MF* reduces the relevance of the phenomenon to the sole Moon, in keeping with the actual treatment of the halo *infra*, §369. Interestingly, a similar reduction of haloes to only lunar, and not solar, appearances is also witnessed by Dante's *Comedy*: «onde fa l'arco il Sole e Delia il cinto» (*Pg* XXIX 78). For the possible background of such a reduction of the halo to an only lunar phenomenon cf. the Arabic Theophrastus, who only discusses the moon halo (although in the text it is made clear that not only moonlight can produce a halo: cf. LETTINCK 1999: 251), Olympiodorus (LETTINCK 1999: 255: «The halo mostly occurs around the moon, rarely around the sun»), Pseudo-Olympiodorus (LETTINCK 1999: 267). Following an already Aristotelian indication, Averroes as well states that the halo occurs more frequently around the Moon than around the Sun (LETTINCK 1999: 288).

AND SO FORTH | As noticed by JANSSENS 2019: 117, this preliminary summary of «vaporous phenomena» is added by al-Ġazālī with respect to the corresponding section of the *DN*.

[§365] D339.10-end of page

The paragraph gives an account of the formation of clouds from hot vapours ascending to a colder layer of the atmosphere. The examples with which the doctrine is corroborated are three culturally relevant practices: (a) the hot bath, (b) a method for cooling water (presumably in summer), and (c) the ritual ablutions of the Muslim faithful.

WHENEVER SOMETHING [...] IT BECOMES CLOUDS | I adopt the reading of *A: fa-mahmā* [...] *fa-ṣāra ġaym^{an}*, instead of Dunyā's *wa-ṣāra* [...], which is worse from the syntactical point of view.

FROM THE HOT LAYER OF THE AIR UP TO THE COLD ONE | The rising of vapourous exhalations here envisaged is from the lowest layer of air – warmer because contiguous to the earth, which is in turn

warmed up by the Sun – up to the second stratum of the atmosphere, which is still reached by wet vapours. The passage is thus from layer (2.4) to (2.3) in Table 48 (§363); cf. also *supra*, §362.

IT THICKENS AND COAGULATES BY VIRTUE OF THE COLD | Arabic *takātafa bi-l-bard' wa-in'aqada bi-hi*, Latin BECAUSE THE COLD HAS A QUICKER INFLUENCE ON THE THICKENING OF THE HOT VAPOUR IN THE AIR | The text is in this passage – which will form an important *locus criticus* for a future critical edition of both the Arabic and the Latin texts of the *MF* – quite tormented. I have translated the reading of *A*, but I report also those of *Dunyā* and of the Latin translation:

Dunyā *li-anna l-bard' asra' ta'tūr^{an} fi qalb' l-buḥār' l-ḥārr' mā^{an} fi l-hawā'*

A *li-anna l-bard' asra' ta'tūr^{an} fi takṭīf' l-buḥār' l-ḥārr' min-hu fi l-hawā'*

Latin *frigiditas enim citius imprimit in aere spissitudinem vaporis calido quam frigiditas in terra*

Dunyā's text would be translatable as: «because the cold has a quicker influence on the transmutation of the hot vapour in water in the air», while the Latin translators certainly had a text with *takṭīf*, as in *D-Alt* (cf. *spissitudinem*) rather than *qalb*, as in *Dunyā*. However, the Arabic antigraph of the Latin text appears also to have been longer than the one at our disposal now.

DON'T YOU SEE THAT [...] LIKE THE CLOUDS? | (a) The first example refers to the well-known Arabic and Persian institution of the public «bath» [*ḥammām*], in which thick vapours are formed when the cold air which is outside – especially in winter [*šitā'*] – gets in contact with the hot wet air of the inside.

THE WINTER ARRIVES [...] LIKE THE CLOUDS? | The Latin text «nonne enim vides, quod cum aer ingreditur domum calidissimam balnei obscuratur ibi aer, et spissatur vapor sicut nubes?» (MUCKLE 1933: 157.9-11) is here conformable with the variant reading of *A* reported by *Dunyā*, but *Dunyā's* text seems acceptable as it stands.

HENCE, THE WATER IS LEFT [...] DURING THE NIGHT. | (b) The second example appears to refer to a practice – perhaps diffused in al-Ġazālī's Persia? – adopted in order to cool down water during night. According to this account, water that one wants to cool down is preliminarily left in the heat of the afternoon's sunlight, in order to make it finer and thus to predispose it to an easier cooling in the night.

AFTERNOON | Arabic *ʿaṣr*, Latin

LIKEWISE, WHEN COLD AND HOT WATER [...] LIKE THIS | (c) The third of the proposed examples is typically Islamic, inasmuch as it involves the reference to the Muslim faithful who «performs the ritual ablutions» [*yatawaḍḍa'u*] in prayer (the water the believer uses freezes more quickly if warm, less quickly if cold). The example, absent in the *DN*, is very vivid, and might well be the fruit of some sort of direct observation (or direct experience) on the part of al-Ġazālī. In Latin, the example is de-Islamicized through the omission of the reference to the practice of ritual ablution, reduced to a simple 'washing': «cum quis lavat faciem suam aqua calida in hyeme, quia statim congelantur capilli eius, quod non fieret, si esset aqua frigida» (MUCKLE 1933: 157.16-18).

ARE Poured | Arabic *ṣubba*, Latin *prohiciatur*.

THE MATCHING | Arabic *naẓīr*, Latin *hoc etiam*.

IN HE WHO | Reading *fi man* instead of *fymn*.

[§366] D340.1-5

The paragraph is a short anticipation of the more elaborate treatment of minerals that will follow *infra* at §§373-375. It deals in particular with the possibility that – instead of ascending into the higher levels of the atmosphere – the wet vapours are retained within the mountains, thus forming minerals.

These vapours only ascend from the interior of the earth

PENETRATES | Arabic *sarà*, Latin.

THEY BREAK THROUGH | Arabic *tanfuḍu*, Latin.

BREAKING THROUGH | Arabic *nufūd*, Latin. Compare *supra* the verb *tanfuḍu*, which I vocalize in the I stem in keeping with the I-stem *maṣdar* occurring here.

THE MOUNTAINS WORK [...] AS AN ALEMBIC WHICH HOLDS THE VAPOUR | Arabic *tarǧī l-ǧībāl^l fī-hā maǧrā al-anbīq^l allādī yamsuku l-buḥār^a*, Latin *sicut alembic, qui retinet vaporem*. The comparison is explicitly (al)chemical. English 'alembic', like its cognates in other modern Western languages, derives from the Arabic term *anbīq* used here in the text, with agglutination of the definite article.

[§367] D340.6-341.7

The paragraph deals with rain, snow and hail, for which ultimately see ARISTOTLE, *Meteor.* I 11-12. All three phenomena are described as the fruit of the differentiation of vapours rising from the mountains in the atmosphere. If these vapours are strong enough to gather, they form clouds (for which see *supra*, §365), from which rain, snow and hail all derive under different circumstances. If these clouds encounter a moderate coldness, they become rain (b.1); if they encounter an intense coldness before being able to gather in drops, they become snow (b.2); if, finally, the cold reaches them after they have gathered in drops, and then a heat reaches them, they result in hail (b.3).

A BREAKTHROUGH | Arabic *manfaḍ^m*, Latin *rimulas* [...] *per quas evadant*. See *supra*, §366, for the occurrence of the same root.

IN THE GORGES OF THE MOUNTAINS | Arabic *fī šī'ābⁱ* (Dunyā *šu'ūb*) *l-ǧībāl^l*, Latin *in montibus*. My correction is based on the fact that *šu'ūb* printed by Dunyā is registered in WEHR (552^a) only as the plural form of *ša'b* («people, folk; nation; tribe, race»), and not of *šī'b* («mountain path, mountain trail; gorge, ravine, canyon; gulf, abyss; reef»; WEHR 552^b), which has plural *šī'āb* and a meaning certainly much more in line with the sense of the passage.

A SUBSTANTIAL QUANTITY [OF VAPOURS] | Arabic *qadr^m šālīh^m*, Latin *magna pars vaporum*.

AND THEN IT DIFFERENTIATES | *i.e.* it behaves in different manners, depending on the environmental conditions it encounters.

THE HEAT OF THE SUN DISSIPATES IT | Arabic *baddadat-hu ḥarārat^u l-šamsⁱ*, Latin *dispergit eum calor solis*. When the heat of the Sun is intense, and thus especially during «summer» [*ṣayf*] (see *infra* in the text) clouds are less likely to form, because the vapours rising from the mountains are dispersed and dissolved into air.

SOMETIMES THE WIND [...] INTO ONE ANOTHER | Winds will be treated in the following §370. Their possible 'condensing' function for the «union» or gathering [*ǧam*'] of the clouds is however mentioned only here.

THEY BLEND INTO ONE ANOTHER | Arabic *yatalāḥiqu*, Latin *raro densantur, vel coadunantur vapores* (probable double translation).

THEN, WHENEVER [THE CLOUDS] [...] CALLED «RAIN» | (b.1) «Rain» [Arabic *maṭar*, Latin *pluvia*] forms when the clouds reach the «cold layer» [*al-ṭabaqa al-bārīda*] of the atmosphere, in the presence of a moderate coldness. For this layer cf. *supra*, *Physics* III.2, §362 (corresponding to (2.3) in Table 48, in the introduction to §363).

THEY FLOCK | Arabic *taqāṭiru*, Latin.

[JUST] LIKE THE VAPOUR ASCENDS [...] THE SLIGHTEST COLDNESS UPON IT. | The formation of rain is compared to the moisture forming on the «cover» [*ǧītā*'] of a «cooking pot» [*qidr*] (an instrument also occurring in another, entirely different but very characteristic illustrative example within the

MF: cf. *infra*, *Physics* V.9, §446). This example of condensation taken from everyday life is to be seen in connection with the analogous examples given in §365 *supra* with regard to the origin of clouds.

AS SOON AS | Reading *ʿindamā* instead of Dunyā's separate spelling *ʿinda mā*.

THE SLIGHTEST COLDNESS | Arabic *adnā burūdat^{mn}*, Latin *aliquid frigiditatis*.

IF, THEN, AN INTENSE COLD [...] CALLED «SNOW» | (b.2) In contrast with rain, «snow» [Arabic *talǧ*, Latin *nix*] only forms when «an intense cold» [Arabic *bard^{mn} šadīd^{mn}*, Latin *multa frigiditas*] reaches the cloudy vapours.

SEPARATE | Arabic *tafarraqat*.

LIKE CARDED COTTON | Arabic *ka-l-quṭnⁱ l-mandūf^f*. The Latin translation of the entire passage appears to be based on a somewhat different, and perhaps longer, Arabic text with respect to Dunyā's one: «et fit sicut partes lane disperse, que elewantur cum lana per arcum dilaniatur, deinde descendunt sicut partes alcotoni conglobate» (MUCKLE 1933: 158.4-6). *Alcotoni* is a direct transliteration – declined in the Latin genitive of the second declension – of Arabic *al-quṭn*; cf. on this the right lexical remark, although dubitative, by MUCKLE 1933: 241: «alcotoni. perhaps the genitive case of the Arabic word “alḳuṭun,” gossipion» («gossipion» for *Gossypium*, the Lynnean name of the genus of the cotton plants, in the family of the mallow, *Malvaceae*).

WOULD BE DEFEATED | Arabic *inhazamat*, Latin *vincetur* [*eius frigiditas*].

IF, [BY CONTRAST,] A COLDNESS [...] «HAIL» | (b.3) «Hail» [Arabic *barad*, Latin *grando*] has a more complicated genesis with respect to rain and snow, because not only coldness, but also heat has a role in its origin. This cooperation of heat and coldness explains why hail is more common in mid-seasons such as «autumn» [Arabic *ḥarīf*, Latin *autumpno*] and «spring» [Arabic *rabīʿ*, Latin *vere*].

UP TO THEIR INTERNAL [PARTS] | Arabic *ilā bawāṭinⁱ-hā*, Latin *ad interiora guttarum*. Compare *infra* in this same paragraph the second occurrence of this phrase, together with the opposite expression «what is in their external [parts]» [Arabic *mā bi-ḡawāḥirⁱ-hā*, Latin *sua exteriora*]. Both expressions are formed with an analogous plural of the active participles (*bāṭin*, *ḡāḥir*), normally used as adjectives but here employed as nouns.

DISPERSED | Arabic *muntašira* (not translated into Latin).

WOULD BE ENTIRELY DEVOTED TO THEM | Arabic *tawaffāra ʿalay-hā*.

[§368] D341.8-22

The paragraph deals with the doctrine of rainbow. It discusses without technicalities – for which the science of optics is rather referenced – the circumstances of its formation and (very briefly) its three colours (cf. Aristotle, *Meteor.* III 2 and 4-5 *passim*). It is noteworthy that in the corresponding section of his *K. al-šifāʿ*, Avicenna reveals quite a strong disagreement from the Peripatetic tradition with respect to the meteorological doctrine of the rainbow (Avicenna, *al-Maʿādin wa-l-āṭār al-ʿulwiyya*, ed. MUNTAŠIR-ZĀYID-ISMAʿİL 1965: 50.8-15, my translation):

Know that the speech regarding the halo is like the realized and the verified as for what concerns me. As for the rainbow, some states of the thing that it is already resulted in me, but [other] states remain that I have not verified; and what is said concerning them is not cogent [*yūqṭaḏū*]. I have already seen several times in person that the manifestation of this bow does not occur above thick clouds; nor does it persuade me what our colleagues among the Peripatetics say about it. I will describe for you in the first place the state of the rainbow in its visible manifestation above the thick clouds, according to that which I have witnessed with [my] sight, and then I will describe for you the cause of its being a semicircle, or [an arc] lesser than a semicircle, and nothing else. I will give you the cause of the fact that the rainbow does not originate in all times of the summery day, while it originates [more often] during winter. As for the colours, their substance did not result [clear] to me, in truth, and I could not know their cause, nor was I satisfied by that which they say [concerning them], since all that is falsity and folly.

Of this interesting glimpse upon an Avicennan doctrinal uncertainty, the much more condensed remarks of the *DN* – and consequently this paragraph of the *MF* – bear no trace. For a discussion of the Avicennan passage on the rainbow cf. also LETTINCK 1999: 281-283.

WITH THE SLIGHTEST POLISHING | Arabic *ma'a adnā l-ṣiqālat*, Latin *aliquantum nitoris*. Wehr only registers the form *ṣiqāl*, but the feminine *ṣiqāla* with the sense of 'the state of being polished' is attested in Avicenna: see e.g. the passage of the *K. al-Burhān* quoted in STROBINO 2021: 268.

THE ONE WHO IS FACING IT | Arabic *al-muḥādī la-hu*, Latin *quem qui intuebitur*.

WHEN HE STANDS OPPOSITE TO IT WITH [THE MIRROR] | This further gloss, which does not add anything to the main idea – i.e. the reflection of sunlight in the air as if in a mirror – is absent in *A*.

COMBINES | Arabic *yaṣṭabiku*.

SOMETIMES THERE IS NOT THE MIDDLE COLOUR | Reading *wa-rubbamā lā yakūnu al-lawṇ al-mutawassiṭ* as in *D-Alt* (and in the Latin translation), instead of *wa-rubbamā yakūnu...* (with omission of the negation) as in *Dunyā*. The correction is meant to make sense of the «sometimes» [*rubbamā*], which otherwise would have no purpose, because with three colours of the rainbow there is already, and always, an intermediate colour.

ROUND | Arabic *mustadīr*, Latin *circularis*. Cf. however *infra* for a specification on the non-completeness of the circle of the rainbow, which gives indeed to it the characteristic form of an arc, or bow. As it is explained shortly *infra*, the «circle» [Arabic *dā'ira*, Latin *circulus*] of the rainbow «is not complete» [Arabic *lā tatimmu*, Latin *non perficitur*], because otherwise a «half» [Arabic *ṣaṭr*, Latin *una pars eius*] of it would fall under the earth – a circumstance which would however be impossible for a luminous phenomenon such as the rainbow.

shows | I read the verb as *turā*, in the iv stem with causal value.

IN A PROPER RELATIONSHIP OF SEEING AND SEEN | Arabic *'alā nisbatⁱⁿ maḥṣūṣatⁱⁿ min al-rā' wa-l-mur'ā*, Latin [*nisi cum fuerit*] *proprius situs (vel comparacio) inter videntem et visum* (with double translation of *nisba*).

THAT IS EXAMINED IN THE SCIENCE OF OPTICS | Arabic *wa-yastaqṣi dālika fī 'ilmⁱ l-manāzīr*, Latin *de quo tractatur in scientia de aspectibus*. This structural reference to another science of the system is not internal, since optics is not treated as such within the project of the *MF*. In this, it is thus similar to the reference to mathematics (not treated in the *MF*) occurring *supra* in *Metaphysics* IV.b.3.4, §293; for a further, and elaborate, reference to optics cf. also *infra*, *Physics* IV.3, §389. For Averroes' contrasting rejection of the idea that the methods of optics and of natural philosophy should be combined, due to the accidentality of the causes treated in optics, cf. the discussion provided in LETTINCK 1999: 293-294.

IN THE BACK OF THE OBSERVER | Arabic *fī qaḥā l-nāzīrⁱ*, Latin *ei post dorsum*.

AS THE POLE FOR THAT CIRCLE | Arabic *ka-l-quṭbⁱ li-tilka l-dā'iratⁱ*, Latin *sicut axis versus illum circumum*.

[§369] D341.23-342.13

The paragraph, which concludes the Third speculation on vaporous atmospheric phenomena started back at §364, deals with the halo, an iridescent appearance cognate of the rainbow and treated already by Aristotle in close association to the latter: cf. ARISTOTLE, *Meteor.* III 2 (and, for the halo itself, see also III 3).

AND NAMELY THE CIRCLE SURROUNDING THE MOON | Arabic *wa-hiya l-dā'ira l-muḥīṭa bi-l-qamar*¹, Latin *circulus circumdans lunam*. While in Aristotle both the Sun and the Moon are listed among the possible luminous causes of the halo, in the text of the *MF* – which follows in this regard the *DN* – only the Moon makes its appearance: cf. *supra* the commentary to §364.

POLISHED [AND] WET | Arabic *ṣaqīl ruṭḥ*, Latin *nitidus et humidus*.

FORM AN UNINTERRUPTED SEQUENCE | Arabic *tawāṣalat*, Latin *super posita essent*.

ENTIRELY | Arabic *fi l-kull*², Latin *in toto*.

IT IS ONLY SEEN | Reading *fa-innamā* as in D-Alt for Dunyā's *fa-immā*. Cf. Latin *non videtur tenebrosus nisi [...]*.

IT IS EFFACED AND BECOMES INVISIBLE | Arabic *inmaḥaqa wa-ṣāra lā yurā*, Latin *desinit, et fit talis qui non videatur*.

THE TINY PARTICLE | Arabic *ḍarra*, Latin *sicut pulvis*. *Supra*, *Metaphysics* III.b.6, §213 I translated this same term – as occurring within the quotation of a Qur'ānic expression, with «atom», in keeping with the most common translations of that passage in the *Qur'ān*. Here, however, that doctrinal context is not at stake.

[§370] D342.14-26^a

The paragraph introduces the Fourth speculation, concerning meteorological phenomena originating from the smoke. After a list of the relevant phenomena, which will be discussed in the following §§371-372, the text treats here in particular the case of winds, whose origin from the dry terrestrial exhalation is a central asset of Aristotle's anemology: cf. *Meteor.* I 13 and II 4-6. Moreover, the text describes the origin of the so-called 'falling star'. These two phenomena share their origin in rising smoke, but they are distinguished by two different situations that may occur to that smoke: (i) an encounter with atmospheric coldness, which produces a thickening and a fall of the smoke, thus generating winds; (ii) a continuous ascent up to the domain of the fire, where the smoke ignites and produces a falling star.

THE WIND | Arabic *rīḥ*, Latin *ventus*. Cf. Greek ἀνεμος (see LETTINGCK 1999: 495).

THE LIGHTNINGS | Arabic *ṣawa'iq*, Latin *fulgur* (singular as in D-Alt: *ṣā'iqā*). Cf. Greek κεραυνός (see LETTINGCK 1999: 496, who translates it as 'thunderbolt').

THE SHOOTING STARS | Arabic *ṣuḥub* (sg. *ṣihāb*), Latin *stelle que videntur cadere*. For *ṣihāb* as rendition of διάπτων ἀστήρ cf. LETTINGCK 1999: 496, who gives however also the alternative Arabic rendition of *kawkab munqaḍḍ* (or *munqiḍḍ*), for which cf. *infra* in this paragraph. Shooting stars had already been mentioned in the summary of beings of the sublunary world given *supra*, *Metaphysics* V, §302.

THE COMETS | Arabic *al-kawākib dawāt al-aḍnāb*, lit. 'the stars endowed with tails': cf. the parallel Latin rendition as «stelle caudate» (MUCKLE 1933: 159.14-15). The rendition of Greek κομήτης with *kawkab dū l-ḍanab* 'star endowed with tail' – of which the expression used in the *MF* represents the direct plural – is proper of the Arabic translation of Pseudo-Olympiodorus' *Commentary* to Aristotle's *Meteorology*, made by Ḥunayn ibn Ishāq and revised by Ishāq ibn Ḥunayn, while the rest of the Arabic tradition of Aristotle's meteorological treatises appears to prefer *kawkab dū l-ḍu'āba* (pl. *kawākib dawāt al-ḍawā'ib*) 'star endowed with the lock (of hair)', closer to the meaning of the corresponding Greek expression.

THE THUNDER | Arabic *ra'ḍ*, Latin *tonitruum*. Cf. Greek βροντή (see LETTINGCK 1999: 495).

THE FLASH | Arabic *barq*, Latin *coruscatio*. Cf. Greek ἀστραπή (see LETTINGCK 1999: 495, who renders the Greek and the corresponding Arabic as «lightning», here reserved rather to Arabic *ṣā'iqā* / Greek κεραυνός; cf. *supra* in this paragraph).

IT SINKS | Arabic *intakassa*, Latin *revertitur*.

A GREAT FAN | Arabic *mirwaḥa* 'azīma, Latin *et movet eum fortissime* (missing the reference to the 'fan'). While in English 'fan' and 'wind' are not etymologically related, the words *rīḥ* and *mirwaḥa* do share the same root in Arabic (compare Italian 'vento' and 'ventaglio'). The comparison with the *mirwaḥa* is not translated into Latin, which only preserves the preceding idea of «strength» (*fortissime*). A passage of Bede the Venerable's *De natura rerum* in which wind is compared with the air moved by a fan is quoted in English translation in FRISINGER 1973: 200; cf. BEDE THE VENERABLE 1843 (VI): 112: «Ventus est aer commotus et agitatus, sicut flabello brevi potest approbari».

MOVING AIR | Arabic *hawā' mutaḥarrīk*, Latin *aer qui movetur*. This looks like a simplification of Aristotle's original doctrine of winds (as expressed in *Meteor.* II 4-6), in which winds are equalled to rivers, moving to the air just as water rivers move through land. Moreover, in *Meteor.* I 13 Aristotle writes:

There are some who say that wind is simply a moving current of what we call air, while cloud and water are the same air condensed; they thus assume that water and wind are of the same nature, and define wind as air in motion (transl. Lee, quoted in COUTANT-EICHENLAUB 1974:1454)

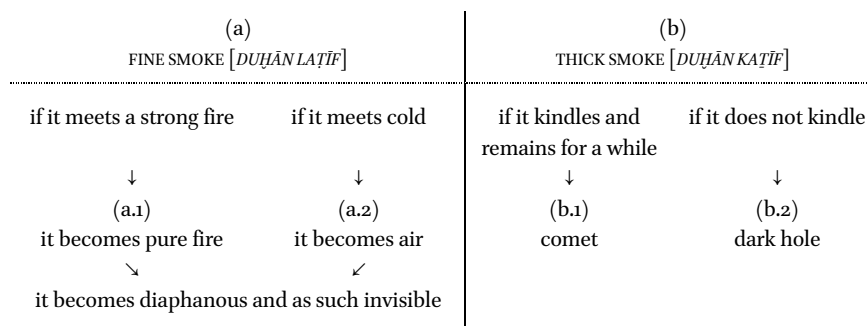
However, in the pseudo-Aristotelian *De mundo* IV, 394b7-9 one reads that «wind is nothing other than a lot of massed air flowing» (I quote the passage from WILSON 2013: 197 fn. 2). As noticed by COUTANT-EICHENLAUB 1974: 1460, in Theophrastus' *De ventis* «[t]he relegation, mostly by omission, of the Aristotelian warm-dry exhalation to a minor role allows Theophrastus to redirect his anemology to the Presocratic concept of wind as air in motion». Something similar appears to happen in the Arabic tradition of which the present, short Ġazālīan excerpt is a specimen.

«FALLING STAR» | Arabic *kawkab^{am} munqidq^{am}*, Latin *stella cadens*. Given that LETTINCK 1999: 496 gives both *shihāb* (for which see above in this paragraph) and *kawkab munqadd* (or *munqidq*) as possible renditions of Greek διάττων ἀστήρ, one could think that the present «falling star» and the previous «shooting star» are simply to be identified. Behind the different Arabic terms one could however surmise also different Greek phrases, such as διαδρομή or διαθέων ἀστήρ, which occur in Aristotle's *Meteorology* and which Lettinck registers with the same meaning of 'shooting stars'. This specific meteorological passage of the *MF* appears to be quoted various times by Barhebraeus: cf. TAKAHASHI 2002^b: 243 and fn. 59.

[§371] D342.26^b-343.17

The paragraph describes the possible behaviours of smoke – fine and thick – in the atmosphere, which can be summarized as in the following Diagram 11. With respect to the situation envisaged in §370 *supra*, the difference in density of the smoke is here crucial. Indeed, while the encounter of smoke *tout court* with atmospheric coldness was deemed *supra* to be the cause for the origin of winds (see point (i) in §370), here the cold that meets *fine* smoke transforms it into air (see (a.2) *infra*). Likewise, while smoke *tout court* produced the phenomenon of the falling star when kindling and elongating in the domain of the fire (point (ii) in §370), here kindled *thick* smoke produced the similar, but different phenomenon of the comet (see (b.1) *infra*). Thus, this paragraph adds complexity to the basic situation described in §370, thus explaining more atmospheric phenomena thanks to the differentiated behaviour of the various kinds of smoke.

DIAGRAM 11. Possible behaviour of fine and thick smoke in the atmosphere and related phenomena



SHEER FIRE | Arabic *nār^{am} širfat^{am}*, Latin *in purum ignem*.

OR [SUCH THAT] IT IS EXTINGUISHED | Reading *aw yanṭafā*, as in D-Alt, instead of Duniyā's printed text *wa- yanṭafā* (corroborated however by the Latin translation *et extinguetur*). I have interpreted this sentence as the second member of alternative (a), concerning the possible behaviour of fine smoke: (a.1) transformation in fire and (a.2) extinction of the smoke. Both scenarios, although different, end up in the invisibility of said smoke, as will be explained more clearly in what follows.

THUS, EITHER BECAUSE IT IS [SUCH] THAT | Arabic *fa-immā bi-anna*. I interpret this as the introductive formula of a reprise of the aforementioned distinction between the two possible alternative behaviours of fine smoke. The difficult *fa-immā*, which might erroneously be seen as a continuation of the disjunction of alternatives started *supra*, is omitted in *A*.

IT BECOMES SHEER FIRE, THAT IS PURE FIRE | Arabic *yašīru nār^{am} širfat^{am} wa-hiya al-nār al-maḥḍa* (sic pro Duniyā's *al-maḥḍ*, incongruously masculine). D-Alt reads instead *yašīru mā^{xm} širf^{am} wa-huwa al-nār al-maḥḍa*, which does not make any sense (there is no reason why smoke should transform into «sheer water», and this become in turn «pure fire»), but might be explained due to the difficulty of accounting for the presence of the preceding *fa-immā*. If that was read as a continuation of the original disjunction, indeed, the sentence «it becomes sheer fire, that is pure fire» – identical to option (a.1) – would have been seen as an intolerable repetition. Thus, the substitution of fire with water could be seen as an attempt to make sense of a passage perceived as corrupted.

OR ELSE [BECAUSE] [...] INTO AIR | Arabic *aw yanṭafā bi-l-bard^ḍ fi irtifā^ḍ-hi fa-yanqalibu hawā^{xm}*. D-Alt reads instead the shorter text *aw yanṭafā fa-yanqalibu [hawā^{xm}]* («or else it is extinguished, so that it transmutes itself [into air]»), which seems also the reading at the basis of the Latin translation *vel extinguetur et convertetur in aerem*. Duniyā, in an important footnote *ad locum*, remarks that D-Alt ends in this point, precisely after *fa-yanqalibu*.

IT BECOMES THEN DIAPHANOUS | Arabic *fa-yašīru šafā^{am}*, Latin *et fiet parvus* (!). I interpret this sentence as the common consequence of both option (a.1) – transformation of fine smoke into pure fire – and option (a.2) – transformation of fine smoke into air, consequent to its coming into contact with the coldness of air. While the transparency of air can be taken for granted as a common datum of experience, for the diaphanous character of pure fire cf. *supra*, §363 and the relative comments. The Latin reading *parvus* seems to presuppose the erroneous reading *šaḡīr^{am}* in the Arabic antigraph.

IF THEN WHAT IT ENCOUNTERS [...] SINCE IT WILL NOT COOL DOWN LATER. | The entire sentence seems to be the third reprise of the alternative between (a.1) and (a.2), which is thus presented by successive additions in the text. In this third formulation, option (a.2) is presented at first, with emphasis placed on the role of the cold in transforming the smoke into air; while option (a.1) is said to happen when

the fire which the smoke encounters is particularly strong, so that it is able to eliminate («clearing» [taḥlīṣ]) all «tarnishing» [ṣawb] from the smoke itself.

THE EXTINCTION | Arabic *iftā'*, Latin *in extinguendo*.

IS STRONG | Arabic *qawīyat*, Latin .

IT KINDLES | Reading *īṣta'ala* as in BĠŪ (188.18) instead of *īṣtaǧala* as in Duniyā. The correction imposes itself on many grounds: from a palaeographical point of view, the *rasm* of the two words is virtually identical, differing only for the diacritic point of *ǧayn*; the sense is better, and the syntax of the sentence seems moreover to require here an intransitive verb. Cf. also the Latin translation as «ignietur quidem» (MUCKLE 1933: 159.34).

FOR SOME TIME | Reading *zamān^{an}* as in BĠŪ (188.18) instead of *zimām^{an}* printed by Duniyā. The reading appears confirmed by the Latin translation, as well: «remanebit sic aliquamdiu» (MUCKLE 1933: 159.35).

THE FIRE CLINGS WITH [ITS] PARTS | I interpret the Arabic *al-nār mutašabbīṭa al-aǧzā'* as an improper genitive construction, with the active participle as *nomen regens* (lit. 'the fire is adherent as for the parts'). A grammatically acceptable alternative would be to read instead *aǧzā'^{al}-hā*, with the pronoun referring back to the feminine *nār*. Cf. the Latin translation: «quod partes ignis continue sunt cum parti bus concavitatis celi» (MUCKLE 1933: 160.1-2).

IN PARTNERSHIP WITH [THE PARTS OF THE FIRE] | Arabic *fi mušāya'atⁱ-hā*, Latin *propter consortium eius*.

IN ITS DOMAIN | Arabic *fi ḥayyīzⁱ-hā*. That is to say, in the domain of the fire.

THE CHARCOAL | Arabic *faḥm*, Latin *carbo*.

QUIT | Arabic *tazāyalu*, Latin *a quo ablata sit rubedo*.

[§372] D343.18-344.7

The paragraph, which concludes the Fourth speculation on smoky meteorological phenomena (started back at §370), deals with thunders, flashes, and lightnings: cf. ARISTOTLE, *Meteor.* II 9.

WITHIN | Arabic *fi tadā'if*, Latin *intra [nubes]*.

«THUNDER» | Arabic *ra'd*, Latin *tonitruum*. The thunder is a «sound» [ṣawt] produced by a violent movement: cf. *infra*, *Physics* IV.2.1, §385, for an analogous account of the more general process of genesis of sound by percussion and vibration.

«FLASH» | Arabic *barq*, Latin [*ignis splendidissimus qui vocatur*] *coruscacio* (in Muckle also *coruscacio*: a future critical edition of the Latin text will helpfully standardize such extravagant spellings).

IT WILL DART OFF | Arabic *indafa'a*, Latin *impelletur*.

«LIGHTNING» | Arabic *ṣā'iqā*, Latin *fulgur*.

YET IT IS A FINE FIRE [...] THE THING [ITSELF] DOES NOT BURN. | The Latin translation corresponding to this passage is vitiated by several mistakes: «fulgur autem est ignis subtilis qui penetrat [i] *herbas*, et res molles, sed cum in res [ii] *diversas* offendit, sicut in ferrum et aurum, dissolvit ea, ita quod dissolvit aurum in marsupio [Arabic *kīs*], et marsupium non adhurit, et dissolvit aurum [iii] *in navibus*, nec adhurit *homines*» (MUCKLE 1933: 160.16-20, emphasis and numbers added). [i] Latin *herbas* for «clothes» appears to presuppose the misreading **al-nabāt* for Arabic *al-tīyāb* (the *rasm* of the two words is potentially identical when written without diacritics). [ii] Latin *diversas* for «hard» [Arabic *al-ṣulba*] can be explained as a mistake occurred in the Latin transmission for an original **duras*. [iii] Latin *in navibus* for the original phrase «of the gilded [thing]» [Arabic *muḍahhab* or *mudhab*] is difficult to explain, since a palaeographical confusion of *muḍahhab* and **sufun* («ships», the Latin *naves*) does not seem likely; [iv] likewise, *homines* for «thing» [Arabic *al-šay'*] would presuppose the

misreading **nās* or **insān* for the correct Arabic text, but might also be explained as a correction *ad sensum* following from error [iii], which either occurred in the Arabic antigraph or in the Latin translation itself. The doctrine that lightning [or ‘thunderbolt’: Greek *κεραυνός*] only melts the hard things, leaving the «supple» [Arabic *raḥwa*] ones intact, is already Aristotelian: cf. *Meteor.* 371^a17^b14 (the examples there provided are the bronze head of a spear in contrast with its wooden handle; and a garment not burnt but only made threadbare: cf. LETTINCK 1999: 227).

SHARPER IN PERCEIVING | Arabic *aḥadd idrāk^{an}*, Latin *acutior*.

SOMETIMES THE FLASH [...] TO THE HEARING | The formulation with *qad* + imperfect («sometimes...») is very accurate, because flash and thunder are perceived as temporally distantiated only when the thunderstorm producing them is far from the observer (the temporal gap between the two being of course proportional to the distance of the storm). By contrast, they are (almost) simultaneous in the case of a storm very near to the observer.

UNTIL | Arabic *mā*.

THE FULLER | Arabic *qaṣṣār*, Latin *lotricem percutientem pannos cum fuste*. The Latin translation (‘a laundress hitting garments with a stick’) adequately captures, albeit *ad sensum*, the situation envisaged by the Arabic text. As a matter of fact, the activity of fulling performed by the *qaṣṣār* involves the pounding of the woollen cloth with a stick or club (or the fuller’s own feet or hands), in order to increase the tissue’s strength and its impermeability. What is important for understanding the example is that the activity in question must produce a strong noise, hearable from a great distance. The «fire» of the fuller mentioned in the Arabic text does not seem directly connected with the activity of fulling, and is accordingly omitted by the Latin translation, although a fire would make the fuller visible at an even greater distance, thus making more apparent the ‘instantaneous’ character of sight as opposed to the slowness of hearing perceptions. Dunyā seems to consider *qaṣṣār* as corrupted, and advances in a footnote the concurrent reading *qitār* (which might then mean ‘train (of camels)’: see WEHR 906^a). The meaning of ‘fuller’ of *qaṣṣār* seems however perfectly appropriate to the context, and appears by the way confirmed, although indirectly, by the Latin translation itself.

[§373] D344.8-15

The Fifth and last speculation of the Third treatise of the *Physics* deals with minerals (a first quick presentation of them was already given *supra*, §366). In general, minerals are the fruit of the composition of a smoke and vapour within the earth; different minerals are produced by different forms which come to the mixtures of smoke and vapour from the Giver of forms. In particular, the present paragraph discusses the sal ammoniac and the sulfur, in which the smoke prevails, and gemstones such as corundum and quartz, in which the vapour prevails. For an overview of Avicenna’s reception of the mineralogical material of the fourth book of Aristotle’s *Meteorologica* cf. HASNAWI 2002.

FROM THE BESTOWER OF THE FORMS | For further information and bibliography on this crucial notion, and a list of its occurrences in the *MF*, cf. *supra*, *Metaphysics* V, §302. The function that the Bestower of forms performs in this passage is that of conferring the form of the mineral to a well-disposed matter, which seems in line with what Avicenna himself says in *al-Af’āl wa-l-infi’ālāt* II.1 (Avicenna 1969: 256.9-11 and ff.); for the importance of that passage cf. also *supra*, *Metaphysics* V, §304, and esp. *Physics* II, §350 (with specific bibliography in the commentary).

THE SAL AMMONIAC | Arabic *nūšādīr*, Latin *quasi sal ammoniacum* (the presence of *quasi*, here and in what follows, indicates some sort of uncertainty on the parts of the Latin translators in the rendition

of the technical mineralogic terms). For the sal ammoniac (also: ‘salammoniac’ or ‘salmiac’) – composed of ammonium chloride (NH₄Cl) – and its Arabic-Persian denomination *nūšādir*, cf. RUSKA 1923 and RUSKA 1928. For its occurrence in an Avicennan context cf. also LETTINCK 1999: 303.

THE SULFUR | Arabic *kibrīt*, Latin *vel quasi sulphur*. Cf. LETTINCK 1999: 303.

THE CORUNDUM | Arabic *yāqūt*, Latin *lapides pretiosi*. The Arabic term, which might have a Persian origin, is also used in Arabic as generic word for ‘gemstone’; WEHR 1294^b qualifies the meaning of ‘ruby’ as proper of the Syrian dialect. For the more specific identification of the *yāqūt* with the corundum – a naturally transparent mineral (aluminium oxide), particularly cherished in Islamic medieval culture, which can assume different colours (red corundum = ruby, blue corundum = sapphire) – see HIJJAWI QADDUMI 2012 (and see also LETTINCK 1999: 306).

THE QUARTZ | Arabic *billawr* (or *ballūr*), Latin *alabaustra* (*vel eruclea*). The Latin rendition involves a double translation: while *alabaustum* pro *alabastrum* is registered in DU CANGE 1883-1887: t. 1, col. 156^b, the alternative translation *eruclea* is explained by MUCKLE 1933: 241^b as a reference to the *lapis Heracleus*, i.e. the magnet (cf. Pliny the Elder, *Nat. hist.* 33, §126), which however would seem quite out of place as synonym for a translucent mineral. WEHR 92^a gives as fundamental meaning of the Arabic term ‘crystal’ or ‘glass’, while ‘rock crystal’ and ‘transparent quartz’ are given *sub voce* as translations of the phrase *billawr ṣaḥrī*. On the *billawr* in Islamic milieu, its presence in pseudo-Aristotle’s *On Stones* (on which see RUSKA 1912), and its possible etymological derivation from Greek βήρυλλος, cf. RUSKA-LAMM 2012.

IS DIFFICULT | Arabic *ta’suru*, Latin *difficile est*.

THEY [CANNOT] BE FORGED | Here and in what follows I render with ‘to forge’ the various forms of the verb, *inṭaraqa*, which however neither WEHR nor LANE register in the VII form. This notwithstanding, the verb appears as such in Avicenna, as well (cf. LETTINCK 1999: 302, who renders it as ‘be malleable’) and is thus acceptable.

BY VIRTUE OF A STICKY WETNESS WHICH IS CALLED OLEOSITY | Arabic *bi-ruṭūbatⁱⁿ laziġatⁱⁿ tusammā duhnīyyat^{an}*, Latin *per humiditatem glutinosam vivam (!) que vocatur unctuositas*. For the notion of oleosity or ‘unctuosity’ cf. the explanation given by FREUDENTHAL 1991: 48: «unctuous moisture – a non-evaporable moisture –, a notion whose origin goes back to the fifth century B.C., but which came to prominence in the wake of the widespread use of fractional distillation by Arab (al-)chemists. [...] By definition, unctuous moisture is a moisture capable of conferring cohesion and Ibn Sīnā founds on this notion his account of how stones and mountains can be formed through desiccation». The Latin text «per humiditatem glutinosam vivam» presupposes the Arabic *bi-ruṭūbatⁱⁿ laziġatⁱⁿ ḥayyatⁱⁿ*, with *ḥayy* meaning ‘lively’, i.e. ‘quick’ (as in ‘quicksilver’, Latin *argentus vivus*, for mercury) and malleable, because not solidified. The adjective, although *prima facie* peculiar, appears thus very appropriate for the context, and it should probably be restored in the Arabic text based on the witness of the Latin translation. For the notion of *ḥayy* / quick / *vivus* cf. e.g. AVICENNA 1927: 34 fn. 11; for its connection to malleability cf. also LETTINCK 1999: 303.

IS DEPLETED | Arabic *naḥdat*, Latin *dissolvitur (liquescit)* (double translation).

[§374] D344.16-345.5^a

The paragraph deals with metals, i.e. those minerals susceptible of melting. Melting is explained in terms of heat and oleosity, which is due to some sort of wetness (hence, coagulated and frozen minerals like the one dealt with in §373 are not susceptible of melting). Likewise, non-coagulated oleosity is the main factor that explains some minerals’ capability of being forged.

THE GOLD, THE SILVER, THE COPPER AND THE LEAD | The order in which the metals appear in the Latin translation is almost the reverse: *sicut es, et plumbum, et argentum, et aurum*. The inversion might be motivated by the desire to build an ascending climax regarding the value of the cited metals.

IS CONSOLIDATED | Arabic *istahkama*, Latin *sapienter* (for the same way of rendering into Latin the root *ḥ-k-m* in another context in the *MF* cf. *supra*, *Metaphysics* III.b.9, §§224-225). Cf. *infra* the term «solidity» [*istiḥkām*].

THE AIRNESS MIXES UP WITH IT | The Latin translation has here *aqueitas* ('wateriness'), which would allow to avoid the slightly incongruous repetition of the concept of 'airness' shortly *infra*. Cf. MUCKLE 1933: 161.14-15: «et permiscetur illi aqueitas, et sic remanet in eo parum terrenitatis cum aeritate».

IT LIQUEFIES | Arabic *tasayyalu*, Latin *facit liquere*.

BE SEPARATED | Arabic *tatafarraqu*, Latin *disperguntur*.

DISJOINING | Arabic *infiṣāl*, Latin *separatione*.

LIMESCALE | Arabic *kils^{an}*, Latin *ut scoria*.

[§375] D345.5^b-end of page

The final paragraph of the Fifth speculation, and with it of the entire Third treatise of the *Physics*, explains some features that help working with minerals, for instance by making their melting quicker, as well as some general principles of coagulation and melting of minerals. In particular, watery substances coagulate with coldness and melt with heat, while earthily substances behave in the opposite way, as they coagulate with heat and melt with coldness.

THE SULFUR | Arabic *kibrīt*, Latin *sulphur*.

THE ARSENIC | Arabic *zirnīḥ*. Muckle's printed form *aripimentum* should be emended in *auripimentum* («orpiment», an arsenic sulfide), a material which is however more properly called *zirnīḥ aṣḡar* ('yellow arsenic') in Arabic alchemy and mineralogy: cf. KĀS 2010 (II): 658-660. The rendition of the simple *zirnīḥ* ('arsenic') as 'orpiment' is however common in Arabic-Latin translations: most notably, see Avicenna, *Liber quartus naturalium*, VAN RIET 1989: 46.79, where *auripimentum* («orpiment») translates *zarānīḥ* (plural of *zirnīḥ*); and for the terminological issue cf. Van Riet's informative footnote *ad locum*. Holmyard and Mandeville directly translate the Arabic *zirnīḥ* (which they vocalize *zarnīḥ*) as «arsenic [sulphides]» in the passage of Avicenna's *De congelatione et conglutinatione lapidum* where the term occurs in connection with sulfur, and give in the footnote *ad locum* the equivalence with As_2S_2 (the mineral realgar) and As_2S_3 (the mineral orpiment): see AVICENNA 1927: 34 and fn. 5. For the rendition of *zirnīḥ* as «arsenic sulphide» in Avicenna cf. also LETTINCK 1999: 303.

BOTH ARE MINGLED WITH IT AND PENETRATE INTO IT | Arabic *ḥalaṭā bi-hi wa-saryā fi-hi*, Latin *permisceantur cum eo*.

THE MELTING HASTENS TO IT | For the role of sulfur and orpiment as catalyzers for mineral melting, cf. the passage of Avicenna's *De congelatione et conglutinatione lapidum* quoted above, commentary to [THE ARSENIC].

THE IRON FILINGS | Arabic *saḥāla al-ḥadīd*, Latin *limatura ferri*.

THE TALC | Arabic *ṭalq*. Cf. KĀS 2010 (II): 769-779.

THE ZINC | Arabic *ḥāraṣīn*. Duniyā however reads *ḥāriṣīnā*, which is not attested by WEHR 260^a; the form *ḥāraṣīnī* is nonetheless registered there (as Egyptian variant), so that Duniyā's final *ā* might be seen as a simple misprint for *ḥāraṣīnī*. The mineral *ḥāraṣīnī* is mentioned by Faḡr al-Dīn al-Rāzī in his *Eastern Investigations* [*al-Mabāḥiṭ al-maṣriḡiyya*]. In discussing said occurrence, LETTINCK 1999: 306 counts the *ḥāraṣīnī* as one of the «seven malleable substances» or simply 'seven bodies' [*al-aḡsād*].

al-sab'a] «often mentioned in cosmographical and alchemistic literature», together with gold, silver, tin, iron, copper, and lead. In fn. 19 *ad locum*, Lettinck tentatively identifies the *ḥāraṣīnī* with a «copper alloy», although he also mentions the identification of it as «a kind of bronze» advanced by WIEDEMANN 1905: 404. The two identifications, although presented by Lettinck as alternative, are not necessarily so, since bronze is indeed an alloy formed of copper (although typically not comprising zinc, as opposed to brass).

The Latin translation has the two terms in the reverse order with respect to Dunyā's text: «et sicut marcazita et atale» (MUCKLE 1933: 161.30-31). For the correspondence of *atale* (often transliterated also as *achale*; for analogous examples of confusion between *-c-* and *-t-* in the case of transliterations from Arabic cf. CALMA 2021: 144) with *al-ṭalq* (from which also the modern 'talc' derives) see the editorial remark by VAN RIET 1989: 31* fn. 9: «Les graphies *acale...natale...* et *achale...* ont été unifiées sous la forme de la simple translittération de l'arabe *aṭṭalc*». By contrast, the rendition *marcazita* for *ḥāraṣīn* appears inappropriate, since the marcasite is the modern name of a mineral made of an iron sulfide (FeS₂) with a crystal structure, actually devoid of zinc. How the term was used in medieval Spain remains however a matter of speculation. LETTINCK 1999: 302 records that a mineral called *marqaṣītā* is mentioned by Ibn al-Biṭrīq in his Arabic version of Aristotle's *Meteorology*. Cf. Arist. *Meteor.* 383^b9. For the Latin reception of this mineralogic passage of the *MF* cf. ALBERT THE GREAT, *Meteora*, 4.2.9, ed. HOSSFELD 2003: 259.32-34: «Liquatur profecto hoc modo etiam lapis, qui Graece dicitur pyramicos, eo quod igne liquatur, et ille, qui Arabice dicitur marcazita et achali, sicut dicit Algazel».

THE SALT | Arabic *milḥ*, Latin *salem*.

WITH A PARTICIPATION OF THE DRYNESS OF THE EARTH | Arabic *ma'a muṣārakat^m min yabūsat^f l-arḍ*, Latin *a calore communicante sibi siccitate terre*.

THE HEAT DETERMINES THE WETNESS AND THE DRYNESS TOGETHER, AND INCREASES BOTH OF THEM | In *Physics* II, §336 *supra*, hotness was linked to lightness, and coldness to heaviness, so that the lightest element was explained to be also the hottest (*i.e.* fire), and conversely the heaviest element also the coldest (*i.e.* earth). By contrast, the fact that hot things are wetter if wet and drier if dry, which is the theory that seems affirmed in this paragraph, was not entirely clear in the preceding treatment of the qualities of the elements. Rather, the fact that water is cold-wet, hence certainly colder than air (hot-wet), but also paradigmatically wetter than it, would seem to indicate another kind of relation between wetness and dryness, on the one hand, and hotness, on the other hand. Likewise, the following statement that «earthness is stronger in correspondence with the heat» seems rather puzzling, the earth being the coldest element of the four.

STRONGER IN CORRESPONDENCE | Arabic *aṣadd^m munāsabat^m*, Latin *maiorem habet affinitatem*.

A [CERTAIN] PROLIXITY | Arabic *taṭwīl*. This indication, together with the following one, is structurally interesting, inasmuch as it aims to suspend the «detailed analysis» [*tafṣīl*] of the minerals and their properties for the sake of brevity. An analogous statement, again in keeping with the concise nature of the *MF* as condensed philosophical encyclopaedia, will be found *infra*, *Physics* IV.3, §389. Cf. the Latin text: «ad distinguendum autem hec omnia sermo prolixior est necessarium».

THE DISCIPLINE OF THE ALCHEMY [...] BRANCH OUT FROM [THIS] | For the «discipline of the alchemy» [Arabic *ṣinā'a al-kīmīyā*, Latin *magisterium alquimie*] cf. already *supra*, *Physics* II.5, §350. The conclusion of the treatise emphasizes a structural aspect, with the idea of a ramification or branching out of scientific disciplines that is typical of the Avicennan systematization of Peripatetic philosophy: cf. on this also the Introduction, esp. §1.4.2.

Treatise IV

[§376] D346.1-12

The treatment of psychology is introduced in continuity with the meteorological and mineralogical material discussed in *Physics* III, since the different souls are said to affect increasingly more perfect and harmonic mixtures of elements with respect to the previously considered inanimate beings. The present paragraph analyses the notion of vegetative soul, by mentioning her three operations and the faculties performing them, as summarized in the following table.

TABLE 49. *Operations and faculties of the vegetative soul*

	OPERATIONS <i>AF'ĀL</i> <i>ACTIONES</i>	FACULTIES <i>QUWAN</i> <i>VIRTUTES</i>
1	nutrition <i>taǧđiya</i> <i>nutrire</i>	nutritive <i>muǧadđiya</i> <i>nutritiva</i>
2	growth <i>tanmiya</i> <i>augmentare</i>	[faculty] of growth <i>munammiya</i> <i>augmentativa</i>
3	generation <i>tawlid</i> <i>generare</i>	generative <i>muwallida</i> <i>generativa</i>

AS THE MIXTURE OF THE SMOKE [...] FORM OF THE MINERALS | The «mixture» of smoke and vapour is called here *iḥtilāt*, with the same term used to designate the «primary mixture» of the elements *supra*, *Physics* II.1, §336 and *Physics* III.2, §360. The beginning of the treatise of psychology is immediately connected with the preceding treatment of minerals in *Physics* III.5, and the three souls of Aristotelian psychology – the vegetative, the animal, and the human rational one – are introduced according to the same scheme of increasing perfection of the mixture of the elements predisposing them. Thus, the entire treatment of psychology inscribes within the hierarchical structure of emanation of reality already well-described *supra*, *Metaphysics* V, §302.

A MORE PERFECT MIXTURE [...] THE MIXED QUALITIES | In keeping with the aforementioned hierarchy of reality, the mixture or blend [here: *imtizāǧ*] which gives rise to the vegetative soul is «more perfect» [Arabic *atamm*, Latin *perfection*] than the one needed for the minerals. This increased perfection is unpacked (i) as generically «better» [*aḥsan*], but also (ii) as an increased closeness to the perfect «balance» [Arabic *i'tidāl*, Latin *aequalitati*], and finally (iii) as a reduction of the contrariety of the «mixed» [Arabic *mumtazaǧa*, Latin *commixtarum*] qualities. In other words, the mixture needed for a soul to arise is more temperate and smoother than the one required for inorganic things.

INORGANIC BODIES | Arabic *ǧamādāt*, Latin *congelatorum*.

THE GROWTH | Arabic *numiŵ*, Latin *augmentum*. Growth is seen as distinctive factor between the inorganic and the organic.

IN THEM | Duniyā reads *fī-hi*, but I think the feminine *fī-hā* would be a sounder choice, since the referent of the pronoun is in all likelihood represented by the mixed elements.

«VEGETATIVE SOUL» | Arabic *naḥs^{am} nabātiyyat^{am}*, Latin *anima vegetabilis*. In the title of the subsection on the vegetative soul, the adjective is however in the masculine [*nabātī*]. This is a sign of the oscillation of the grammatical gender of *naḥs*, which can be either feminine or masculine in Arabic, and which might have been used indifferently in the two genders by al-Ġazālī himself.

IN THE HERBS | Arabic *fī l-naǧm*. The first meaning of the term is of course that of ‘star’, ‘celestial body’, but the word also admits of the collective meaning of «herbs, herbage, grass» (WEHR: 1110^a), which appears here particularly appropriate. The remark by ALONSO 1963: 259 n. 22, who would aim at replacing the specific *al-naǧm* with the generic *al-nabāt*, is thus unwarranted. The Latin translation (MUCKLE 1933: 162.18-19) correctly reads «in arbore, et in plantis», but, in order to justify the reading, there is no need to presuppose that its Arabic antigraph should have had *al-nabāt*, as Alonso does *ibidem*. Cf. also Dunyā’s footnote *ad locum*, where he correctly specifies that *naǧm* has the meaning of ‘plants without trunk (or stem, or stalk [Arabic *sāq*])’.

OPERATIONS | Arabic *af‘āl*, Latin *actiones*.

THE NUTRITION | Arabic *taǧdiya*, Latin *nutrire*. (1) The function of nutrition of the organism is performed by a «nutritive» [*muǧaddiya*] faculty. The participle of the II form *muǧaddiya* does not seem the typical way of expressing in Arabic this particular notion of Aristotelian psychology – cf. for instance the presence of the active participle of the I form *ǧādiya* with the meaning of «nutritive [faculty]» in the *Physics* of Avicenna’s *Šifā’* (cf. MCGINNIS 2009: 469) –, but it is clearly the best option given that all the «operations» or ‘actions’ [*af‘āl*] of the vegetative soul, and conversely all the «faculties» or ‘virtues’ [*quwan*] performing them, are expressed here with voices of the II form of the verb (respectively the *mašdar* for the operation, and the active participle for the faculty; see *infra* the other examples).

THE EXPANSION | Arabic *tanmiya*, Latin *augmentare*. (2) The expansion (or simply ‘growth’), of the organism is performed by the «faculty of growth» [*munammiya*] (cf. MCGINNIS-REISMAN 2007: 180, 272).

THE GENERATION | Arabic *tawlid*, Latin *generare*. (3) The procreative function of ‘generation’ is performed by a «generative» [*muwallida*] faculty.

[§377] D346.13-347.2

After their presentation in §376, the text offers here an elaboration on the three faculties of the vegetative soul and their operations. For a very recent analysis of Avicenna’s theory of nutrition, here presupposed and summarized, cf. ALPINA 2021^b.

«NOURISHMENT» | Arabic *ǧidā’*, Latin *cibus*. The same root *ǧ-d-y*, this time in the VIII stem, is further productive in the text, giving rise shortly *infra* to the passive participle «nourished» [*muǧtadā*], and the active one «nourishing» [*muǧtadī*].

IT TAKES OFF [...] THE NOURISHED | The «transforming» [Arabic *muḥila*, Latin *convertens*] capacity of the nutritive faculty is described as a conversion of the form of the food in the form of the organism ‘eating’ it (*i.e.* transforming it in vegetal and animal tissues proper of the «nourished» being, and no more of the «nourishing» stuff). For the idea of ‘divesting’ the form – see here the verb «takes off» [*taḥla‘u*] – and wearing another one back again – see here «clothes» [*taksū*] –, albeit expressed with a different lexicon, cf. *supra*, *Metaphysics* IV.b.2.3, §276; *Metaphysics* V, §299; *Physics* II, §350. The metaphor of clothing, which could also be expressed as a ‘donning’ and a ‘doffing’ of the form on the part of matter, also appears in Avicenna, *K. al-Nafs* V.6 (English translation in MCGINNIS-REISMAN 2007: 202; *ivi*: fn. 66, the translators trace the metaphor back to the Arabic translation of Plotinus in the Pseudo-Aristotelian *Theology*).

[THE NOURISHMENT] SPREADS [...] DISSOLVED | This is a longer description of the restoring function of nutrition, already hinted *supra* at *Physics* I, §319 (where the same characteristic expression «takes the role of» [Arabic *yasuddu masadd^a*] is used).

INCREASE | Arabic *ziyāda*. Together with «growth» [*numūw*] and «expansion» [*tanmiya*] (cf. *supra*, §376), this is the third synonym used to describe the operation performed by the faculty of growth.

DIMENSIONS | Here: *aqtār*.

ACCORDING TO THE SYMMETRY APPROPRIATE FOR THE GROWING [BODY] | Arabic *'alā l-tanāsuq' l-lā'iq' bi-l-nāmī*, Latin *secundum quod convenit corpori augmentando*.

AT THE END OF THE DEVELOPMENT | Arabic *ilā muntahā l-nuṣūʿ*, Latin *ad perfectionem sui incrementi*.

IS APPROPRIATE | Arabic *yulīqu*, Latin *conveniente*.

ACTUALLY, THESE FACULTIES [...] IS DERIVED FOR IT | The insertion establishes a one-to-one correspondence between operations (or actions) [*af'āl*] and an «operating agent» [*fā'īl*] performing them (identified with the faculty in charge of said operation). The existence of (occult) faculties of the soul is thus inferred from the presence of (visible) effects, which must have a cause in order to be there at all. For the same notion of a one-to-one correspondence between *af'āl* and *quwan* in Avicenna's medicine cf. *Qānūn* I.1.6 («On the Faculties and Operations»; see HALL 2004 for a quick but informative overview).

LIKE THE SPERM [...] OF THE CEREALS | The «sperm» [Arabic *nufā*, Latin *sperma*] for animals and the «seed» [Arabic *buḍra*, Latin *semen*] for the «cereals» [Arabic *hubūb*, Latin *granorum*] are examples of that potentially similar part of the procreating body that «disjoins itself» [*tafṣīlu*] from that body in order to become a new organism. The fact that the two examples pertain to different biological domains (animals and plants) is a sign of the continuity of the series of the souls: the animal soul also contains all the functions of the vegetative one. For the potential presence of the form of man in that of the semen cf. already *supra*, *Metaphysics* I.1, §103; *Metaphysics* I.7, §167.

[§378] D347-3-7

The paragraph, which concludes the short section devoted to the vegetative soul (§§376-378), deals with the biological temporal 'extent' of the various vegetative faculties. While the nutritive faculty is active throughout the biological life of the organism, the faculty of growth and the generative faculty are less continuous. The first one is only active at the beginning of the organic life, up to the apex of the bodily development, while the generative faculty activates at that culminating point, when the organism has reached its adult size.

NUTRITIVE | Here: *gāḍiya*, with the active participle of the I form as in D-Altvicenna: cf. the terminological note in §376 *supra*.

ACTIVE | Arabic *'āmila*, Latin *agit*.

INCAPACITY | Arabic *'aǧz*, Latin *debilitatur*.

TRANSFORMING | Arabic *iḥāla*, Latin *ad convertendum*.

UNTIL THE MOMENT [...] OF THE DEVELOPMENT | Arabic *ilā waqt' l-bulūǧ' wa-kamāl' l-nuṣūʿ*, Latin *usque ad tempus iuventutis et perfectionem crescendi*.

IT COMES TO A STANDSTILL | Arabic *taqīfu*, Latin *cessat*.

GROWING | Here: *nāmiya* (cf. *supra* for the case of the parallel active participle of the I form *gāḍiya*).

ARISES | Arabic *intahāḍat*, Latin *excitabitur*.

[§379] D347.8-20

The animal soul is introduced, and its faculties – which will be dealt with in the following paragraphs – are distinguished, according to the scheme presented in Table 50.

TABLE 50. *Faculties proper of the animal soul*

	FACULTY		SPECIES OF THE FACULTY	§§
1	perceptive <i>mudrika</i>	1.1	external <i>ẓāhira</i> [five senses]	§§383-393
		1.2	internal <i>bāṭina</i> [internal senses]	§§394-401
2	moving <i>muḥarrika</i>	2.1	desiderative <i>šahwāniyya</i> [> research]	§§379-380
		2.2	irascible <i>ġadabiyya</i> [> flight]	

ANIMAL SOUL | Arabic *naḥs hayawānī*, Latin *anima animalī*.

MORE PERFECT | Here: *akmal*.

AND THE ADDITION OF TWO FACULTIES. | Dunyā prints at the end of this sentence an incongruous question mark, which ought to be ignored.

ONE OF THE TWO IS THE PERCEPTIVE [...] [FACULTY] | The same distinction between a «perceptive» [Arabic *mudrika*, Latin *apprehendens*] and a «moving» [Arabic *muḥarrika*, Latin *movens*] faculty is presented as an internal articulation of the *naḥsāniyya* ('psychic') faculty, which has to do with the brain, in Avicenna's *Qānūn*, I.1.6.5 and I.1.6.6: cf. HALL 2004: 76 and fn. 28 (who translates *mudrika* as «cognitive» and *muḥarrika* as «motor»).

THAT WHICH PERCEIVES | Dunyā has here a footnote explaining how the concept of *idrāk* is applied to the animals in this usage, while the *ta'qqul* («intellection») is proper of man, being that which distinguishes him from the other animal species. Dunyā probably feels the need to specify this because *idrāk* can be used in non-philosophical Arabic (and not only in such contexts) in order to identify superior cognitive faculties: for cases in the *MF* cf. *supra*, *Logic*, *Preface*, §2, where *idrāk* is given as a paraphrasis of «conception» [*taṣawwur*]; and more particularly see its application to the intellectual perceiving of God's essence in *Metaphysics* III, §244, and to the faculties of the heavenly movers in *Metaphysics* IV.b.3.1, §286 (cf. also Diagram 6).

IS CONJOINED | Arabic *yattaṣilu*, Latin *connectuntur*.

DESIRE | Arabic *šahwa*, Latin *desiderium*.

FLIGHT | Arabic *harab*, Latin *fugiendum*.

[§380] D347.21-348.9

The concepts of research of the suitable and flight from the harmful, with their opposing correlatives of hatred and fear, are explored.

STRIVING | Arabic *nuzūʿ*, Latin *appetitus*.

LIKE THE SEXUAL INTERCOURSE | Arabic *ka-l-ġimāʿ*, Latin *ut est coitus*.

«DESIDERATIVE FACULTY» | Arabic *quwwa šahwāniyya*, Latin *virtus desiderativa*. [(3.1)] The desiderative faculty tends to what is suitable.

REPULSION | Arabic *dafʿ*, Latin *ad repellendum*.

THAT WHICH IS INCOMPATIBLE AND CONTRARY | Arabic *mā yunāfi wa-yuḍāddu*, Latin *contrarium*.

«IRASCIBLE FACULTY» | Arabic *quwwa ḡaḍabiyya*, Latin *irascibilis*. [(3.2)]

«FEAR» IS AN EXPRESSION [...] DESIDERATIVE FACULTY | The emotions of «fear» [Arabic *ḥawf*; Latin *tīmor*] and «hatred» [Arabic *karāha*, Latin *abominatio*] are defined as weakness respectively of the irascible (3.2) and the desiderative (3.1) faculty. This implies that they are merely negative, in that the strength or normal action of the corresponding faculties of the animal soul effectively produces their contrary (*i.e.*, courage, for the irascible faculty, and desire or love, for the desiderative one).

SPREAD | Arabic *munbatta*, Latin *diffusa*.

IN THE MUSCLES AND THE NERVES | Reading *fi l-ʿaḍalāt wa-l-aʿṣāb* instead of *fi l-faḍalāt* printed by Dunyā. Cf. Latin *in musculis et nervis*.

ACCORDING TO THE WAY [...] PRACTICE OF THE MOVEMENT | Arabic *ʿalā sabīl l-baʿt wa-l-istiḥtāt ʿalā mubāšara l-ḥarakat*, Latin *secundum imperium et obedientiam ad repraesentandum motum*.

THE FACULTY WHICH IS IN THE MUSCLES [...] [AND] ORDERS | The faculties which end up in movement are hierarchically ordered: the one which is «in the muscles» [*fi l-ʿaḍalāt*] – the proper «moving» faculty, the *muḥarrika* – «carries out the orders» [*muʿtamira*], and is thus subject to the «striving [faculty]» [Arabic *nuzūʿiyya*, Latin], which, in turn, «dispatches» [*bāʿita*] and gives the orders [*āmira*]. This is the same notion expressed immediately above with the sentence «the two are moving [*muḥarrikatāni*] with respect to the moving [*muḥarrika*] faculty», which makes a pun between two senses of the active participle *muḥarrik*: in the second case it is used in technical sense to designate the faculty, in the first somewhat metaphorically, in the sense of ‘triggering the movement’ (and thus similarly to the different metaphor of the ‘orders’ employed just afterwards. The expression *nuzūʿiyya* can be considered here as an umbrella term for both the desiderative and the irascible faculties described above, which give together the orders to the physiological faculty that moves the muscles (presumably by means of spirit, a concept which will be introduced shortly afterwards, in §383). Cf. the Latin translation of the passage in ST. CLAIR 2005: 62.52-55: «Et haec movent virtutem motivam, quae est diffusa in musculis et nervis secundum imperium et obedientiam ad repraesentandum motum. Virtus enim quae est in musculis est repraesentans motum, quia huic iubetur ut moveat».

[§381] D348.10-19

The paragraph discusses the perceptive faculty identified in §379 *supra*, distinguishing within it the external, or outer, and the internal, or inner, senses. The necessary existence of the latter is argued on the basis of an instance of (instinctual) behaviour observed in animals.

EXTERNAL | Arabic *zāhira*, Latin *exteriorem*. (1.1) The five external senses will be dealt with analytically in what follows (see *infra*, §§383-392), but here they are not mentioned one by one, as opposed to the internal faculties.

INTERNAL | Arabic *bāṭina*, Latin *interiorem*. (1.2) There follows a list of the five internal faculties. For all the listed terms cf. the often-alternative formulation given *infra*, at §394, at the beginning of the section specifically devoted to the internal senses (see in particular the comparative Table 53). The numbers that I have assigned in the text to the terms of this first formulation presuppose that second one, which is far more systematic than this one.

THE IMAGINATIVE FACULTY | Arabic *al-quwwa al-ḥayāliyya*, Latin *phantasia*. The relative adjective *ḥayālī* literally means «imaginary, unreal; ideal, ideational, conceptual; utopian» (cf. WEHR: 310^a), but its technical sense is well-established in philosophical jargon. Cf. *infra*, introduction to §394 and Table 53 for a more detailed treatment of the terminology of the internal senses.

THE ESTIMATIVE [FACULTY] | Arabic *al-mutawahhima*, Latin *aestimatio*. (1.2.4)

THE MEMORATIVE [FACULTY] | Arabic *al-dākira*, Latin *memorialis*. [(1.2.5)]

THE COGITATIVE [FACULTY] | Arabic *al-mutafakkira*, Latin *cogitatio*. [(1.2.3)] The explicitation of the names of the internal senses is added here by al-Ġazālī, while Avicenna's *DN* mentioned, on the contrary, the external ones: «Quant à la faculté de perception, elle s'exerce de deux manières: perception externe, perception interne. Il n'est pas besoin de définir la perception extérieure (ouïe, vue, odorat, goût, toucher). Mais il est besoin de définir la perception intérieure» (ACHENA-MASSÉ 1958 p. 56).

AS THE VERIFICATION ABOUT THEM WILL FOLLOW | For the detailed treatment of the internal senses cf. *infra*, §§394-401.

HAS FOUND REPUGNANT | Arabic *istabša'a*, Latin *abhorret*.

ONE TIME | Usually *dufa wāhida* has the meaning of 'all at once', but here it is used as correlative of the following *dufa uḥrā* («another time»); for the idea of the reiteration of the same experience on the part of the animal cf. also the adverbial *tāniy^{an}*, which I rendered as «again».

SOUR | Arabic *maḍir*, Latin *nocivum*.

[§382] D348.20-349

The paragraph discusses the common sense and its functions.

UNIFYING | Arabic *ḡāmi'a*, Latin *collectivam*.

«COMMON SENSE» | Arabic *al-ḡiss al-muštarak*, Latin *sensus communis*.

THE HONEY | Arabic *'asal*, Latin *mel*.

SWEETNESS | Arabic *ḡalāwa*, Latin *dulcedinem*.

JUDGING | Arabic *ḡākim*, Latin *aliquod unum...ad hoc ut iudicetur*.

THE SHEEP WOULD NOT PERCEIVE THE ENMITY OF THE WOLF | Arabic *lam takun al-ṡāḡ tudriku l-'adāwat^a l-dī'b'*. Reading *dī'b'* 'wolf' instead of Dunyā's obvious misprint *ḡanab* 'tail'. As made clear by comparison with the Arabic original, the Latin reading *omnis* in the translation of the passage («contingeret quod omnis non apprehenderet inimicicias lupi numquam visi ut fugiat ab eo», MUCKLE 1933: 164.32-33) is an error for *ovis*, already corrected in ST. CLAIR 2005: 62.73. The example of the enmity of wolf and sheep in order to explain the notion of 'intention' in the estimation is one of the most famous and best-studied aspects of Avicennan psychology. «Dieb», as a calque from the Arabic, can designate also in English a jackal or wild dog found in North Africa (*Canis anthus*), while the Arabic term can also designate the golden jackal (*Canis aureus*), diffused in Asia. It is however also the standard translation of Greek λύκος 'wolf' in Aristotle's *Historia animalium* cf. FILIUS 2018: 457. This philosophical zoological source, together with the widespread rendition as *lupus* of all the Latin translations, certainly calls for maintaining the traditional interpretation of this animal as a 'wolf', despite a jackal might also have been envisaged by the Persian Avicenna as a very fitting enemy for his philosophical sheep. For further occurrences of the same example in the *MF* cf. *infra*, §§396 and §408.

WHERE THE FACULTIES MEET | Arabic *maḡāmi' al-quwā*, Latin *summa de collection virtutum*.

ANALYSE THEM IN DETAIL | The promise of a *tafṡīl* [Latin *distinguere*] of the outer senses will be fulfilled in the following §§383-392.

[§383] D350.1-12

The paragraph introduces the analytic examination of the external perceptions (announced at the end of §382), and of the five senses performing them. The first one to be treated is the sense of touch (1.1). The five external senses, their organic localization, and their proper sensibles, as dealt with in §§383-392, are listed in the following summarizing table.

TABLE 51. *External senses, their sensibles, and their anatomical localizations*

	SENSE	SENSIBLE	ORGAN	§§
1	touch <i>lams</i> <i>tactus</i>	heat and coldness, wetness and dryness, hardness and softness, roughness and smoothness, lightness and heaviness	entire epidermis and flesh; network of the nerves	383
2	olfaction <i>šamm</i> <i>olfactus</i>	odours	two outgrowths of the brain, similar to the two nipples of the breasts	384
3	hearing <i>samaʿ</i> <i>auditus</i>	sounds	nerve spread out in the furthestmost [part] of the auditory meatus; [ear]drum	385
4	taste <i>dawq</i> <i>gustus</i>	flavours	nerve spread out along the external [part] of the tongue	386
5	sight <i>bašar</i> <i>visio</i>	forms of things seen; colours and shapes	cavity where the [nerves of the] two eyes intersect in the anterior [part] of the brain	387-389

THE TOUCH | Arabic *al-lams*, Latin *tactus*.

A FACULTY UNROLLED IN THE ENTIRE EPIDERMIS AND FLESH | Arabic *quwwat^{um} mabtūtāt^{um} fī ġamī^d l-bašaratⁱ wa-l-laḥmⁱ*, Latin *virtus diffusa per omnem cutem et carnem*. JANSSENS 2019: 117 and fn. 122 remarks that the idea of the diffusion of the sense of touch throughout the body is a Ġazālīan addition with respect to the *DN*, although he references Avicenna's *Nağāt* (ed. DĀNİŞPĀŽŪH 1985: 322.16) «for a similar idea». BY MEANS OF WHICH THE HEAT [...] ARE PERCEIVED | The sensibles perceived by the sense of touch are arranged by al-Ġazālī in five couples of opposite qualities: (i) hot / cold, (ii) wet / dry, (iii) hard / soft, (iv) rough / smooth, and (v) light / heavy. In this respect, it is noteworthy to quote here a parallel passage from Avicenna's *K. al-Nafs* I.5, ed. RAHMAN 1959: 42.14-43.1, English transl. ALPINA 2021^a: 214-215:

It seems that for a group of people this faculty is not a final species, but a genus for four or more faculties, disseminated together all over the skin. [(i)] One [of these supposed faculties] makes judgements on the contrariety between hot and cold; [(ii)] the second makes judgements on the contrariety between moist and dry; [(iii)] the third makes judgements on the contrariety between hard and soft; [(iv)] the fourth makes judgements on the contrariety between rough and smooth;

except [R43] that their being gathered in one single organ gives the impression that they are one in essence.

The possible differentiation of the sense of touch in four different sensory faculties seems to be taken rather seriously by Avicenna in the *K. al-Nafs*, since there he presents, in the same chapter, two different enumerations of the external senses: «The perceptive [faculty] from outside are the five or eight senses» (RAHMAN 1959: 41.18-19, English transl. ALPINA 2021^a: 213 and see fn. 123 *ad locum*). The *MF* differs from the *Nafs* not only because this alternative possibility of classification of the external senses is not mentioned, but also because the couples of different sensible qualities perceived by the sense of touch are five in al-Ġazālī's text, and only four in Avicenna's one (heaviness and lightness being omitted in the *Nafs* of the *Šifā'*). The *DN* does mention however «pesanteur, légèreté» among the qualities perceived by touch: see ACHENA-MASSÉ (II): 56.29. A similar list of opposing sensory qualities is presented *supra*, *Physics* II, §335 in their hierarchy: hot/cold and wet/dry are primary qualities of the elements, while rough/smooth, heavy/light and hard/soft are derivative features coming from the primary ones (see also *ivi* Table 43).

THE SKIN | Arabic *ġild*, Latin *cutis*.

BY THE MEDIATION OF A FINE BODY [...] «SPIRIT» | JANSSENS 2019: 117 and fn. 123 remarks that the idea of the diffusion of the sense of touch thanks to a fine body (which is its «carrier» [Arabic *ḥammāl*, Latin *vehiculum*]) is a Ġazālīan addition, and he references Avicenna's *al-Adwiya al-qalbīyya* (BILGE 1937: 2.7-10) as a possible source. On vital spirit in the *MF* cf. also *infra*, *Physics* V.5, esp. §§433-434, where a more specific definition of *rūḥ* is given and some of its further functions are explored. In both cases, however, «spirit» is understood to be a «fine body» [Arabic *ġism laṭīf*, Latin *corpore subtili*]. This characterization, which is reminiscent of the Galenic notion of $\pi\nu\epsilon\upsilon\mu\alpha$ as opposed to the Aristotelian $\psi\upsilon\chi\eta$, is widespread among Muslim theologians, as argued for instance in JAFFER 2003: 167; see also LANGERMANN 2009 and GRIFFEL 2018. For the important reception of the Ġazālīan notion of spirit in Albert the Great (since the very beginning of his acquaintance with the Latin Algazel) cf. SIGNORI 2019: *Appendix*, quotations number [1], [2], [14], [214].

STREAMS | Arabic *yaġrī*, Latin *discurrit*.

IN THE NETWORK OF THE NERVES | Arabic *fi šubbākī l-ʿaṣabī* (collective noun rather than plural [*aʿṣāb*]), as in the previous occurrence of the term in §380), Latin *per compagines nervorum*.

THAT FINE BODY ONLY BENEFITS OF THAT POWER FROM THE BRAIN AND THE HEART | Arabic *wa-innamā yastafīdu dālika l-ġism^u l-laṭīf^u tilka l-quwwat^a min^a l-dimāġi wa-l-qalbⁱ*, Latin *Et hoc corpus subtile non acquirit, neque haurit [double translation?] virtutem hanc, nisi a corde et cerebro*. In agreement with the Latin translators, I have interpreted the Arabic *quwwa* as used generically, thus not in the technical sense of 'faculty'. More particularly, I intend *tilka l-quwwa* as the power or capacity of the spirit (the «fine body») to carry sensory information.

AS WILL BE EXPLAINED | The same tight association of brain and heart is also to be found *infra*, *Physics* IV.3, §413 and §419 (in her remark *ad locum*, ST. CLAIR 2005: 63 fn. 3 only refers to the first of these passages). Cf. also *infra*, *Physics* V.5, §433, where however only the heart (and not the brain) is mentioned as the relevant organ. The double presence of both heart and brain in these passages may be the vestige of Avicenna's attempt at conciliating Aristotle's cardiocentric position (with the brain as mere coolant of the hot blood) and Galen's opposite cerebrocentric theory: for a quick presentation of the issue from the viewpoint of the history of medicine see SMITH 2013. A manifestation of this Avicennan tension can be for instance the following: despite his typical emphasis on the ventricular (and thus cerebral) localization of the inner faculties, in the psychological section of his *K. al-Naġāt* Avicenna makes an (Aristotelian) point for the priority of the heart as organ of the higher mind functions; see the English translation of the passage in RAHMAN F. 1952: esp. 66.32-34.

RESEMBLANCE | Arabic *šabah*, Latin *in simile apprehensi*.

[§384] D350.13-351.3

The paragraph deals with the sense of olfaction (1.2), by providing a discussion of its localization and of the way in which odours are transmitted in the air. For reprises of al-Ġazālī's remarks on olfaction in Albert the Great's *De homine* see SIGNORI 2019: 538-539, nn. [23]-[24]. A brief discussion of the example of vultures presented in this paragraph, in its reprise by Moses Narboni, can be found in IVRY 2015: 285-286.

THE OLFACTION | Arabic *šamm*, Latin *olfactus*. (1.1.2)

IN TWO OUTGROWTHS OF THE BRAIN, SIMILAR TO THE TWO NIPPLES OF THE BREASTS | Arabic [*zā'idatay*] *bi-ḥalamatay tadīyayni*, Latin *in duabus carunculis cerebri quae sunt similes summatibus uberum*. The identification of the seat of olfaction with what are modernly called the olfactory bulbs is one of the main achievements of Arabic theories on the sense of smell, together with the transmission of odours through air and vapours: for an overview of Arabic sources on the issue cf. ROBINSON 2019: 65-66. The first anatomic designation of the olfactory «breasts» is attributed to Avicenna by PALMER 1993, but this onomastic paternity in the field of anatomy is now disputed; cf. ROBINSON 2019: 67 for further information.

ODOURS | Arabic *rawā'ih* (sg. *rā'ihā*), Latin *odoribus*.

mixed or mingled | Arabic *yamtaziḡu aw yaḥtalītu*, Latin *permiscentur*.

IT DOES NOT FOLLOW | Arabic *laysa yalzamu*, Latin *non sequitur*.

IT IS PREDISPOSED TO ITS RECEPTION BY THE BESTOWER OF FORMS | For a list of occurrences of the notion of *wāhib al-ṣuwar* within the text of the *MF* cf. *supra*, *Metaphysics* V, §302. The function performed by the Giver of forms in this instance is that of predisposing the air to the reception of the odour, on the occasion of the proximity of the air with an odorous thing. This seems at least in part different from what JANSSENS 2002: 553 and fn. 12, following DAVIDSON 1992: 79, notices about the role of the 'Giver of forms and powers' in the *al-Afāl wa-l-inf'ālāt* (on which cf. *supra*, *Physics* II, §350), when he says that «it seems that even tastes and odours figure among these characteristics and powers» (*i.e.* those coming from the Giver of forms and received in a body «by its very perfect physical constitution»; JANSSENS 2002: *ibidem*). As a matter of fact, that kind of reception seems to apply to the odorous thing itself – which is reasonably such and such due to its complexion or temperament –, while what is here at stake is the transmission of the odour to the air (which is certainly not predisposed in itself to be odorous, and much less so due to its own *mizāḡ* – a contradiction in terms when it comes to a simple element such as air). Thus, the function that al-Ġazālī attributes here to the bestower of forms seems at least in part peculiar. For an only partially analogous case, concerning the sense of sight and the occurrence of the form of the seen thing, cf. *infra*, §388.

TRANSFER OF THE ACCIDENTS | Arabic *intiḡāl al-a'rād*. The pericope on the impossibility of the *intiḡāl* of the accidents is not translated into Latin.

THE GREEKS HAVE ALREADY REPORTED [...] UP TO THAT LIMIT. | Under the generic epithet of «the Greeks» [Arabic *yūnāniyyūna*, Latin *Graeci*], al-Ġazālī – following Avicenna in the *DN* – is remotely quoting Aristotle *qua* zoologist, since the anecdote concerning the sudden appearance of vultures [Greek sg. γύψ, Arabic *raḡam(a)*] on remote battlefields is to be found in the *Historia animalium*: cf. *Hist. anim.* VI.5, 563^a5 ff.; medieval Arabic translation of the passage in FILIUS 2019: 135(245).18-136(246).5. This zoological fact provided Avicenna with material useful to substantiate the generic affirmation, found in Aristotle's *De anima* II 421^b8-13, that «some» animals – but there perhaps only *water* animals – «come upon food from far away, having been guided by smell» (transl. SHIELDS 2016: 42). The connection between the arrival of vultures in the presence of corpses and their sense of smell was already made in Avicenna, *K. al-Šifā'*, *K. al-Nafs*, II.4, ed. RAHMAN 1959: 78.16-79.8; it was repeated in the *DN* and consequently in this passage of the *MF*, and it then had a wide fortune in Latin thought,

also due to its reprise in Averroes' Long Commentary on Aristotle's *De anima*, c. 97, ed. CRAWFORD 1953: 277.39-43; 278.49-50 (English transl. in TAYLOR-DRUART 2009: 215). A particularly significant connection of the zoological and the psychological strand of this tradition is to be found in Albert the Great's treatises *De anima* (ed. STROICK 1968: 135.20-51) and *De animalibus* (see esp. VI.1.6, ed. STADLER 1920: 459.1-25), where Albert references back his own psychological treatment of the olfaction for explanation of the vultures' behaviour. I plan to further explore the fascinating history of this notion, widespread throughout the Middle Ages, in a future contribution that is currently under preparation. Cf. also *supra*, Introduction, §1.8.1.2 for a brief discussion.

HAVE ALREADY REPORTED | Arabic *qad ḥakà*, Latin *iam...dixerunt*.

BY VIRTUE OF THE ODOUR OF THE CORPSES | Arabic *bi-rā'ihāt l-ḡiyaf* (sg. *ḡifa*), Latin *propter odorem ex cadaveribus*.

THE VULTURE | Arabic *raḥama*. The ornithological term is rendered generically into Latin as *quaedam avis* (ST. CLAIR 2005: 64.1).

TWO HUNDRED PARASANGS | Arabic *'alà mi'atay farsaḥ^h*. The distance from which the vultures would have flown to the corpses is the distance at which animals endowed with an exceptional sense of smell might perceive odours; it is thus also a good empirical (although theoretically unsure) measure of just how far odours can be transmitted through the medium of air. If we take a reasonably average measure of the variable parasang (cf. *supra* the commentary to *Metaphysics* I.1, §115) and fix it at 5 km, it seems however that the measure of 200 parasangs here given is quite unrealistic. In the further Latin sources that make use of the example (cf. *supra* in this paragraph, and the Introduction, §1.8.1.2), as well as in the Latin translation of this passage (*per ducentas leugas*) the measure is usually given in leagues, and it also varies, making it difficult to ascertain the point.

BATTLEFIELD | Arabic *ma'raka*, Latin *locum proelii*.

BIRDS | Arabic *ṭayr*, Latin *avium*.

STIMULATION | Arabic *infi'āl*, Latin *passionem*.

OF ITS RECEPTION | *scil.* of the air.

IT IS NOT POSSIBLE THAT ITS PARTS SPREAD | Arabic *lā yumkinu an tantašir^a aḡzā^h-hu*, Latin *aliter non posset intelligi...possit diffundi*. The Latin translation misinterprets the sentence by adding *aliter* ('otherwise'), and thus implying that the parts of vapour did indeed spread for that distance. The Arabic original seems rather to envisage a different situation, in which air transmits odours by successive stimulation(s).

[§385] D351.4-end of page

(1.3) The paragraph deals with the sense of hearing and its sensible object, sound. A definition of sound is given. Moreover, the phenomenon of the echo is explained through a comparison with the propagation of the waves or ripples of water in a container, when a stone is thrown into it.

HEARING | Arabic *sama'*, Latin *auditus*. The entire pericope of text from «it is a faculty» up to «perceives the sound» is omitted into Latin, which simply reads *auditus fit per sonum*, a text much abridged and even somewhat imprecise. The omission is an important one, which might be due to the anatomical difficulty of the Arabic text (cf. *infra* the technical terminology for 'auditory meatus' and 'eardrum').

SPREAD OUT | Arabic *mafrūša*.

AUDITORY MEATUS^{1,2} | Arabic *šimāḥ^{1,2}*, Latin *in profundo concavitatis²*.

EXTENDED | Arabic *mamdūda*.

OVER THE [EAR]DRUM | Arabic *ṭabl*. WEHR 647^b attests *ṭabla al-udun* as the proper expression to indicate the ‘eardrum’ or ‘tympanic membrane’, while *ṭabl*, as registered *ivi*, 647^a, properly means only ‘drum’.

VIBRATION | Arabic *tamawwuġ*, Latin *undationem*. The passage constitutes a veritable definition of sound, which could have systematic relevance in an Avicennan encyclopaedia of philosophy with respect to the section devoted to music. Such a section is absent however in the *MF*, which omits all treatment of mathematics.

VIOLENT MOVEMENT | The idea that sound must be produced by a «violent» (or ‘intense’) [Arabic *šadīda*, Latin *ex motu fortissimo*] movement is repeated several times in this passage: compare the following expressions «harshness» [*ʿunf*] and «vehemence» [*ḥidda*] – which qualify the *per se* forceful actions of «striking» [Arabic *qarʿ*, Latin *percussione*] and «plucking out» [Arabic *qalʿ*, Latin *separation*], respectively –, and later again «violence» [*šidda*], used to describe the quick escape (verb *infalata*) of air away from two bodies that «knock together» [*ištakka*]. Compare *supra*, *Physics* III.4, §372, the analogous account of the genesis of thunder as a sound produced by violent motion.

MOTIONLESS | Arabic *rākid*, Latin *quiescentem*. Also: ‘stagnant’.

RINGING | Arabic *ṭanīn*, Latin *tinnitus*. JANSSENS 2019: 117 remarks that the mention of the ringing is a Ġazālīan addition, although he interprets the passage as giving «the description of the ringing in the ear... as due to the arrival of a motion in the tranquil air of the meatus». It rather seems to me that the text is providing here a general explanation of how hearing works, *i.e.* a parallel between the ‘ringing’ – that is, the vibrations – occurring in the eardrum in the auditory meatus and the same ‘ringing’ occurring in a musical drum. JANSSENS *ivi* fn. 124 references Avicenna’s *K. al-Nafs*, ed. RAHMAN 1959: 82.2-4, for a «support» of the idea here expressed.

AS – WHEN THERE IS SOME WATER IN A CUP [...] THERE [COMES] THE ECHO. | The situation envisioned in this syntactically not easy passage, which aims to give a visible analogy for the auditory phenomenon of the echo, is the very same described, in poetry, in these beginning lines of Dante’s *Paradiso* XIV 1-3: «Dal centro al cerchio, e sì dal cerchio al centro / movesi l’acqua in un ritondo vaso, / secondo ch’è percosso fuori o dentro» («From centre unto rim, from rim to centre, / In a round vase the water moves itself, / As from without ‘tis struck or from within», transl. Longfellow, available online). Cf. in particular the expression «it turns [*in’atafat*] toward the middle [Latin *qui mox percussus ab eis redit ad medium*]]».

THE EXTREMES OF THE CUP | Arabic *aṭrāf al-ṭās*, Latin [*usque ad*] *extremitates pelvis*.

THE ECHO | Arabic *al-šadā* (Indeterminato *šadan*, nome in *an.*), Latin *tinnitus* [!] (already used for *ṭanīn* immediately *supra*).

CONTINUOUS SEQUENCE | Arabic *talāḥuq*, Latin *propter longam repercussionem*.

TURNING | Arabic *in’iṭāf*.

ITS EXTENSION BY ADDITIONS | Arabic *tazayyudʿ-hu*, untranslated in Latin.

TUB | Arabic *ṭašt* (or *ṭišt*), Latin *in pelvi* (the same term already used for *ṭās* immediately *supra*)

IN THE BATH | Arabic. Examples involving the tradition of the *ḥammām* are quite frequent in the *MF*: cf. *supra*, *Logic* IV, §66 and *Physics* III.3, §365, and *infra*, *Physics* V.5, §434.

IN THE YELLING UNDER THE MOUNTAIN | Arabic *wa-l-šarīḥ taḥta l-ġabalʿ*, untranslated in Latin.

[§386] D352.1-3

(1.4) The short paragraph deals with the sense of taste.

TASTE | Arabic *dawq*, Latin *gustus*.

SPREAD OUT ALONG THE EXTERNAL [PART] OF THE TONGUE | Arabic *mafrūša ‘alà zāhir’ l-lisān*, Latin *attributa nervo expanso in exterior superficie linguae*. Cf. *infra* in this same paragraph the analogous expression «surface» [*zahr*] of the tongue.

BY THE MEDIATION OF THE SALIVARY WETNESS | Arabic *bi-wāsitat’ l-ruṭūbat’ l-lu‘ābiyyat’*, Latin *mediante humiditate salivae* (against ST. CLAIR 2005: 65.122, who prints *suavi*, most likely a misreading for *saliv(a)e*).

FLAVOUR | Arabic *ṭa‘m*, Latin *saporis*.

SPREAD | Arabic *munbatta*, Latin *diffusa*.

[§387] D352.4-11

(1.5) This paragraph introduces the treatment of the sense of sight, far longer and more detailed than that of the other four senses. Aristotle’s theory will be presented at §§387-389. On Avicennan optics and his doctrine of vision cf. MCGINNIS 2013^b.

SIGHT | Arabic *baṣar*. As in the case of hearing (see *supra*, §385), also in this paragraph the first sentence of the text, full of anatomical details (from «As for the sight» to «of the brain») is omitted in the Latin translation.

MUCH-ACCOMPLISHING | Arabic *darrāka*. The root of the curious term is the same commonly used for perception, and precisely the perceived objects of sight are then listed: the «colours» [*alwān*] and the «shapes» [*aškāl*]. The same two items were mentioned *supra*, *Metaphysics* I.1, §131 as main examples of things belonging to the category of quality.

LOCATED IN THE CAVITY [...] THE BRAIN | JANSSENS 2019: 117 and fn. 125 remarks that the specification of the location of the sight is a Ġazālian addition with respect to the *DN*, although he references Avicenna’s *K. al-Nafs*, ed. RAHMAN 1959: 156.15 for Avicennan support.

«VISION» | Arabic *ibṣār*, Latin *visio*.

IMPRESSION | Arabic *inṭibā‘*, Latin *sigillatio*.

GLACIAL WETNESS OF THE EYE | Arabic *fī l-ruṭūbat’ l-ḡalīdiyyat’ min al-‘ayn*, Latin *in humore oculi cristalleido*. As documented by the ALGloss, s.v., the Arabic term is not registered in the principal dictionaries and lexica of the Arabic language. It designates the crystalline humour (or crystalloid) of the eye. Cf. LINDBERG 1976: 51 and HASSE 2000: 121. The crystalline, in connection with its Arabic derivation from *ḡalīd*, ‘ice’, is here compared precisely to it, as well as to «hail» [Arabic *barad*, Latin *grandini*] – for which cf. *supra*, *Physics* III.3, §367 – and to «frozen water» [Arabic *ḡamad*, Latin *glaciei*].

BY THE INTERPOSITION OF A DIAPHANOUS BODY | Arabic *bi-tawassuṭ’ ḡismⁱⁿ ṣaffā^{fn}*, Latin *cum fuerit medium inter ea corpus pervium illuminatum*. The reading *corpus parvum* (!) *illuminatum* (‘illuminated little body’, instead of ‘diaphanous’) as printed by ST. CLAIR 2005: 65.130-131 is a clear mistake and must be emended.

[§388] D352.12-21

The paragraph develops the doctrine of vision, distinguishing between the predisposition to the obtainment of the perceived form – which occurs when a perceivable faces a perceiver with a diaphanous body between the two –, and the proper obtainment of it, bestowed upon the perceiver by the Giver of forms. The anatomical feature known as optic chiasm is presented, with the help of an illustration.

OBSERVER | Arabic *nāẓir*, Latin *in oculo videntis*.

PROPER OPPOSITION | Arabic *bi-l-muqābalat^l l-maḥṣūsat^l*, Latin *per oppositionem propriam*.

AS FOR ITS [ACTUAL] RESULTING, IT IS FROM THE BESTOWER OF THE FORMS. | For a list of occurrences of the notion of ‘bestower of forms’ in the *MF* cf. *supra*, *Metaphysics* V, §302. The role here played by the Giver of forms is somewhat similar to the one envisaged for it *supra*, §384, since in both cases what is at stake is a sensory experience. However, while in that case the bestower of forms was assigned the somewhat baroque task of giving the air its predisposition to the reception of an odour (in the absence of any ‘soul’ for the air), here it more plainly produces the actualization of the form of the seen thing in the soul of the observer.

VISUAL FACULTY | Arabic *quwwa bāṣira*, Latin *virtuti visibili*.

IN THE INTERSECTION [...] IN THE ANTERIOR PART OF THE BRAIN | Arabic *fī multaḡà al-‘aṣabatayni al-muḡawwifatayni al-nābīṭayni min muqaddim al-dimāḡ*, Latin *in coniunctione duorum nervorum concavorum, qui sunt in anteriore parte cerebri*.

ACCORDING TO THIS FIGURE | For the figure of the so-called optic chiasm in the Arabic tradition of the *MF*, and its absence in the Latin tradition of the work, cf. *infra*, *Appendix 2*.

THE SOUL, THEN, PERCEIVES IT | *i.e.*, the (resemblance of the) form.

LIKE THE EXPOSITION ON [THIS] WILL FOLLOW | Cf. *infra*, *Physics* IV.2.2, §394, devoted precisely to the «exposition» [*ṣarḥ*] of the common sense and its functions.

IF THE MIRROR HAD A SOUL [...] WOULD RESULT IN IT | The form of the object placed in front of a mirror could be said to be ‘seen’ by the mirror if it just had a soul endowed with the faculty of perceiving (thus, an animal soul, since vegetals do not perceive: cf. *supra*, §379 and Table 50 for the faculties proper of the animal soul). Vision, then, is nothing but a mechanical process of reflection, with the added awareness of the perceiving and ‘reflecting’ subject. This process is however also said to be completed by the intervention of the bestower of forms (*supra*, at the beginning of this paragraph), which adds a layer of complexity to the account.

[§389] D352.22-353.23

With the help of a diagram depicting the so-called ‘cone of vision’, the paragraph explains the reason why we see objects farther away smaller than closer objects. In the simplest case, the seen object is circular, so that the cone of vision is properly a cone; in the case of more irregular objects of vision, the ‘cone’ will have an accordingly more irregular basis (corresponding to the shape of the seen item). A final reference connects this cursory treatment to the wider one generally provided by mathematical optics, while the closing remark explicitly mentions Aristotle as the source of the aforementioned doctrine of sight and vision. Cf. RAHMAN F. 1952: 28-29 for a parallel passage in Avicenna’s *K. al-Naḡāt*; interestingly, Rahman’s note *ad locum* (*ivi*: 77) characterizes the entire argument as «post-Aristotelian» and having its source in Alexander of Aphrodisias’ *Commentary* on Aristotle’s *De anima* II (*Mantissa*), ed. BRUNS 1887: 127-130. Thus, the final explicit nominal reference to Aristotle might need to be considered as a restriction to the sole master of a doctrine globally developed – on the basis of original indications – by some of his followers and commentators.

SPHERICAL | Arabic *kuriyya*, Latin *sphaericus*.

A CIRCULAR SURFACE | Arabic *saḥ^{am} mustadīr^{am}*, Latin *rotundam superficiem* (St. Clair *superficiam* [!]). The simplest case of object of sight, given as basic example for the understanding of the theory, is a circular «shield» [Arabic *turs*, Latin *ancile*].

LAYER [*ṭabaqa*] of the eye from [D353] the air, until it ends up in the visual/seeing spirit [*rūḥ bāṣir*] > CONIC IN SHAPE | Arabic *maḥrūt al-šakl*, Latin *secundum figuram pyramidis rotundae*. The air which is «stimulated» [Arabic *munfa'al*, Latin *haec oppositio* (!)] by the process of vision has the form of a cone. As a matter of fact, the «perceived» [*mudrak*] object – or better its «surface» [*saḥ*] – represents the «basis» [Arabic *qā'ida*, Latin *basis*] of the cone, while its «vertex» [Arabic *ra's*, Latin *caput*] is the watching eye (in the text the visual or «seeing spirit» [*rūḥ bāṣir*]; see also *infra*).

SEEING SPIRIT² | Reading again *rūḥ bāṣir*, as immediately *supra*, instead of Dunyā's obvious misprint

سياسر

ITS VERTEX IS A THREE-DIMENSIONAL ANGLE, WHICH IS IN TRUTH THE PERCEIVER | The sentence is left untranslated in Latin.

THREE-DIMENSIONAL ANGLE | Arabic *zāwiya muğassama* (lit. 'bodily', 'embodied').

LENGTHENS | Arabic *ṭāla*, Latin *elongatur*.

PUPIL | Arabic *ḥadaqa*, Latin *centro oculi*.

ITS VERTEX IS MADE THIN | Arabic *yudiqqu*, Latin *angulus strictior*.

IS WITHDRAWN | Arabic *yağibu*, Latin *absentabitur*.

THIS IS ITS FIGURE | For the various versions of this figure in the *DN* and *MF* cf. *infra*, Appendix 2. The figure is by contrast absent in the Latin tradition of the *MF*, together with the reference formula that indicates it and with the following pericope of text («If the seen [object] were not circular [...] [more] angles»). As noticed by MCGINNIS 2013^b: 49, it is interesting that Avicenna – and with him al-Ġazālī in the *MF* – explains «the apparent size of a visible object in terms of the angular separation between the visual rays coming from the object's extremes», because «this is the very account that geometrically inclined optical theorists, such as Euclid, Ptolemy and al-Kindī, had given to explain differences in apparent size». On these thinkers' optical theories cf. LINDBERG 1976 (chapters 1-2); cf. also the explanation of Ibn al-Hayṭam's (Latin Alhazen) visual pyramid in LINDBERG 1967: 329. Ibn al-Hayṭam's account, which retains the Euclidean-Ptolemaic geometrical understanding of optics while rejecting their extramissive theory of vision (and thus subscribing rather to an intromissive account), is the closest to the Avicennan theory expounded here by al-Ġazālī.

SURROUNDED BY SIDES [...] OF THE SEEN OBJECT | The text envisages here a more complicated case than the basic one just presented, *i.e.* the case of a non-circular object of sight. The expression «surrounded by sides and angles» [Arabic *yuhīṭu bi-hi adlā' wa-zawāyā*] would thus mean anything from 'polygonal' to 'irregular in shape'. According to Wehr *ḍil'* or *ḍila'* means specifically 'side (of a triangle)', but this is of course too narrow in the given context. Also in the case of a non-circular shape, the form of the stimulated air is said to be a «conic shape» [*šakl^{am} maḥrūt^{am}*], although the resulting solid would rather be, properly speaking, a pyramid. Even in modern geometry, however, a pyramid is sometimes intended as a cone with a polygonal basis, with a generic usage of «cone» which seems in keeping with al-Ġazālī's formulation in the *MF*. By contrast, Latin translations of Arabic texts usually employ *pyramis* also when a proper cone in the narrower sense is at stake: cf. LINDBERG 1967: 329 fn. 40.

THE SCIENCE OF THAT IS INQUIRED [...] AMONG THE MATHEMATICS | As noticed by JANSSENS 2019: 117, this – by the way structurally elaborated – reference to optics is a Ġazālīan addition. ST. CLAIR 2005: 66 and fn. 9 takes the reference, which might well be a generic hint as the science of optics, to be instead title-specific (as she prints it in italics: «in *Libro de aspectibus*»). Accordingly, she quotes as a source a specific treatise of optics by another author, Ibn al-Hayṭam (Latin Alhazen): «Alhacen (*sic*), *Libro (sic!) de aspectibus* VI, 18-39 (ed. Smith, vol. I, 20-21)». While the source – the main treatise of Arabic optics – could indeed be adduced as a parallel, it is unlikely that al-Ġazālī's original reference to optics should be intended as referring specifically to al-Hayṭam, given the unambiguously Avicennan character of the entire passage.

BUT IN THIS MEASURE IT IS SUFFICIENT FOR OUR GOAL | Cf. also *supra*, *Physics* III, §375, for an analogous statement aimed at avoiding prolixity in the treatment of problems that lie partially outside the scope of the *MF*, which is then consciously conceived by its author as a short, concise philosophical encyclopaedia. In this case, the reference to the aim of the treatise («for our goal») usefully clarifies the reason why digressions are systematically avoided in the work.

THIS IS WHAT I ESTABLISH IN THE VIEW OF ARISTOTLE | Arabic *wa-hādā allādī astaḡirru ‘inda Aristātālīs*, Latin *Et haec sententia est Aristotelis de hoc*. Given that the source of the argument is in all likelihood Alexander of Aphrodisias' *Commentary* on the *De anima*, in the second book commonly known as *Mantissa* (cf. *supra* in the introduction to this paragraph; the passage of Aristotle's *De sensu et sensato*, 440^a15-18 referenced by ST. CLAIR 2005: 67 fn. 10 has little or nothing to do with our text), the explicit nominal reference to Aristotle at this point might rightly seem at least in part misplaced. While the attribution to Aristotle of some doctrine of his Peripatetic followers is in general very common in the later tradition, and thus cannot be ruled out *a priori* as the most likely explanation of this asset of the text, the presence of the preposition *‘inda* might also be important. The Arabic wording might indeed not be equivalent to a more specific *fi* ('in' Aristotle), but it might rather be also used to express the wider (and here more accurate) idea of establishing a doctrine 'according to the (general) view of Aristotle' – and thus, one would say, 'in a Peripatetic fashion' –, rather than according to the very words of the master himself. In this sense, the origin of the doctrine in Alexander would appear less problematic. Cf. also *supra*, Introduction, §1.6.1 and Table 9.

[§390] D353.24-354.5

The paragraph presents the standard extramission theory of vision, according to which vision takes place thanks to rays extending from the eyes to the seen object. This doctrine, contrary to the idea of a reception of the form of the seen object in the eye, is presented as maintained by Aristotle's predecessors.

[THOSE] WHO WERE BEFORE HIM | Arabic *man qabla-hu*, Latin *qui...precesserunt eum*.

IT IS INEVITABLE THAT THERE IS A CONJUNCTION [...] TO RESULT | The notion of «conjunction» [Arabic *ittiṣāl*, Latin *continuationem*] is used here in a concrete sense to indicate the material connection that must be established between the «sense» [Arabic *ḥiss*, Latin *sensum*] – *i.e.*, the organ of sense – and the «sensed» [*maḥsūs*] in order for any «sensation» [Arabic *iḥsās*, Latin *sentio*] to occur.

SINCE IT IS IMPOSSIBLE [...] UP TO THE EYE | Synthetical presentation of the intromissive theory; see *supra* [1.1.5.a].

VISIBLE [THING] | Arabic *mubṣar*, Latin [*a*] *viso*.

IT IS INEVITABLE [...] BY ITS MEDIATION | The sentence offers the standard presentation of the extramissive theory; see *supra* [1.1.5.b].

VISION | Arabic *ibṣār*, Latin *visio*.

STRETCH | Arabic *tansabītu*, Latin *dilatabitur*. The VII stem of the root *s-b-ṭ* is not attested in either Wehr or Lane (which however attributes to the IV stem the meaning here adopted).

SPHERE | Despite the celestial understanding, the Arabic term is here *kura* instead of *falak* (normally used for the heavenly orbs).

OF THE SKY? | The needed question mark is absent in *Dunyā*.

[§391] D354.6-9

The paragraph presents an opinion – attributed to certain ancient physicians – against the standard case of extramission explained in the preceding §390, according to which vision would take place thanks to the conjunction of the rays departing from the eyes and from the object of vision in the air. This would be tantamount to say that the air is the instrument of vision, a thesis which will be countered in the following §392.

A PARTY AMONG THE PHYSICIANS | Arabic *ṭāʾifa min al-aṭibbāʾ*, Latin *quidam medicorum*.

HAS FOUND [...] REPUGNANT | Arabic *istabšaʿa*, Latin *viderunt hoc esse absurdum*.

THEY EMPLOYED ARTFUL MEANS | Arabic *iḥtālū*, Latin *adinvenerunt aliud modum*. Or: ‘they resorted to tricks’.

[BECAUSE OF] THEIR COMBINATION WITH THE RAYS OF THE AIR | Arabic *wa-ṣtibāk^l-hi bi-ṣuʿā^q l-hawā^x*, Latin *quia colligate sunt radius et aer*.

IN LESS THAN THE BLINK OF AN EYE | Arabic *fī aqall^a min ṭarfati l-ʿayni*, Latin *citius quam in ictu oculi*.

GATHERING | Arabic *ǧumūʿ*, Latin *et sic coniuncti*.

AN INSTRUMENT | Arabic *āla*, Latin *unum instrumentum*.

[§392] D354.10-355.5

The paragraph presents a refutation in three points of the doctrine of the physicians (§391), and in particular of its foremost consequence, *i.e.* the consideration of air as tool or organ itself of the vision. (i) The first argument is that, should air be an instrument of vision, shortsighted people should improve their power of sight when in group, because many eyes would in that case transfer their vision rays to the surrounding air. This, however, is counterfactual. (ii) The second argument aims to invalidate the existence of the rays themselves, showing that their assumption – either if they are considered as accidents or as substantial bodies – has unwanted consequences for the explanation of vision. (iii) The third argument shows a further unwanted consequence of extramission rays, *i.e.* the impossibility to explain the variation in size in function of the distance (for which cf. *supra* §389).

THE FIRST ONE [...] BRIGHTNESS OF THE LAMP. | For this first argument against the combined intramission-extramission theory cf. also Avicenna, *K. al-Šifāʾ*, *K. al-Nafs* III.5, ed. RAHMAN 1959: 121.9-end of page.

PRODUCES VISION | Arabic *mubṣir*, Latin *faciat videre*.

AS, FOR INSTANCE, THE PUPIL [DOES] | Omitted in Latin.

AT THAT TIME | Arabic *ḥīnaʾiḍ^m*, Latin *quotiens*.

A GROUP OF PEOPLE | Arabic *ǧamāʿa*, Latin *multi*.

ARE TOO WEAK FOR TRANSFORMING | Arabic *daʿufa ʿan iḥāla*, Latin *esset debilis ad convertendum*.

HAD RECOURSE TO | Arabic *yastaʿīnu* (X stem of the root ʿ-w-n, cf. WEHR 772^a), Latin *adiuvaret*.

WITH THE BODY OF THE EYE | Here: *ǧirm*. While *badan* usually refers to the human body, and *ǧism* is the most generic term, the text uses here the third possibility, *ǧirm*, to describe the eyeball. Elsewhere in the *MF*, however, *ǧirm* appears used in particular to describe the celestial bodies: cf. *supra*, *Metaphysics* IV.b.2.3, §277.

THE SECOND RESPECT INVALIDATES [...] WOULD BE PREVENTED. | The second argument aims to eliminate the possibility itself of the existence of rays, by arguing that they are neither accidents (a) – because

otherwise they could not be transferred –, nor bodies (b). Bodies are supposedly the only kind of substances that rays are thought to possibly be, because otherwise the argument would not exhaust all the alternatives, and thus would be incomplete and invalid. The rays cannot be bodies because if they were, they would either (b.2) remain conjoined with the eye, or (b.1) disjoin themselves completely from it. In the first case (b.2), they would either (b.2.1) «scatter» all around the eye, making it impossible to focus a distinct image; or else (b.2.2) they would extend like straight lines from the eye to the seen object. In this latter case they would however be deflected by intervening factors such as wind, thus pointing to, and making visible, items that are not in front of the eye but elsewhere, which is clearly counterfactual.

THE SECOND RESPECT INVALIDATES THE ROOT [ITSELF] OF THE RAYS | For a somewhat similar reasoning against the idea that rays should be hot bodies – and bodies in the first place – cf. already *supra*, *Physics* II.3, §§344-346.

EXTENDING THEMSELVES LIKE LINES | Arabic *mumtadd^m miṭla l-ḥuṭūt*, Latin *extensus sicut lineae*.

OR IT WOULD BE NECESSARY | Reading *aw* («or») instead of *wa-* ('and') as in *Dunyā*.

FELL DOWN | Arabic *habata*, Latin *impelleret*.

IT WOULD MAKE IT INCLINE [...] STRAIGHTNESS | If the rays were material lines connecting the observer with the visible thing, a material factor altering their path, like for instance a gust of wind, would produce an inclination in them [Arabic *amālat-hu*, Latin *intorqueretur*] and thus an alteration of their «straightness» [*istiḡāma*].

WHAT IS NOT ACCORDING TO THE OPPOSITION TO IT | *i.e.*, more simply, in front of the eye.

VISION | Here: *ruṣṣa*, as more commonly *infra*, *Physics* V, when the discussion will be focused on dream-like and prophetic visions.

CONFORMABLE | Arabic *muṭābiq*, Latin *coaequatur*.

AS IT WAS SAID BEFORE | The reference is to §389 *supra*, where the perceived difference in size of the objects of sight in function of their distance from the observer was explained precisely through a «cone» of vision (cf. Figure 10).

[§393] D355.6-end of page

The paragraph, which concludes the section on the external senses (§§383-393), presents the distinction between proper and common sensibles and a list of both kinds. Perceptual errors in common sensibles are said to be more frequent than analogous mistakes concerning the proper ones. For a brief but valuable introduction to the problem of common sensibles in Aristotle cf. OWENS 1982.

FIVE OTHER MATTERS ARE PERCEIVED | The common sensibles are typically five in Aristotle, as well, although the Aristotelian standard enumeration presents some differences with respect to this Arabic elaboration. In *De anima* 418^a17-18 (425^a15-16) and *De sensu et sensato* 442^b5-6, as a matter of fact, the common sensibles [αἰσθητὰ κοινά] are listed as movement, rest, number, shape, and size, while *De memoria et reminiscentia* 450^a10 also includes time. Whereas the latter has no place in the list given in the *MF*, size (b.1), number (b.3), shape (b.4), and movement and rest – together as (b.5) – are all considered in al-Ġazālī's text, which adds moreover distance (b.2), absent in both Aristotelian enumerations. Shape is exemplified with the cases of «roundness» [*istidāra*] and «squaredness» [*tarbī*], *i.e.* 'being round', 'being square'.

THE ACCESS THAT ERROR [...] PRINCIPLES | Perception errors concerning the common sensibles are more frequent than those concerning the proper sensibles. For the Aristotelian background of this notion, the problems arising from it, and an attempt at solving them through Alexander of Aphrodisias' interpretation, cf. JOHNSTONE 2015. From the point of view of technical lexicon, it is noteworthy here

that the counterposition holds between root-principles [*uṣūl*], and the things ‘following’ from, and depending on, them (*i.e.* the «appurtenances» [*tawābiʿ*, sg. *tābiʿa*], from the root of the verb *tabiʿa*, ‘to follow’). Indeed, the common sensibles are somewhat derivative with respect to the proper ones, since they are perceived by more than one sense, as opposed to the proper sensibles. On this, and the medieval criteria of distinguishing the ones and the others, cf. PASNAU 2000: esp. 28-29, who proposes *inter alia* to consider the proper sensibles proper (or ‘special’) precisely because they individuate the five senses (that is, the one-to-one correspondence of senses and proper sensibles has its *primum* in the proper sensibles, and not in the senses; hence also the derivativeness of the common sensibles. On this cf. also SORABJI 1971). The Latin text as edited by ST. CLAIR 2005: 68.203-204 («et plus erratur in istis sequentibus quam in *multis* radicibus», emphasis added) must certainly be corrected, on the basis of the Arabic, in «et plus erratur in istis sequentibus quam in *illis* radicibus», following the reading of ms. O [Biblioteca Apostolica Vaticana, Ottob. lat. 2186].

THE ACCESS THAT ERROR GAINS | Arabic *taṭarruq al-ḡalaṭ*, Latin [*plus*] *erratur*.

[§394] D356.1-12

The paragraph introduces the section on the internal senses, by mentioning them and by giving some preliminary information on the first of them, *i.e.* the common sense. The lexicon employed to refer to the internal senses is extremely rich and differentiated in Avicennan contexts, and the *MF* is no exception to this rule. On the internal senses see at least WOLFSON 1935, DI MARTINO 2012, PORMANN 2013.

TABLE 52. *Functional classification of the internal senses*

	forms [<i>ṣuwar</i>]	notions [<i>maʿānī</i>]
receptive faculty [<i>qābila</i>]	common sense [1]	estimation [4]
retentive faculty [<i>ḥāfiẓa</i>]	faculty of forms or [retentive] imagination [2]	memory [5]
faculty of composition [<i>tarkīb</i>] and division [<i>tafṣīl</i>]	imaginative (animals) [3a] / cogitative (human beings) faculty [3b], or [compositive] imagination [3]	

TABLE 53. Arabic and Latin terminology for the internal senses in the MF

	ARABIC		LOCUS			LATIN
1	al-ḥiss al-muštarak [common sense]	الحس المشترك	<i>Phys.</i> IV.2	§382	348.21	<i>sensus communis</i>
			<i>Phys.</i> IV.2.2	§394	356.4	
			<i>Phys.</i> IV.2.2	§395		
			<i>Phys.</i> V.8	§441	379.22	<i>sensum communem</i>
			<i>Phys.</i> V.8	§441	379.23	<i>sensu communi</i>
			<i>Phys.</i> V.8	§441	379.24	<i>sensu communi</i>
			<i>Phys.</i> V.8	§441	379.25	<i>sensum communem</i>
			<i>Phys.</i> V.8	§441	380.2	<i>sensu communi</i>
			<i>Phys.</i> V.8	§442	380.6	<i>sensu communi</i>
			<i>Phys.</i> V.8	§442	380.7	<i>sensus communis</i>
			<i>Phys.</i> V.8	§442	380.10	<i>sensu communi</i>
			<i>Phys.</i> V.9-3	§450	383.21	<i>sensum communem</i>
			1	al-muštarak [common (sense)]	المشترك	<i>Phys.</i> V.8
2	al-ḥayāl [imagination]	الخيال	<i>Phys.</i> IV.2.2	§398	357.8	<i>phantasia</i>
			<i>Phys.</i> IV.2.2	§400	357.18	<i>phantasiam</i>
			<i>Phys.</i> IV.2.2	§400	357.22	<i>imaginativa</i>
			<i>Phys.</i> IV.3	§407	360.15	<i>phantasiam</i>
			<i>Phys.</i> IV.3	§407	360.16	<i>phantasia</i> (<i>phantasma?</i>)
			<i>Phys.</i> IV.3	§407	360.19	<i>phantasia</i>
			<i>Phys.</i> IV.3	§409	361.14	<i>phantasia</i>
			<i>Phys.</i> IV.3	§409	361.17	<i>phantasia</i>
			<i>Phys.</i> V.2	§427	372.19	<i>phantasia</i>
			<i>Phys.</i> V.5	§436	377.14	<i>phantasia</i>
			<i>Phys.</i> V.5	§436	377.16	<i>phantasia</i>
			[<i>Phys.</i> V.5	§436	377.18	<i>haec phantasia</i>]
			<i>Phys.</i> V.5	§436	377.21	<i>phantasiarum</i> (!)
2	al-ḥayāliyya	الخيالية	<i>Phys.</i> IV.2	§381	348.12	<i>phantasia</i>

	ARABIC		LOCUS			LATIN
2	al-muṣawwira [formative]	المصورة	<i>Phys.</i> IV.2.2 <i>Phys.</i> IV.3 <i>Phys.</i> V.8 <i>Phys.</i> V.8	§401 §407 §441 §441	358.3 360.19 379.22 379.23	<i>imaginativa</i> <i>imaginativa</i> <i>imaginativa</i> <i>imaginativa</i>
2	al-mutaṣawwira [(faculty) of the forms]	المصورة	<i>Phys.</i> IV.2.2 <i>Phys.</i> IV.2.2	§394 §395	356.5 356.13	<i>imaginativa</i> <i>imaginativa</i>
2	al-ḥāfiza [retentive]	الحافظة	<i>Phys.</i> V.5 <i>Phys.</i> V.6	§435 §437	377.5 378.5	<i>servatrix</i> <i>virtute conser-vatrice</i>
2	al-ḥifz [retention]	الحفظ	<i>Phys.</i> V.5 <i>Phys.</i> V.5 <i>Phys.</i> V.7 <i>Phys.</i> V.8	§436 §436 §439 §441	377.13 377.15 379.6 379.20	<i>memoria</i> (!) <i>in hoc</i> (!) <i>conservatrice</i> <i>conservante</i>
3a	al-mutaḥayyila [imaginative]	المتخيلة	<i>Phys.</i> IV.2.2 <i>Phys.</i> IV.2.2 <i>Phys.</i> IV.2.2 <i>Phys.</i> V.5 <i>Phys.</i> V.5 <i>Phys.</i> V.6 <i>Phys.</i> V.6 <i>Phys.</i> V.6 <i>Phys.</i> V.6 <i>Phys.</i> V.6 <i>Phys.</i> V.7 <i>Phys.</i> V.7 <i>Phys.</i> V.8 <i>Phys.</i> V.8	§394 §398 §401 §435 §436 §437 §437 §437 §437 §437 §439 §439 §441 §442	356.6 357.4 358.4 377.6 377.8 377.26 378.4 378.13 378.16 378.17 379.6 379.8 379.23 380.8	<i>phantasia</i> [cogitativa] <i>phantasia</i> [cogitatio] <i>phantasia</i> <i>virtus phantastica</i> <i>phantasia</i> <i>virtutis phanta-</i> <i>sticae</i> <i>phantasiae</i> <i>in phantasia</i> <i>virtus... phantastica</i> <i>ipsa</i> <i>phantasia</i> --- <i>phantastica</i> <i>phantasia</i>

	ARABIC		LOCUS			LATIN
			<i>Phys. V.8</i>	§442	380.10	---
			<i>Phys. V.9:3</i>	§450	383.15	<i>phantastica virtus</i>
			<i>Phys. V.9:3</i>	§450	383.16	<i>phantasia</i>
			<i>Phys. V.9:3</i>	§450	383.18	---
3a	al-muḥayyila [imaginative]	المخيلة	<i>Phys. V.8</i>	§441	379.21	<i>virtus phantasiae</i>
3a	al-ḥayāl [(compositive) imagination]	الخيال	<i>Phys. V.6</i>	§437	378.11	<i>phantasiae</i>
			<i>Phys. V.6</i>	§437	378.12	<i>phantasia</i>
3b	al-mufakkira [cogitative]	المفكرة		§398	357.9	<i>cogitativa</i>
				§399	357.10	<i>cogitativa</i>
3b	al-mutafakkira	المفكرة	<i>Phys. IV.2</i>	§381	348.12	<i>cogitatio</i>
4	al-wahm [estimation]	الوهم		§412		
4	al-wahmiyya [estimative]	الوهمية	<i>Phys. IV.2.2</i>	§394	356.7	
			<i>Phys. IV.2.2</i>	§396	356.19	<i>aestimativa</i>
			<i>Phys. IV.3</i>	§408	361.1	<i>aestimativa</i>
4	al-mutawahhima [estimative]	الموهمة	<i>Phys. IV.2</i>	§381	348.12	<i>aestimatio</i>
5	al-ḍākira [memorative]	الذاكرة	<i>Phys. IV.2</i>	§381	348.12	<i>memorialis</i>
			<i>Phys. IV.2.2</i>	§394	356.8	
				§397		
				§397		
				§401	358.3	<i>memorialis</i>

In the preceding table I have silently standardized the Latin spelling of terms, adding diphthongs and other conventional features of spelling (*e.g.*: *ph pro f*).

THE COMMON SENSE | Arabic *al-ḥiss al-muštarak*, Latin *sensus communis*. (1.2.1) The analysis of the common sense is carried out in the present paragraph, after the initial presentation of the other internal senses.

THE FACULTY OF FORMS | Arabic *al-quwwa al-mutašawwira*, Latin *virtus imaginativa*. In agreement with Avicenna's own *usus* (cf. *K. al-Nafs* I 5, ed. RAHMAN 1959: 44: *al-ḥayāl wa-l-muṣawwira*), this same faculty is also called *ḥayāl* in what follows: cf. *infra*, §407: «in the imagination [*ḥayāl*] – I mean in the faculty which is called formative [*muṣawwira*]». For the correct identification of *mu(ta)šawwira* and *ḥayāl* cf. already ALONSO 1963: 267 fn. 25, who vocalizes however the term as *ḥiyāl*. See also *supra*, §381, in which al-Ġazālī designated the same faculty as *al-quwwa al-ḥayālīyya*. Despite the apparent etymological connection, thus, the two terms *ḥayāl* and *al-mutaḥayyila* (for which cf. immediately *infra*) do not indicate the same faculty. However, *infra* in *Physics* V.6, §437 some occurrences of *ḥayāl* clearly indicate the compositive, rather than the retentive, imagination, and are thus synonymous with *mutaḥayyila* (cf. *infra*, the commentary *ad locum*). (1.2.1) For the treatment of this faculty cf. *infra*, §395.

THE IMAGINATIVE FACULTY | Arabic *al-quwwa al-mutaḥayyila*, Latin *phantasia*. The Latin rendition – as edited by ST. CLAIR 2005: 69.207 – has instead *cogitativa*, which would seem to presuppose instead the Arabic **al-mu(ta)fakkira*; however, mss. N [Paris, BNF lat. 14700] and O [Biblioteca Apostolica Vaticana, Ottob. lat. 2186] read *phantasia*. Cf. *infra*, §398, for a second occurrence of the same situation in the Latin text (with mss. N and O in agreement, with the reading conformable to the Arabic text, against the other *codices*) and a further discussion. (1.2.3) For the treatment of this faculty – the faculty of the *phantasmata* – and the difference between its animal and human instantiations cf. *infra*, §§398-400.

THE ESTIMATIVE FACULTY | Arabic *al-quwwa al-wahmiyya*, Latin *virtus aestimativa*. In the first formulation of §381 *supra* the term chosen by al-Ġazālī to designate this faculty was not the relative adjective, but the active participle of the V stem of the same root, *al-mutawahhima*, without however any variation of meaning. On the notion of *wahm* in Avicenna – with considerations useful for the *MF*, as well – see at least BLACK 1993 and HALL 2006. (1.2.4) For the autonomous treatment of estimation cf. *infra*, §396.

THE MEMORATIVE FACULTY | Arabic *al-quwwa al-dākira*, Latin *virtus memorialis*. For memory, there are no terminological variations with respect to the first formulation occurring *supra*, at §381. (1.2.5) For its treatment cf. *infra*, §397.

THOSE SENSES | *i.e.* the internal ones.

[§395] D356.13-18

(1.2.2) The paragraph deals with the faculty of forms or formative faculty, also called '[retentive] imagination' (the English expressions 'form-bearing' [faculty] and 'imagery', in the sense of repository of images, are also used in scholarship: cf. for instance ALPINA 2021^a: esp. *e.g.* 156, 165, 216).

AS FOR «FACULTY OF THE FORMS» [...] IN THE COMMON SENSE | The function of the formative faculty as retentive faculty of the forms collected in the common sense (on which cf. *supra*, §394 and Table 52) makes it the counterpart at the level of forms [*suwar*] of what memory is for concepts [*ma'ānī*].

ALONSO 1963: 269 fn. 28 appropriately quotes here a parallel passage by ps.-ALBERT THE GREAT, *De quinque potentiis animae* (BRADY 1953: 244-5), which quotes *verbatim* the Latin translation of this sentence of the *MF*, putting it in comparison with Avicenna's statements and with a possibly Augustinian background:

Sciendum quod imaginatio multipliciter sumitur, et secundum hoc multa habet nomina. Quandoque enim dicitur vis quae retinet imagines sensibilium abeuntibus sensibilibus ab organis sensuum: communis et proprii. Et sic proprie dicitur vis sensibilis animae proxime sitam post sensum commune in qua reservantur imagines acceptae a sensibus; et secundum diversas considerationes habet tria nomina: [i] Dicitur enim imaginatio secundum quod formae sibi impressae imagines sunt rerum quae sunt extra; et [ii] dicitur etiam formalis eo quod formalius habet illas imagines quam sensus (externus), quia sensus habet eas cum praesenti materia; imaginatio autem materia rei non praesente; et [iii] haec etiam dicitur ab Augustino *spiritus*... Ab Algazele autem secundum idem sic (diffinitur): Imaginatio est virtus retentiva eius quod impressum fuit sensui communi. Avicenna: Formam sensibilem retinet illa virtus quae vocatur formalis et imaginatio.

FACULTY OF THE FORMS | Arabic *al-quwwa al-mutaṣawwira*, Latin *imaginativa*.

RETENTION | Arabic *ḥifẓ*, Latin *retinere*.

IMPRESSION | Arabic *intibā'*. Omitted in Latin.

RECEPTION | Arabic *qabūl* or *qubūl*, Latin *recipere*.

IT DOES NOT RETAIN THEM | JANSSENS 2019: 118 and fn. 126 references Avicenna's *Nağāt*, ed. DĀNĪSPĀZŪH 1985: 329.2-3 for this notion.

THE WAX RECEIVES [...] BY THE FACULTY OF THE DRYNESS. | The same principle of disjunction between the receptive and retentive faculties is clearly expressed in the *TF*: cf. *TF*, Discussion 18, MARMURA 2000: 179: «A thing does not retain [another] thing by the [same] faculty by which it receives it. For water receives but does not retain, whereas wax receives through its moistness and retains through its dryness, unlike water». JANSSENS 2003^b: 42 notices that the example of the wax is not in Avicenna's *DN*, and treats it as a Ġazālīan addition. Its presence in the *TF* is thus a further hint that points to an approaching, rather than a sharp disjunction, between the *MF* and the refutative work. OZKAN 2016: 158-159 notices a parallel occurrence of the example of the wax, in psychological context, in the *Rasā'il [Epistles]* of the *Iḥwān al-ṣafā'* [Brethren of Purity], ed. TĀMIR 1995 (II): 315.

THE WAX | As already noticed by ALONSO 1963: 269 fn. 27, the Latin translation («Auditus vero [...]»), cf. ST. CLAIR 2005: 69.216 ff.) presupposes a misreading of the Arabic antigraph, and precisely سمع [sam], 'hearing' – the more common term in Avicennan jargon being however *samā'* – for the correct reading سمع [šam], 'wax'.

SOFTNESS | Reading *līn* instead of Dūnyā's obviously wrong *layl* ('night', 'nighttime'). For softness as proper of wax cf. also *supra*, *Metaphysics* I.7, §166 (concerning the category of being acted upon); and see also *Physics* II.1, §335 and Table 43, where however *līn* is more correctly contrasted with the tactile quality of «hardness» [šalāba], rather than with the much more general notion of «dryness» [yabūsa] as here in this paragraph.

WHATEVER HARM HAPPENS [...] RESULTS. | The conclusive sentence of the paragraph anticipates the anterior localization of the faculty of forms, restated in a conclusive form in §397 *infra* (see also Table 54). The anatomical notion is expressed in a physio-pathological way, clearly influenced by Avicenna's own medical knowledge: the localization of the *muṣawwira* in the anterior part of the brain is indeed inferred on the basis of the malfunction in the retainment of 'forms' caused by the physical damage to that area. Interestingly, this line of reasoning is not far from the one that led the French physician Pierre Paul Broca to identify, many centuries after Avicenna, the frontal cerebral area that bears his name as implied in the functioning of human language, on the basis of an autopsy conducted on a patient with linguistic impairments (aphasia).

HARM | Arabic *āfa*, Latin

HAPPENS | Or: inhere [*ḥalla*].

THE RETAINING OF THE IMAGES | Arabic *ḥifẓ al-mutaḥayyilāt*, Latin *retentio fantasiarum*.

THE OBLIVION OF THE FORMS | Arabic *al-nisyān li-l-ṣuwar*, Latin *oblivio formarum*.

[§396] D356.19-20

(1.2.4) This very short paragraph, which I only isolated for reasons of symmetry with the other sections on the various internal senses, focuses on the estimative faculty.

ESTIMATIVE | Arabic *al-wahmiyya*, Latin *aestimativa*.

IT PERCEIVES IN THE SENSED THAT WHICH IS NOT SENSED | Arabic *tudriku min al-maḥsūs mā laysa bi-maḥsūsⁱⁿ*, Latin *apprehendens de sensate quod non est sensatum*.

THE SHEEP PERCEIVES THE ENMITY OF THE WOLF | Cf. *supra*, §382 and *infra*, §408. See also the Introduction, §1.8.1.2.

FOR THE BEASTS | Arabic *li-l-bahā'im*, Latin *brutis animalibus*.

LIKE THE INTELLECT FOR THE MAN | This analogy between human intellect and animal estimation can be seen as well as a sign of the far more general continuity that Avicenna – and al-Ġazālī following him in the *MF* – sees at play between rational and non-rational, and bodily and non-bodily, faculties of the living beings.

[§397] D356.21-357.3

The paragraph briefly deals with the inner sense of memory, comparing its retentive faculty to the one performed by the faculty of forms (see *supra*, §395). For a treatment of the faculty of memory in Avicenna's psychology, with special reference to the Scholastic criticism of it, cf. MÜLLER J. 2015. The text goes on in this paragraph by describing the ventricular localization of the four internal senses – common sense, faculty of forms, estimation and memory – hitherto discussed. JANSSENS 2019: 118 fn. 128 notices that the emphasis the *MF* put on the cerebral location of the internal senses is characteristically Avicennan. With the addition of the seat of the (compositive) imaginative faculty, introduced in the following §398, the localization of the internal senses propounded in the *MF* – slightly different, and less specific, than the one exposed in the *K. al-Nafs* of Avicenna's *K. al-Šifā'* – can be summarized as in the following Table 54.

TABLE 54. *Brain ventricular localization of the internal senses*

		<i>MF</i> §§397-398	<i>K. al-Šifā'</i> , <i>K. al-Nafs</i> ed. RAHMAN 1959: 44-45, English transl. ALPINA 2021 ^a : 216-217
1	common sense	anterior part of the brain	first cavity of the brain
2	formative	anterior part of the brain	rear part of the front cavity of the brain
3	imaginative	middle of the brain	central cavity of the brain, near the cerebellar vermis
4	estimative	posterior part of the brain	end of the central cavity of the brain
5	memory	posterior part of the brain	rear cavity of the brain

MEMORATIVE | Arabic *dākira*, Latin *memorialis*.

ESTIMATIVE | Arabic *wahmiyya*, Latin *aestimativa*.

THE COFFER OF THE NOTIONS | Arabic *ḥizāna al-maʿānī*, Latin *archa intentionum*.

THE [FACULTY] OF THE FORMS | Arabic *mutaṣawwira*, Latin *imaginativa*.

THE COFFER OF THE FORMS | Arabic *ḥizāna al-ṣuwar*, Latin *archa formarum*. The system of analogies between faculties can be summarized in this way:

- (1) forms [*ṣuwar*] : notions [*maʿānī*] :: formative [*mutaṣawwira*] : memorative [*dākira*]
- (2) forms [*ṣuwar*] : notions [*maʿānī*] :: common sense [*al-ḥiss al-muštarak*] : estimative [*wahmiyya*]

From which it follows:

- (3) common sense : estimative :: formative : memorative
al-ḥiss al-muštarak : *wahmiyya* :: *mutaṣawwira* : *dākira*
 [reception] :: [retention]

THE ESTIMATIVE AND THE MEMORATIVE | Here: *al-wahmiyya wa-l-dākira*.

IN THE POSTERIOR [PART] OF THE BRAIN | JANSSENS 2019: 118 fn. 128 wrongly states: «it is puzzling that al-Ghazālī places [...] the estimation together with the faculty of memory in the front part of the brain», because the Arabic passage speaks rather coherently of the «posterior» [*muʾaḥḥar*] part of the brain.

THE COMMON [SENSE] | Here: *al-muštarak*.

THE FORMATIVE | Here: *muṣawwira*.

[§398] D357.4-8

The paragraph deals with the imaginative faculty or '[compositive] imagination', sometimes also called phantasy in scholarship. While the corresponding Greek term is actually used by Aristotle to indicate both the retentive and the compositive kinds of imagination, the Arabic text keeps the notion of the compositive and retentive imagination distinct, although the terminology is confusingly similar: the retentive imagination (= formative faculty), as a matter of fact, is also called *ḥayāl*, from the same root of the participle of the v stem *mutaḥayyila*, which designates the compositive imagination (= imaginative faculty).

THE IMAGINATIVE | Arabic *al-mutaḥayyila*. ST. CLAIR 2005: 70.228 reads here *cogitatio*, but mss. N (Paris, BNF lat. 14700) and O (Città del Vaticano, Biblioteca Apostolica Vaticana, Ottob. lat. 2186) have once again *phantasia* (as *supra*, §394, once again in correspondence with Arabic *al-mutaḥayyila*). This seems indeed to be the best reading, because *infra*, at the beginning of §399, the Latin text reads *phantasia* – on the basis of all manuscripts – where the Arabic text as a generic *hādīhi* (this [faculty]), which conceals precisely the imaginative faculty of which the cogitative faculty represents the human part; but the noun *phantasia* would appear there *ex abrupto* if there had not been any mention of it in what preceded. The necessity of the correction, also based on the analogous situation of §394 – in which mss. N and O also have the reading more conformable to the Arabic antigraph, although their witness is discarded by St. Clair – creates however a further problem, because *infra* in this paragraph the Latin text has *in phantasia* for Arabic *fi l-ḥayāl*. As shown *supra* in the commentary to §394 (*iuxta* the testimony of §407), however, *ḥayāl* does not designate the imaginative faculty which is at stake here, but rather the formative one, *i.e.* the coffer of forms. In the

Latin text, then, the same term – *phantasia* – would designate in few lines of text two different faculties (the Arabic *mutaḥayyila* and the Arabic *ḥayāl*, *i.e.* respectively the compositive and the retentive imagination). While unfortunate, this circumstance is however not unlikely, given that the two terms deceptively share the same trilateral root *ḥ-y-l*, which might well have led the Latin translators astray. The reason for the emergence of the reading *cogitatio* (or *cogitativa* in §394 *supra*) might rather be precisely the correction of an intelligent copyist, who recognized the difficulty of attributing the same label of *phantasia* to faculties clearly different from one another, and supplied in the place of it the word *cogitatio/cogitativa* in those occurrences in which the equivalence with human cogitative faculty was granted by the context. In so doing, however, our hypothetical copyist would have extended the meaning of *cogitatio/cogitativa* to the entire faculty of compositive imagination, while the text itself of the *MF* is clear (also in its Latin translation, despite the misfortunes of the tradition) that only in human beings can the compositive imagination be called cogitative (see ST. CLAIR 2005: 70.236: «Haec autem in homine solet vocari cogitativa»).

BUSINESS | Arabic *ša'n*, Latin *cuius est*.

SETTING INTO MOTION | Reading *tahrīk* instead of the misprint تحريك as in Dunyā.

IT INQUIRES ABOUT | Arabic *tufattišu 'an*, Latin. that which is in the coffer of the forms

BY MEANS OF THE COMPOSITION AND THE DIVISION ALONE | Arabic *bi-tarkīb^m wa tafṣil^m faqaṭ*, Latin. Cf. the *reportatio* of this doctrine in ps.-ALBERT THE GREAT, *De quinque potentiis animae* (BRADY 1953: 249), already quoted in ALONSO 1963: 270 n. 29:

Alio modo et stricte accipitur phantasia pro potentia collativa imaginum per compositionem et divisionem et sic diffinitur ab Algazel, qui dicit quod phantasia est virtus quae operatur componendo et dividendo quandoque in hiis [*sic*] quae sunt in archa formarum, quandoque in his quae sunt in archa intentionum.

IT CONCEIVES [FOR INSTANCE] A MAN WHO FLIES | The first example of (mis)construct of the phantasia given by al-Ġazālī is a flying man, whose occurrence here has however nothing to do with Avicenna's famous mind experiment to prove the existence of the soul (on which see now ALPINA 2018). Instead of the flying man, the Latin translation gives as an example a man with two heads, leaving by contrast unaltered the second example of phantastical being provided by the Arabic text (which involves a centaur, half man and half horse): «Imaginat enim aliquando hominem cum duobus capitibus, vel aliquid cuius medietas fit forma equi et medietas forma hominis, et alia huiusmodi» (ST. CLAIR 2005: 70.232-234).

CONTRIVE | Arabic *ih̄tirā'*, Latin *adīnvenire*.

EXAMPLE | Arabic *miṭāl*, Latin *exemplo*. The imaginative faculty envisaged in Avicenna's psychology is not freely creative. On the contrary, it must always have a model, or example, in sensible reality.

IN THE IMAGINATION | Arabic *fī l-ḥayāl*, Latin *in phantasia*. That is, *iuxta* §407 (cf. *supra* the discussion in the commentary to §394), in the faculty of forms or formative faculty, *i.e.* the retentive faculty of the forms. In other words, the compositive imagination (= imaginative faculty [*mutaḥayyila*]) operates on those images or forms that are stored in the retentive imagination (= formative faculty [*ḥayāl, mu(ta)ṣawwira*]).

AS SEPARATE | Reading *mutafarraq^{an}* instead of the misprint متفرقاً as in Dunyā.

[§399] D357.9-13

The paragraph deals with the cogitative faculty, as the name that the faculty of compositive imagination receives when it regards humans rather than animals. For an examination of Avicenna's doctrine of the cogitative faculty cf. BLACK 2013.

«COGITATIVE» | Arabic *mufakkira*, Latin *cogitativa*.

THIS [FACULTY]² | The Latin translators directly gloss the Arabic demonstrative pronoun *hādīhi* with the noun *phantasia*, to be seen as the general name for the faculty of which the «cogitative» [*mufakkira*] represents the human subcase. Cf. *supra*, §398.

ITS INSTRUMENT IN THOUGHT | Arabic *ālat^u-hu fi l-fikrⁱ*, Latin *instrumentum...cogitationis*.

THE THINKING [PART IN ITSELF] | Arabic *al-mufakkira*. In the second and third occurrences in the Arabic text, the active participle of the II stem *mufakkira* is certainly used in its proper and general sense, and not in the technical one of 'cogitative' faculty. Accordingly, I have translated it as the «thinking [part]» (of the human soul) or as «the thinking [part in itself]». Indeed, what is meant in this passage is not of course that the cogitative faculty – *i.e.* one of the inner senses, and as such partially interwoven with the materiality of the body – is in itself the entirely immaterial «intellect» [*ʿaql*], but rather that it is precisely the intellect that does the thinking in humans, if one is to speak properly. The name itself of the cogitative faculty – the *thinking* faculty, namely – is thus at least partially improper, and used somewhat derivatively with respect to the truly intellectual thought.

HOLE | Arabic *ḡuhr*, Latin *in sua concavitate*. That is to say, in the eye socket.

THE VISION AND THE INQUIRY | Arabic *al-ibṣār wa-l-taftīṣ*, Latin *visus ad inquirendum*.

THE HIDDEN [THINGS] | Arabic *ḡawāmiḡ*, Latin *occulta et parva*. The Latin text does not look like a double translation, and it might presuppose an equivalent of 'little [things]' in the Arabic text).

TO BE FACILITATED | Arabic *yatayassara*, Latin *expandatur*.

STEMS | Arabic *yata'attā*.

[§400] D357.14-26^a

The paragraph explains the nature of the cogitative faculty in humans in terms of a continuous motion from things to forms and images stored in the mind, and between those images. As noticed by JANSSENS 2019: 118 and fn. 127, the emphasis on the «power of mobility and of imitation» of the imaginative faculty might derive to al-Ġazālī from the *Iṣārāt*: ed. FORGET 1892: 215.8-10. This hectic movement of the faculty also helps building within one's soul some structural images, such as trees or ladders, that in turn help retrieve the wanted form (*e.g.* from the branches of the imagined tree, or from the steps of the ladder). These indications, although very cursory, have the character of an art of memory in a nutshell, since the mental construction of a visually structured space in which remembered images are located is crucial to ancient mnemotechnics: for a still unsurpassed general introduction, although more focused on the Renaissance period, see YATES 1966.

NATURE | Arabic *ṭab'*, Latin *natura*.

IT DOES NOT ABATE | Arabic *lā tafturu*, Latin *nec cessat*.

CORRESPONDS TO IT | Arabic *yunāsibu-hu*, Latin *sibi conferibile*.

for the resemblance [...] or for the contrariety, or for the fact that it was connected [*muqtarin*] with it in the casual occurring | Three almost Humean reasons of connection of one image to the other in the compositive imagination are given: (i) «resemblance» [Arabic *muṣābaha*, Latin *similitudinem*], (ii) «contrariety» [Arabic *muḡādda*, Latin *contrarietatem*], and (iii) the image's being «connected» [Arabic *muqtarin*, Latin *coniunctum*] to the other in a «casual occurring» [Arabic *fi l-wuqū' l-ittifāqī*], when the one image reaches the formative faculty of retentive imagination [Arabic *inda ḡuṣūl-hi fi l-ḡayāl*, Latin *quando venit in phantasiam*]; cf. *infra*.

IN THE IMAGINATION^{1,2} | Arabic *fi l-ḡayāl^{1,2}*, Latin *in phantasiam¹, in imaginativa²*.

THE ASSIMILATION AND THE EXEMPLIFICATION | Arabic *al-muḥākāt^u wa-l-tamṭīl^u*, Latin *conformare et gesticulari*. *Supra*, *Logic* IV, §50, the term *tamṭīl* was already used to describe a possibly fallacious logical method.

WHEN YOUR INTELLECT [...] WHAT WAS FORGOTTEN | In this specimen of mnemotechnics *in nuce*, the intellectual division is equalled to the image of a tree with ramified «branches» [*ağşān*], while the action of ordering [*rattaba*] in «ranks» or degrees [*darağāt*] is linked to «stairs» [*al-marāqī*] and «ladders» [*salālim*].

IT STUMBLES UPON THE FORM | Arabic *ta'turu 'alā l-ṣūratⁱ*, Latin *offendit in formam*.

PRESENCE | Arabic *ḥuḍūr*, Latin *ad praesentandum*. The notion of knowledge by presence will be an absolutely crucial asset of al-Suhrawardī's critique to Avicenna's Peripatetic epistemology. Its occurrence here is clearly not involved directly with those important developments, although in their light it is interesting to remark that a piece of eminently Avicennan theory of cognition such as the finding of the middle term of a syllogism can be sensibly described in terms of *ḥuḍūr*, 'presence'. For a recent reconstruction of al-Suhrawardī's doctrine cf. Griffel 2021: 355-358; see also KAUKUA 2013.

THE RELATION OF THE MIDDLE TERM TO THE CONCLUSION | For the technical expressions of syllogistic occurring here («middle term» [*al-ḥadd al-awsaṭ*] and «conclusion» [*natīġa*]), cf. *supra*, *Logic* IV, §36.

[§401] D357.26^b-358

The paragraph concludes the treatment of the internal senses, and with it the entire discussion on the animal soul (§§379-401), by providing a summary of the functions of motive and perceptive faculties. Among the internal senses, only the retaining faculties of forms and of intentions (retentive imagination or formative and memory, respectively) are explicitly mentioned, together with the imaginative faculty. All the aforementioned, stratified structure of faculties is said to be a sign of the existence of a soul *qua* principle of all these functions, which also uses the body (and its limbs) as her tool. This helps introducing the treatment of the rational human soul, which will take place from the following §402 onwards.

THE MOVEMENT [...] OF THE DAMAGES | For the articulation of the moving faculty in a desiderative power – addressed to the research of the good (here: «procurement of advantages» [*ġalb al-manāfi'*, sg. *manfa'a*]) – and an irascible one – addressed instead to the removal of the evil (here: «repulsion of the damages» [*maḍārr*, sg. *maḍarra*]) –, cf. already *supra*, *Physics* IV, §§379-380.

SPIES | Arabic *ġawāsīs* (sg. *ġāsūs*), Latin *exploratores*. For the same characteristic expression applied to the sense organs cf. Faḥr al-Dīn al-Rāzī's *Great Commentary to the Qur'ān, The Keys of the Unknown* [*al-Taḥsīn al-kabīr. Maḥāṭib al-ġayb*], XXII 44 (ad *Qur'ān* 20, *Ṭāhā* 25), quoted in French translation in OULDDALI 2019: 65 (and see fn. 169 for further parallel passages). Interestingly, the phrase also appears in al-Ġazālī's *Iḥyā'*, III 5-6, as mentioned by OULDDALI 2019: 148 and fn. 51. Correctly, Oulddali draws parallels between the metaphorical language of the two authors concerning human faculties, although he does not mention, in relation to the expression *ġawāsīs*, the further Ġazālīan source of the *MF*.

BY MEANS OF WHICH THE NEWS ARE HUNTED | Arabic *allatī taqtaniṣu bi-hā al-aḥbār*, Latin *inquirentes quae referent*.

THE FORMATIVE [FACULTY] | Arabic *al-muṣawwira*, Latin *imaginativa*.

MEMORATIVE | Arabic *al-dākira*, Latin *memorialis*. The retentive function of the formative (for forms) and the memorative (for concepts/notions) is repeated here: cf. *supra*, §395.

THE IMAGINATIVE | Arabic *mutaḥayyila*, Latin *phantasia*.

FOR THEIR FETCHING AFTER [THEIR] ABSENCE | *li-iḥḍār-hā bada l-ḡaybati*, Latin *ad representandum ea postquam absentata fuerint*. To appreciate the pertinence of the Latin rendition *representandum* cf. *supra*, §400, the translation as *praesentandum* of *ḥuḍūr*, which is a 1-stem *maṣḍar* of the same root for which *iḥḍār* is the IV-stem verbal noun.

TO WHICH THEY ARE SUBSERVIENT | Arabic *musahḥara*, Latin *subiecta*.

AND BY WHICH THEY ARE CAUSED | Arabic *musabbaba* (instead of Dunyā's obviously misspelled *musabbabu-hu*), Latin [*per quam*] *habent esse*.

ONE REFERS TO THAT PRINCIPLE WITH [THE TERM] «SOUL» | The passage is crucial for recognizing in the immaterial soul the principle and guide of all the faculties hitherto described.

LIMB | Arabic *uḥw*, Latin *membrum*.

[§402] D359.1-10

The paragraph introduces the treatment of the human soul, which only informs the best and most balanced of the elementary mixtures. The remainder of the Fourth treatise of the *Physics* of the *MF* will be devoted to a detailed analysis of the intellectual faculties of this highest kind of soul, of which two principal faculties – a knowing and a practical one – are detailed here. The internal articulation of the rational soul is summarized in the following Table 55.

TABLE 55. *Faculties proper of the human soul*

	FACULTY		'SPECIES' OF THE FACULTY	§§
1	knowing <i>'ālīma</i> [<i>'ālīmiyya</i> §404]	1.1	speculative <i>naẓariyya</i>	§§402-403
		1.2	faculty of practical reasoning <i>'amalīyya</i>	
	↓			
2	practical <i>'āmīla</i>	↗	intellectual research (of a positive outcome)	§404
		↘	intellectual flight (from a negative outcome)	

IT REACHES TO THE UTMOST DEGREE | Arabic *balaḡa ilā l-ḡayat*.

FOODS | Arabic *aḡḍīya*, Latin *cibis*. The better and more subtle complexion of the human sperm is achieved thanks to a nutrition made of finer foods than the animals and the plants.

THE RECEPTION FROM THE BESTOWER OF THE FORMS OF A FORM WHICH IS THE BEST OF THE FORMS | For a list of other occurrences of the notion of bestower of forms in the *MF* cf. *supra*, *Metaphysics* V, §302. For Avicenna's own emphasis in the *Ta'liqāt* (see esp. BADAWĪ 1973: 110.9 ff.) on the emanation of the soul proper to each body on the part of the Giver of forms cf. JANSSENS 2002: 555 and fn. 24. Cf. also *infra*, §422, for an analogous occurrence of *wāhib al-ṣuwar* in psychological context.

THEORETICAL [FACULTY] | Arabic *'ālīma*, Latin *sciens*.

PRACTICAL [FACULTY] | Arabic *'āmīla*, Latin *operans*. In the Latin translation the order of *'ālīma* and *'āmīla* is inverted (*una operans et altera sciens*).

[§403] D359.11-16

The paragraph explains the internal articulations of the knowing or theoretical faculty first presented in §402 *supra*. This theoretical faculty subdivides in turn into a properly speculative faculty and a faculty of practical reasoning (different from the practical faculty introduced above). Examples of judgments passed by each subdivision of the knowing faculty are given. Among them, a statement affirming the temporal origin of the world stands out as a particularly significant instance of al-Ġazālī's surreptitious insertions of religion-based elements in his report of Avicenna's philosophy: cf. SIGNORI 2018: 368-374 and SIGNORI 2020^b: 172-173 and fn. 75 (and *ivi*, *Appendix*: 201 n. [24]).

SPECULATIVE FACULTY | Arabic *quwwa nazariyya*, Latin *virtutem speculativam*. For these articulations of the knowing faculty cf. *supra*, §402, Table 55.

GOD MOST HIGH IS UNIQUE | Arabic *Allāh^u ta'ālā wāḥid^{um}*, Latin *Deus unus est*. The first of the two examples of knowledge attained through the speculative faculty (as a subspecies of the knowing or theoretical faculty) is the classical affirmation of the Islamic *tawḥīd*, *i.e.* the profession of God's oneness. For the insistence of the *MF* as well on this crucial theological topic for Muslims cf. also *supra*, *Logic* III, §27; *Metaphysics*, Second Premise, §100; *Metaphysics* I.2, §142; and *Metaphysics* II.7, §182.

AND THAT THE WORLD HAS AN ORIGIN IN TIME | Arabic *al-'ālam^u ḥādī^{um}*, Latin *mundus coepit*. As I have argued in both SIGNORI 2018: 368-374 and SIGNORI 2020^b: 172-173 and fn. 75, the presence of this second example in the *MF* is particularly meaningful, inasmuch as an analogous anti-eternalist statement is by contrast absent in Avicenna's *DN* (cf. ACHENA-MASSÉ (II) 1958: 65: «La connaissance théorique est telle que [par exemple] tu sais que Dieu est unique» and see the Persian edition in MEŠKĀT 1952: 101.6). Despite its brevity, this example is almost certainly not the gloss of a copyist, since it is reported in all Arabic editions, as well as in Arabic mss. *Y* and Dublin, Chester Beatty Library, Ar. 5328. The Latin tradition also attests the example as I have reported it with great consistency: cf. for references SIGNORI 2018: 372 fnn. 35-36. The reliability of its transmission and the intrinsic importance of this anti-Avicennan addition make it a foremost example of al-Ġazālī's tendency, in the *MF*, to subtly alter his Avicennan source according to a much more theological agenda (cf. Introduction, esp. §1.7.2, §1.9, and §1.10). Despite such important historical and doctrinal aspects, JANSSENS 2019: 118 surprisingly omits any reference to this meaningful variation in his *conspectus* of the changes of the *MF* with respect to the *DN*.

THE FACULTY OF PRACTICAL REASONING | Arabic *'amalīyya*, Latin *activam*.

WHICH DEPENDS ON OUR ACTIONS | Reading *yata'allaqu*, as in BİĠŪ 2000: 201.8, instead of the misprint *يتصلق* as in *Dunyā*.

INJUSTICE IS [SOMETHING] SHAMEFUL, WHICH OUGHT NOT TO BE DONE | Arabic *al-zulm qabīḥ^{um} lā yanbaġī an yaf'ala* (or: 'which is not seemly to commit'), Latin *quia iniuria turpis est, ideo non est facienda*.

«ZAYD OUGHT NOT TO COMMIT INJUSTICE» | Arabic *Zayd lā yanbaġī an yaẓlima*, Latin *Petro non debet fieri iniuria* (which presupposes the interpretation in the passive of the verb, as *yuẓlama* instead of *yaẓlima*). After the example of a universal moral rule produced by the practical reasoning of the knowing faculty, the text gives also an example of a particular practical knowledge, which applies the general rule to a single person and his or her specific moral agency.

[§404] D359.17-end of page

After the treatment of the knowing faculty and its subdivisions (§403), the practical faculty, also improperly called practical intellect, is discussed here after its introduction in §402.

PRACTICAL | Arabic *‘āmīla*, Latin *operans*.

BY THE INDICATION OF THE KNOWING FACULTY | Arabic *bi-iṣārat’ l-quwwat’ l-‘alimiyyat’*, Latin *per innuitionem virtutis scientis*.

«PRACTICAL INTELLECT» | Arabic *‘aql ‘amalī*, Latin *intellectus activus*.

IT IS CALLED «INTELLECT» ONLY BY AMBIGUITY | The expression *bi-l-iṣtirāk* [Latin *aequivoce*] – as made clear by both its explanation in *Logic* I, §9, and its occurrence in the preliminary discussion of modulation of existence in *Metaphysics* I.1, §134 – has in the *MF* the meaning of homonymity or equivocality *stricto sensu*, that is, the application of the same name to entirely different things. Thus, the text aims here to draw a sharp distinction between the practical faculty – which is not an ‘intellect’ at all – and the actual theoretical intellect, which properly deserves that name. Cf. Avicenna, *K. al-Nafs*, I 5, ed. RAHMAN 1959: 45, English transl. ALPINA 2021^a: 218: «As to the human rational soul, its faculties are divided into a practical faculty and a cognitive faculty, both of which are called *intellect* by equivocation or its similarity».

JUST AS THE ANIMAL MOVING FACULTY [...] BETTER. | The passage compares the practical intellect to the moving faculty [*quwwa muḥarrika*] proper of the animal soul, for which cf. *supra*, *Physics* IV, §§379-380. Both faculties, as a matter of fact, trigger a movement toward («research» [Arabic *ṭalab*, Latin *ad acquirendum*]) or away («flight» [Arabic *harab*, Latin *fugiendum*]) something, while the difference between the two is primarily the fact that the «pursuit» [Arabic *maṭlab*, Latin *inquisitio*] of the practical intellect is, coherently with its denomination, of an intellectual nature, while that of the moving faculty is sensible and physical.

THE REWARD IS CONJOINED [...] AWAY FROM IT. | A second crucial difference between moving faculty and practical intellect is presented here, that is, the ability of the intellect to postpone the flight or research it triggers, thanks to non-instinctual considerations. As opposed to this intellectual mechanism of delayed gratification, the animal moving faculty immediately exerts its function, making the animal grasp, or by contrast flee, the useful, or harmful, object of its perception.

REWARD | Arabic *tawāb*. The Arabic word *tawāb* is also a *terminus technicus* of Islamic law, with the meaning of ‘merit, credit (arising from a pious deed)’: cf. WEHR 130^a.

THE AVAIL IS IN THE [REMOTE] OUTCOME | Arabic *al-naḥḥ fi l-‘āqiba*. In the place of this rather difficult pericope of text, the Latin text only reads *scilicet de hoc quod est bonum, rectum, utile*, which might be an attempt at a translation *ad sensum* of the passage.

THE ANIMAL DESIRE | Arabic *al-ṣahwa al-ḥayawāniyya* (sic pro Dunyā’s obvious misprint الحيوانية), Latin *voluntas animalis*. The term is used as synecdoche for the «moving faculty» mentioned above, in itself more extended than the mere desire. Cf. indeed *supra*, §379 Table 50, where it is made clear that the desiderative faculty constitutes a subclass of the moving one (in particular, the one devoted to research of the useful objects, as opposed to the flight from the harmful ones). Since the example here given is precisely that of a flight, the usage of «desire» is slightly inappropriate.

[IMMEDIATELY] STAMPEDES AWAY FROM IT | Arabic *tanḥuru*, Latin *fugiat ab ipso*.

[§405] D360.1-7^a

The paragraph deals with the amphibious character of the human soul, placed midway between the lower side of animal life and bodily concerns, and the higher side of intellectual contemplation,

performed above and without the body. For the paradigmatic formula of the *Liber de causis* that defines the human rational soul as suspended «in horizonte inferius aeternitatis et supra tempus» see PATTIN 1966: 50 and fnn. 20-22 (prop. 2), and cf. D'ANCONA 1992 for a discussion. A text from al-Ġazālī's *TF*, Discussion 18, MARMURA 2000: 181.9-22 constitutes an important parallel to this paragraph:

Hence, the soul has two faculties in relation to two sides: the theoretical faculty in relation to the side of the angels, since through it [the soul] takes from the angels the true sciences – and this faculty ought to be constantly [open to] reception from the side above; and the practical faculty, which belongs to [the soul] in relation to what is below – namely, the direction of the body to its management and the rectification of moral dispositions. This is a faculty that ought to take control over all the rest of the bodily faculties, whereby the rest of the faculties would be disciplined by its educative action [and be] vanquished by it, so that it is not influenced by [the bodily faculties], but, rather, that these faculties [themselves] are influenced by it – [this] lest there occur in the soul by way of bodily qualities submissive dispositions called vices. Rather, [this practical faculty ought] to be dominant so that because of it there would be realized for the soul dispositions called virtues.

TWO FACES | Arabic *waġhāni*, Latin *duas facies*. One face of the soul is turned toward the «superior side» [*al-ġanba al-‘āliyya*], while the other is focused on the «inferior» [*al-ġanba al-sāfila*] one. Just like in the text of the *TF* quoted above, also in the *MF* the two «faces» are quite explicitly identified with the two main faculties of the human knowing soul, *i.e.* the speculative faculty [Arabic *naẓariyya*, Latin *speculativam*] (addressed to the higher side) and the faculty of the practical reasoning [Arabic *‘amaliyya*, Latin *activam*] (addressed to the lower side).

THE LOFTY CONGREGATION | Arabic *al-mala’ al-a‘lā*, Latin *vastitas* [!] *superior*. Cf. *supra*, *Metaphysics* III.b.11, §238, and *infra*, *Physics* V.4, §431, for the use of the same expression. See the commentary to §238 for an explanation of the mistranslation *vastitas* adopted in Latin. In the parallel passage of the *TF* quoted in the introduction to this paragraph, the «lofty congregation» of the *MF* is directly replaced by the term ‘angels’: «in relation to the side of the angels» [*ilā ġanba al-malā’ika*] (MARMURA 2000: 181.10).

ITS TRUTH | Reading *ḥaqq^u-hu* instead of *ḥuqqa* (which would have the entirely extrinsic meaning of ‘small box, case, pot or jar’) as in *Dunyā*.

PERPETUALLY RECEIVING | Arabic *dā’im al-qabūl*, Latin *ut semper reciperet*.

GOVERNMENT | Arabic *tadbīr*, Latin *ad regendum*. Significantly, the same word, *tadbīr*, is used *supra*, in *Metaphysics*, First Premise, §94, to describe the subject-matter of the various sciences – politics, economics, and ethics – that constitute the spectrum of practical philosophy. Likewise, we learn here the soul exerts a *tadbīr* over the body thanks to her practical faculty.

EXTERNAL AND SUPERVENIENT WITH RESPECT TO THEM | Arabic *ḥāriġa ‘an-hā wa-zā’ida ‘alay-hā*, Latin *non est exiens ab eis, nec est addens eis*. The externality and supervenience of the rational soul with respect to the sensory perceptions is an elaboration of the already Aristotelian, but extremely ambiguous and heavily discussed, notion of νοῦς θύραθεν (‘intellect from without’). For this concept, which was probably only a biological notion in Aristotle’s intentions, but which nonetheless elicited some of the most sophisticated psychological reflections of the Middle Ages and the Renaissance, cf. *De gen. anim.* II 3, 736^b27-29 («It remains, then, that the intellect alone comes from the outside [θύραθεν] and that it alone is divine [θεῖος]; for the bodily actuality has nothing to do with its actuality.»). For its interpretation cf. at least MORAUX 1955; for an aperçu of its medieval history, dealing in particular with Avicenna, Averroes, Ibn Gabirol (Latin Avicbron), Philip the Chancellor and Albert the Great, see also SÖDER 2005.

[§406] D360.7^b-14

The paragraph introduces the articulation of the various degrees of human perception. The process of abstraction which is at stake, and which will be discussed step by step up to §411 *infra*, begins in this paragraph from the basic level of the sensory perception, which is performed by the external senses. In particular, the example followed throughout the exposition is that of a sensible form originally perceived by the sense of sight (already extensively treated *supra*, §§387-392). The centrality of vision in the framework of Peripatetic psychology is thereby reaffirmed.

WE HAVE ALREADY MENTIONED | Cf. *supra*, *Physics* IV.2.1, §388.

«PERCEPTION» | Arabic *idrāk*, Latin *apprehensio*.

[VARIOUS] DEGREES | Arabic *marātib*, Latin *ordines*. Precisely these *marātib* will be described up to §411 *infra*, thus building an effective explanation of the epistemological path of abstraction. In this regard, it is important that the general term *idrāk* is not only taken as referring to the inferior degrees – those related to sensible knowledge – but also as an umbrella term for all levels of human knowledge (up to the intellectual one).

ITS APPURTENANCES | Arabic *tawābi'*.

THEIR OWN SELVES | Arabic *a'yān*, Latin *ipsa eadem*.

EXTRANEOUS | Arabic *ġarība*, Latin *extranea*.

[§407] D360.15-end of page

The second degree of the path of abstraction, whose description began in the preceding §406, entails the discussion of the internal senses. In particular, the present paragraph discusses the reception of the sensible form within the 'faculty of forms' or '[retentive] imagination' (for which cf. *supra*, §395).

IN THE IMAGINATION ^{1,2} | Arabic *fi l-ḥayāl* ^{1,2}, Latin *in phantasia* ¹, *hoc phantasia* ² (sic; rectius *hoc phantasma* or perhaps *haec phantasia*).

IN THE IMAGINATION ³ – I MEAN IN THE FACULTY WHICH IS CALLED FORMATIVE – | Arabic *fi l-ḥayāl* ³, *a'nī fi l-quwwat' llātī tusammā muṣawwirat'* ³, Latin *in phantasia scilicet, in virtute que vocatur imaginativa*.

INASMUCH AS ITS EXISTENCE [...] IS ENTRUSTED TO | The image or form occurring in the retentive imagination is not as entrusted [Arabic *tastadī'u*, Latin *indiget*] to matter as the form which is directly seen, because – unlike the latter – it can persist also in the absence of the external item generating the form.

[§408] D361.1-13

Continuing the treatment of the internal senses, within the wider framework of the process of increasing abstraction that characterizes human knowledge, the present paragraph deals with the estimative faculty, whose ability to perceive non-sensible notions (or concepts, or 'intentions') within the sensible world is described in detail. This central notion of Avicennan psychology, especially mediated by Avicenna's own *K. al-Nafs* (*Liber sextus de naturalibus*), had a wide fortune in the Latin Middle Ages, especially through translated texts like the ones quoted below, who constitute tight parallels for the present Ġazālīan discussion.

- (i) Avicenna, *De anima*, VAN RIET 1972: 86 (Arabic text in RAHMAN 1959: 43)

Differentia autem inter apprehendere formam et apprehendere intentionem est haec : quod forma est illa quam apprehendit sensus interior et sensus exterior simul, sed sensus exterior primo apprehendit eam et postea reddit eam sensui interiori, sicut cum ovis apprehendit formam lupi, scilicet figuram eius et affectionem et colorem, sed sensus exterior ovis primo apprehendit eam et deinde sensus interior ; intentio autem est id quod apprehendit anima de sensibili, quamvis non prius apprehendat illud sensus exterior, sicut ovis apprehendit intentionem quam habet de lupo, quae scilicet est quare debeat eum timere et fugere, quamvis non hoc apprehendat sensus ullo modo. Id autem quod de lupo primo apprehendit sensus exterior et postea interior, vocatur hic proprie nomine formae; quod autem apprehendunt vires occultae absque sensu, vocatur in hoc loco proprie nomine intentionis.

- (ii) Avicenna, *De anima*, VAN RIET 1972: 89 (Arabic text in RAHMAN 1959: 45-8-9)

Deinde est vis aestimations; quae est vis ordinata in summo mediae concavitate cerebri, apprehendens intentiones non sensatas quae sunt in singulis sensibilibus, sicut vis quae est in ove diiudicans quod ab hoc lupo est fugiendum, et quod huius agni est miserendum; videtur etiam haec vis operari in imaginatis compositionem et divisionem.

«ESTIMATIVE» | Arabic *al-wahmiyya*, Latin *aestimativa*.

FOR INSTANCE THE ENMITY [...] FOR HER LAMB | Concerning this interesting series of three examples, JANSSENS 2019: 118 and fn. 129 remarks specifically that the one about the sheep and the wolf is added here by al-Ġazālī, mentioning of course the *Nafs* of Avicenna's *K. al-Šifā'* (ed. RAHMAN 1959: 45.8-9) for comparison. In truth, however, the corresponding passage of the *DN* (ACHENA-MASSÉ (II) 1958: 67) does not present the two other zoological examples, either. Moreover, given that in the *K. al-Nafs* only the example of the sheep – in her «enmity» [*adāwa*] with respect to the wolf and «suitability» [*muwāfaqa*] with respect to her «lamb» [*saḥla*] – is actually to be found, the further example, *i.e.* the one concerning the enmity (now, and perhaps also back then, proverbial) of the «cat» [*sinawr*] and the «mouse» [*fa'ra*], seems to be a specifically Ġazālīan addition. For the example concerning the sheep and wolf cf. already *supra*, *Physics* IV, §382 and §396.

SUITABILITY | Arabic *muwāfaqa*. Cf. BERTOLACCI 2003: 44 and fn. 83 for a discussion of the sole occurrence of *muwāfaqa* in the *Ilāhiyyāt* of the *K. al-Šifā'*, where it has the meaning of 'congruence' and is used in close connection to the discussion on the appendages on unity (for whose treatment in the *MF*, without mention of the *muwāfaqa*, see *supra*, *Metaphysics* I.3, §152). Clearly, the occurrence of the term in the present psychological context is much weaker, and it does not bear any of the important metaphysical consequences of that Avicennan usage.

THE PERCEPTION OF THIS | That is, of the object of the estimative faculty (in the example, the non-sensible «enmity» of the wolf), whose dependence on the external sense perception is hereby established.

STICKING | Arabic *multaṣiqa*, Latin

IT IS NOT CONNECTED | Arabic *lā yuqtarinu*, Latin. Cf. also *infra* in this paragraph the participle of the same root and form *ḡayr muqtarina* (in the phrase «not connected»).

ACCIDENTS | Reading '*awāriḍ*' instead of the misprint *عواض* as in *Dunyā*. Another option, even better for the required sense of 'accidents', would perhaps be to read instead *a'ṗād*.

[§409] D361.14-22

Within the framework of the process of human cognition described from §406 onwards, the present paragraph introduces the highest level of abstraction, represented by the intellect's knowledge of abstract(ed) concepts.

«INTELLECT» | Arabic *'aql^{mn}*, Latin *intellectus*.

THE IMAGINATION | Once again the chosen Arabic term is *ḥayāl* [Latin *phantasia*], although the immediately following occurrence of the verb 'to perceive' would perhaps lead one to think to a receptive, rather than to a retentive, faculty. Also the second occurrence of *ḥayāl* in the paragraph is rendered with *phantasia*. For the terminology cf. *supra*, §394 and Table 53. The Latin translation as printed by St. Clair 2005: 74.333-334 reads: «Haec autem nudata, id est abstracta phantasia, non valet apprehendere». Comparison with the Arabic original reveals however that *nudata id est abstracta* is most likely a double translation for *al-muḡarradāt*, which constitutes the anticipated object of the verb *apprehendere*. The commas, which misinterprets the text attributing the qualification of being abstract to the imagination/*phantasia*, should then be eliminated. Alternatively, and perhaps more clearly, only *id est abstracta* should be enclosed between them as a parenthesis.

EITHER SITTING OR STANDING | Arabic *aw qā'id^{mn} aw qā'im^{mn}*, Latin *sedentem vel stantem*.

EITHER NAKED OR DRESSED | Arabic *aw 'ārīyy^{mn} aw kāsiyy^{mn}*, Latin *nudum vel indutum*.

MAN HUNTS THE KNOWLEDGE OF THE IGNORED [THINGS] | Arabic *yaqtaniṣu*, Latin *apprehendit* (missing the metaphor). For the metaphor of hunting cf. already *supra*, §401.

BY THE MEDIATION OF THE MIDDLE TERM [...] IN THE CONCEPTIONS | For the basic distinction between «judgments» [Arabic *taṣdīqāt*, Latin *credulitatibus*] and «conceptions» [Arabic *taṣawwurāt*, Latin *imaginationibus*], cf. *supra*, *Logic*, Preface, §2.

[§410] D361.23-362.5

Concluding the preliminary description of the human intellect and its activity, the paragraph characterizes intellection as being involved with universals, and distinguishes it from the instinctual way of knowledge that presides over unilateral animal behaviour.

THE PERCEPTIONS RESULTING IN IT | That is, in the intellect.

ARE UNIVERSAL BECAUSE THEY ARE ABSTRACT | Arabic *kulliyyat^{mn} li-anna-hā muḡarradat^{mn}*, Latin *sunt universals eo quod sunt abstractae*.

ONE [AND THE SAME] RELATION | What is meant is that the relation of the universal with each of the particulars subsumed under it is one and the same (cf. also *supra*, *Logic* II, §10 ff.).

HENCE, THEY ALL [ACT] [...] THE SUBJUGATION | In the absence of any capacity to intellectually distinguish between situations, animals are forced to an *ad unum* way of behaviour (they act in one and only «fashion» [*namaṭ*]), which is aptly characterized as natural and due to «instinct» [*ilhām*]. This is also understood as a kind of «subjugation» [*tashīr*] to nature, while human intellection entails *per se* a higher degree of freedom. Animals, in particular, are not able to get to know what they previously ignored: hence, they cannot contrive any «artifice» [*hīla*] that might be able to rescue them [*ḥalāṣ*] from the dangers that «troubles» [*yaṣuqqu*] them. Man's *proprium*, by contrast, is the flexible and versatile intellectual knowledge, capable of adapting to each and every situation, without instinctual boundaries. For this understanding of *ad unum* animal behaviour, emphatically

maintained up to the Latin Scholastics, cf. at least PERFETTI 2014, which explores the issue in Thomas Aquinas.

THEY DO NOT HAVE BUT THE MEASURE OF THEIR NEED | Arabic *laysa la-hā illā miqdār ḥāğat-hā*, Latin *nec est eis, nisi quantum opus est eis*.

THEY FAVOUR [SOMETHING] | Arabic *taḥuṣṣu*.

THESE TWO FACULTIES [...] AS IT WAS SAID BEFORE. | For the unity of all faculties in one and only soul cf. *supra*, Physics IV.2.2, §401.

[§411] D362.6-23^a

The paragraph deals with the several degrees of actualization of the intellect. The classification presented by al-Ġazālī in the *MF* is typically Avicennan, as it differs from other attempts at subdividing human noetical equipment such as that provided by al-Fārābī. See his *Risāla fī l-‘aql* [*Epistle on the Intellect*], ed. LUCCHETTA 1974: 96-105, in particular 96.5-8, for the distinction between: «1) intelletto in potenza (‘*aql bi-l-quwwa*), 2) intelletto in atto (‘*aql bi-l-fi‘l*), 3) intelletto acquisito (‘*aql mustafād*), 4) intelletto agente (‘*aql fa‘āl*)», without mention of the intellect *in habitu* (‘*aql bi-l-malaka*, see here *infra*). The best analysis of the Arabic, and more particularly Avicennan, classification of the intellects, as well as of its wide and fascinating reception history in Scholastic thought, is provided by HASSE 1999. For a brief, but valuable overview of Avicenna’s classification of the intellectual degrees and its differences (and similarities) with respect to Plotinus’ noetics cf. also ACAR 2003: 78-81.

TABLE 56. *Degrees of the intellect*

	TYPE OF INTELLECT	ALTERNATIVE DENOMINATION
1	material intellect ‘ <i>aql hayūlānī</i> <i>intellectus materialis</i>	intellect in potency ‘ <i>aql bi-l-quwwa</i> <i>intellectus in potentia</i>
2	intellect <i>in habitu</i> ‘ <i>aql bi-l-malaka</i> <i>intellectus in habitu</i>	
3	intellect in actuality ‘ <i>aql bi-l-fi‘l</i> <i>intellectus in effectu</i>	
4	acquired intellect ‘ <i>aql mustafād</i> <i>intellectus acquisitus</i>	
5	agent intellect ‘ <i>aql fa‘āl</i> <i>intelligentia agens</i>	angel <i>malak</i> <i>angelus</i>

BUT RATHER IT DOES NOT HAVE BUT THE PREDISPOSITION AND THE RECEPTION | Dunyā reads *bal laysa la-hā al-isti‘dād wa-l-qabūl*, whose meaning is opposite to the required one. I correct the text by adding *illā* before *al-isti‘dād*, the genesis of the error being very well explainable by haplography of *لا* in *illā al-isti‘dād* [لا الاستعداد].

AT THAT TIME | Arabic *hīna'id^m*, Latin *cum* (temporal). The presence of the temporal qualification is important inasmuch as it helps to characterize the following denominations of the various intellects also in terms of distinct logical (but also often temporal) phases of actualization of the one human intellect, which manifests itself in several degrees throughout the process of intellection.

MATERIAL INTELLECT | Arabic *'aql hayūlānī* (cf. Greek ὑλικός), Latin *intellectus materialis*.

INTELLECT IN POTENCY | Arabic *'aql bi-l-quwwa*, Latin *intellectus in potentia*.

APPEAR IN IT | Strictly speaking, the masculine pronoun of *fi-hi* could refer either to the material intellect = intellect in potency, or to the youth taken *supra* as example for tracing the development of the intellectual faculty (in which case, one should translate «appear in him»). The closest referent is however the intellect, hence my choice of translation. Cf. also shortly *infra* «they are impressed in it» (*i.e.* in the intellect).

ONE OF THE TWO [...] AS WE HAVE CLARIFIED | For the first kind of intelligibles cf. the description of «primary» [*awwalīyyāt*] propositions *supra*, *Logic*, IV, §60 (mention) and §61 (actual treatment). Such propositions are indeed known through the sole force of the intellect, which cannot but subscribe to their truth. Thus, they do not need an «acquisition» [Arabic *iktisāb*, Latin *inquisitione*] in proper sense, but they are almost innate. It is worth noticing, *en passant*, that this theoretical sense of *iktisāb* is much different from the practical/ethical one given to the term – as ‘acquisition of the acts’ – by Classical Aš‘arite theology. ALONSO 1963: 275 fn. 31 compares the present passage with the form of innate knowledge of God described in THOMAS AQUINAS, *Super De Trinitate*, I, q. 1 art. 3 ad 6 («Ad sextum dicendum quod Deum esse, quantum est in se, est per se notum, quia sua essentia est suum esse – et hoc modo loquitur Anselmus – non autem nobis qui eius essentiam non videmus. Sed tamen eius cognitio nobis innata esse dicitur, in quantum per principia nobis innata de facili percipere possumus Deum esse»), although I found the pertinence of the reference to be at best very doubtful. Among other reasons to exclude the validity of the crossreference, it appears to me particularly apparent that in §61 *supra* the existence of God was not one of the given examples of primary propositions.

IT RECEIVES | Arabic *taqbalu-hā*. If the feminine form of the verb is not to be emended, it might entail a silent passage from the intellect (masculine) to the intellectual faculty or the soul (feminine) as the logical subject of the sentence.

THE SECOND ONE [...] TECHNIQUES | For the second kind of intelligibles cf. the description of the «famous» [*mašhūrāt*] propositions *supra*, *Logic* IV, §60 and §66.

INTELLECT IN HABITU | Arabic *'aql bi-l-malaka*, Latin *intellectus in habitu*. (2)

it has already taken over | Arabic *qad malaka*, Latin *iam potens est acquirere*.

BY A SYLLOGISM | Arabic *qiyās^{am}*, Latin *per speculationem si voluerit* (!) (the mistranslation is perhaps due to an attraction of the pericope ‘whenever he wants’ that follows closely).

INTELLECT IN ACTUALITY | Arabic *'aql bi-l-fi'l*, Latin *intellectus in effectu*. (3)

LIKE THE KNOWING [MAN] [...] WHENEVER HE WANTS | Arabic *ka-l-'ālimi l-ġāfilī 'anī l-'ulūmī, al-qādirī 'alay-hā mahmā arāda*, Latin *tunc enim est* (St. Clair *non est*) *quasi sapiens oblitus cogniti, sed potens scire cum voluerit*. The negation added by St. Clair, but omitted by almost all her witnesses, is clearly wrong on the basis of the Arabic text.

ACQUIRED INTELLECT | Arabic *'aql mustafād*, Latin *intellectus acquisitus*. (4) For a very recent reappraisal of this crucial tenet of Greek-Arabic noetics, which highlights its origin in Ishāq ibn Ḥunayn’s Arabic version of Alexander of Aphrodisias’ *De intellectu* and its primeval equivalence with the expression «acquired from outside» [Arabic *mustafād min ḥārīġ^m*, Greek ἐξωθεν γινόμενος], cf. D’ANCONA 2021: esp. 195-196, with a draft edition of the relevant passage by the Arabic Alexander. The entire article by D’Ancona constitutes however an extremely thorough and valuable reappraisal of the convoluted noetical issues which lie at the remote background of the present excerpt of Avicennan doctrine of intellect, as well as of the most important episodes of Latin reception of those issues.

FROM A CAUSE AMONG THE DIVINE CAUSES | Arabic *min sababⁱⁿ min al-asbābⁱ l-ilāhiyyatⁱ*, Latin *ex aliqua causarum divinarum*. This clause, together with the following expression ‘angel’, clearly contributes to connote the agent intellect as a transcendent entity, which operates on human intellection from above and without.

«ANGEL» | The Arabic text – as already noticed by ALONSO 1963: 276 fn. 32) has *ملاك* instead of *ملك* («angel») which is however clearly the best reading; cf. also the Latin translation «*quae vocatur angelus*» (ST. CLAIR 2005: 75-370). The reading *malaka* can be explained by attraction of the previously mentioned ‘*aql bi-l-malaka* (see *supra*).

AGENT INTELLECT | Arabic ‘*aql fa‘āl*, Latin *intelligentia agens*. (5) While the structure and style of the passage strongly suggest continuing the numbering of the degrees of intellect up to the fifth and last kind, the agent intellect, this circumstance should not lead one to overlook the substantial divide – both ontological and epistemological – that separates the ‘*aql fa‘āl* from the preceding four kinds of intellect. While (1)-(4) are all facets of the human intellect, variously involved in the process of human acquisition of knowledge, the agent intellect is celestial and super-human, and provides the conditions of possibility of human intellection, rather than being a stage or phase of it. This is also the reason why the Latin reception of the Arabic theory of intellect, as masterly reconstructed by HASSE 1999, typically distinguishes four, and not five, kinds – that is, degrees – of the human intellectual faculty, leaving the *intelligentia agens* aside, and above, this fourfold articulation. This same divide is also mirrored in the terminological choices of the Latin translation, which renders the human articulations of ‘*aql* with *intellectus*, but calls the agent intellect *intelligentia*. The present occurrence of the phrase «agent intellect» is chronologically the first one in the *MF*. The expression will be widely used *infra*, in the Fifth and last treatise of the *Physics* of the work: cf. *infra*, §425 (three occurrences), §426 (2 occurrences), §427 (2); §428 (2); §430; §447. For a discussion of the commonly presented identification of this intellect with the Bestower of forms [*wāhib al-ṣuwar*] cf. *supra* the commentary to *Metaphysics* V, §302.

A SELF-SUBSISTING SUBSTANCE | Arabic *ḡawhar qā'im bi-nafsⁱ-hi*, Latin *substantia existens per*. The expression is often employed in the *TF*, both in the singular (as here in the *MF*) and in the plural [*ḡawāhir qā'ima bi-anfusⁱ-hā*]. Cf. *TF*, Discussion 1, MARMURA 2000: 42; Discussion 3, *ivi*: 64 e 66; Discussion 4, *ivi*: 83; Discussion 16, *ivi*: 153; Introduction to the natural sciences, *ivi*: 163; Discussion 18, *ivi*: 178; Discussion 20, *ivi*: 219.

WITH THE PERISHING OF THE BODY | Arabic *bi-fanā^x l-ḡismⁱ*, Latin *pereunte corpore*.

FOREVER AND EVER | Arabic *abad^a l-abadīn* (with ‘Semitic’ superlative of the adverbial *abad*: cf. *supra* the commentary to §16 for the same grammatical structure), Latin *in perpetuum*.

EITHER FEELING PLEASURE OR SUFFERING PAIN | The eternity of the intellectual part of the soul, and its destiny of perpetual pleasure or punishment, anticipates the eschatological subject-matter of *Physics* V: for the eternal happiness of the soul cf. in particular *Physics* V.3, §§428-429; for her misery see *Physics* V.4, §§430-432. The two notions are expressed here with two active participles of the *v* stem, deriving respectively from the root of *ladḏa*, ‘pleasure’ [Arabic *mutaladdid*, Latin *laeta*], and from that of *alam*, ‘pain’ [Arabic *muta'allim*, Latin *tristis*]. For *mutaladdid*, WEHR 1013^a gives, significantly, also the meaning of ‘epicure’ (in the sense of hedonist); while this is of course not the specific sense that is here at stake, the linguistic connection with the full enjoyment of pleasure is very conspicuous.

[§412] D362.23^b-363.11

The paragraph introduces a long discussion, articulated in ten proofs, of the immateriality of intellect (§§412-419, plus an additional proof in §420). This section of the *MF* globally bears strong resemblances to the Eighteenth Discussion of al-Ġazālī’s *TF*, and in particular to the ten proofs there given for countering the philosophers’ «claim of knowing through rational demonstrations that the soul is a self-subsistent substance» (MARMURA 2000: 181.29-31). These similarities can be roughly

articulated as in the following table, although a full conspectus of the minor differences between the two texts would have to wait for a more careful analysis.

TABLE 57. *Correspondences between TF, Discussion 18, and the proofs for the immateriality of intellect presented in MF, Physics IV, §§412-419*

<i>TF, Discussion 18</i>		<i>MF, Physics IV</i>	
[18.1]	MARMURA 2000: 182.3-185.16	[8]	§§415-417, esp. §415
[18.2]	MARMURA 2000: 185.17-187.17	–	–
[18.3]	MARMURA 2000: 187.18-end of page	–	–
[18.4]	MARMURA 2000: 188.1-189.16	–	– ?
[18.5]	MARMURA 2000: 189.17-190	~ [2][4]	§412
[18.6]	MARMURA 2000: 191.1-193.8	~ [10]	§419
[18.7]	MARMURA 2000: 193.9-194.8: esp. 193.13-20	~ [1][6] + esp. [5]	§§412-413
[18.8]	MARMURA 2000: 194.9-196.11	[7]	§413
[18.9]	MARMURA 2000: 196.12-197	–	–
[18.10]	MARMURA 2000: 198.1-200	[9]	§418

The first seven indications (D362.23-364.17) – dealt with in §§412-414 – correspond with only «minor modifications» to *DN* c. 40 (cf. JANSSENS 2019: 118). After a distinction between seven merely persuasive «marks» and three actually apodictic proofs, this paragraph goes on to present the first four marks, which are all based (as will the further three non-apodictic signs) on the difference of observable behaviour between sensation and intellection. The signs presented are as follows: (1) sensory perception, being based on the corporeal organs, gets damaged if these are damaged; (2) the senses do not perceive their own organs, nor themselves *qua* senses; (3) if a (harmful, unnatural) quality pathologically overtakes the sensory faculties to the point that it becomes entirely engrained in their organs, then the senses will not be able to perceive it anymore; (4) the senses (in which internal senses are in this case explicitly included, perhaps in contradistinction to [(2)]) are not capable of self-perception.

STRONG MARKS | Arabic *‘alamāt qawīya*, Latin *fortissimo signa*.

DECISIVE DEMONSTRATIONS | Arabic *barāhīn qāṭi‘a*, Latin *probationes necessariae*.

THEN WILL EITHER NOT PERCEIVE [ANymore] | Reading *fa-immā lā tudriku*, as suggested by Duniyā in a footnote *ad locum*, instead of *fa-immā tudriku*, which would translate to an apparently incongruous «either will [still] perceive» (with a meaning opposite to the required one). As already noticed by ALONSO 1963: 276 n. 33, the Latin translators had the correct Arabic text at their disposal (or else were able to correct *ope ingenii* the rather obvious polar mistake): «...cum in instrumento acciderit aliquod nocumentum, vel non apprehendent vel debilitatur eorum apprehensio et errant in illo» (St. CLAIR 2005: 76.381-382).

OR THEY WILL COMMIT A MISTAKE CONCERNING IT | Arabic *aw yağlaṭu fī-hi*. While the general meaning of an error in sensory perception due to the physical harm of the organ is clear, the text is not entirely

satisfying. My translation presupposes that the singular *yağlaṭu* stands for, and has the same meaning of, the feminine/plural *tağlaṭu*, which would have been expected for symmetry with *tudriku* in the first of the alternative outcomes (see *supra*). In this case, the suffix pronoun of *fi-hi* would stand for the masculine *idrāk* («perception»), which was the subject of the second horn presented. However, one could also hypothesize that the three-legged alternative here presented with the structure *fa-immā... wa-immā... aw* was actually meant to be a two-horn dilemma with the structure *fa-immā...wa-immā*, and that the final *aw* is a mistake for *wa-*. Under this hypothesis, which lies at the basis of the Latin translation as well (see *supra*), the best rendition of the second (and last) alternative would probably be: «or their perception [*idrāk*] will weaken, so that it will make commit a mistake concerning it», with *idrāk* as the subject of the second sentence, the causative *yuğliṭu* (IV form) instead of the I form *yağlaṭu*, and the suffix pronoun referring to a generic object of sensory perception.

NOR ITS INSTRUMENT | Since the example given is that of the sense of sight, the «instrument» [*āla*] or organ at stake will be specifically to be identified with the eyes, which, indeed, do not see themselves (but the same is said to hold, more generally, for all the other sensory organs: the tongue does not taste itself, nor does the nose smell itself, and so on).

THE THIRD ONE [...] WOULD NOT PERCEIVE THAT. | Cf. the Latin text: «Tertium est quod si esset in eo qualitas aliqua, non apprehenderet eam; numquam enim apprehendit nisi quod est praeter se, in tantum quod malitia etiam complexionis cum fuerit firma in corpore totaliter, sicut ethica non apprehendet calorem suum virtute sui tactus» (ST. CLAIR 2005: 76.385-388).

ILL TEMPERAMENT | Arabic *sū' al-mizāğ*, Latin *malitia...complexionis*. Al-Ġazālī's text is quite compressed, but, thanks to the parallel passages from Avicenna's *al-Adwīya al-qalbīyya* and *K. al-Nafs* given *infra* (cf. commentary on the notion of «hectic fever»), it can be surmised that the «ill temperament» here mentioned would be technically (*i.e.*, medically) defined as «equal» [*mustawin*]/«concordant» [*muttafiq*], *i.e.* not «different» [*muhtalif*]. This is to say that the ill disposition here at stake is of the same kind of the hectic fever, *i.e.* a kind of disease which becomes so deeply rooted and cemented into the very nature of the harmed organs, that these become incapable of even feeling the presence of the disease.

DEEPLY INGRAINED IN THE BODY | Arabic *mutamakkin fi l-badan*, Latin *firma in corpore totaliter*.

THE HECTIC FEVER | Arabic *al-diqq*, Latin *ethica*. The passage by John Blund referenced by ST. CLAIR 2005: 76 fn. 19 as a parallel to this expression of the *MF* is entirely out of place, since it completely misses the medical connotation of *ethica* pro *hctica* (*febris*). For this meaning of *ethica* (in the sense of *febris ethica*), from Greek ἐκτιχός 'continuous', cf. rather DU CANGE (III): 325^c («ETHICA, nude, vel *Ethica febris*, quam Medici *Hecticam* a Græco ἐκτιχός, Habitualis, ab ἔξις, Habitus, Febris solutu difficilis, Gall. *Hectique*. Occurrit in Actis S. Martii tom. 3. pag. 869. Maii tom. 4. pag. 480. Junii tom. 1. pag. 793. apud Baluzium tom. 2. Hist. Arvern. pag. 503. etc. *Ethicus morbus*, in Anecdotis Martenianis tom. 3. col. 1892»). For the common usage of *ethicus* pro *hcticus* in medical Latin texts cf. also for instance Pietro d'Abano's Latin translation of Galen's *De marcore*: see URSO 2015: 58-59 fn. 31. However, the closest parallel for this passage of the *MF* is probably to be found in Avicenna's *al-Adwīya al-qalbīyya*, ed. BILGE 1937: 6.12-end of page (my translation, with a suggested emendation):

The one having the hectic [fever] [*ṣāhib al-diqq*] does not suffer from the violent heat [*bi-l-ḥarāra al-šadīda*], which is more violent than the heat of the acute fever [*al-ḥummā al-muḥriqa*], while the one having the acute [fever] [*ṣāhib al-muḥriqa*] does suffer from what is under it [*i.e.* a lower heat than the hectic one], and that because the heat of the hectic [fever] is deeply ingrained [*mutamakkina*] within the limbs, as [if it were] their [own] temperament [*ka-l-mizāğ la-hā*], while the heat of the acute fever overtakes [reading *ṭār'a* pro *ṭāriya* Bilge] the limbs, and it differs from the temperament of the limbs. The physicians designate [*yuḥaṣṣūna*] what behaves like the hectic [fever] with the name of «equal ill temperament» [*sū' al-mizāğ al-mustawī*], and what behaves like the acute fever with the name of «different ill temperament» [*sū' al-mizāğ al-muhtalif*].

The identity of language with the present section of the *MF* is striking: see the usage of ‘hectic’ [*diqq*], ‘ill temperament’ [*sū’ al-mizāġ*], and especially the characteristic adjective ‘deeply ingrained’ (or ‘deep-rooted’, ‘consolidated’, ‘cemented’) [*mutamakkina*]. Compare the Latin translation of the same passage edited in VAN RIET 1968: 193.84-91, where *diqq* and *muḥriqa* are respectively rendered with [*febris*] *hectica* (*ethica* in Algazel) and *acuta*:

Et ideo habens hecticam, non dolet ex calore vehementi, qui vehementior est calore febris acutae; dolet autem habens febrem acutam ex calore minore quam sit ille: calor enim hecticae infusus est membris quasi complexio illorum; calor vero febris acutae extraneus est membris et differt a complexione membrorum. Medici autem imponunt nomen proprium ei quod est sicut hectica, complexionem malam aequalem, et ei quod est sicut febris acuta, complexionem malam diversam.

See also the parallel passage for this place of the *Cardiac Remedies* in Avicenna’s *K. al-Nafs* II.3, ed. RAHMAN 1959: 71.3-8 (my translation), which deals with exactly the same problem, although the terminology is only partially identical:

The bad temperaments [*al-amziġa al-radī’a*], indeed, when they establish themselves and the original temperaments [*al-amziġa al-aṣliyya*] are annihilated at the point that these bad [ones] are as if they were [themselves] original, are not sensed; and because of that the heat of the hectic [fever] [*diqq*] is not sensed, even though it is stronger [*aqwā*] than the heat of the tertian [fever] [*ġibb*]. As for the case in which the original [temperaments] were still existing, and these [ones] overtaking [them] were contrary to them, they would be sensed, and this is called «different ill temperament» [*sū’ al-mizāġ al-muḥtalif*], while this [other kind] which establishes itself is called «concordant ill temperament» [*sū’ al-mizāġ al-muttafiq*].

Among the other differences, it is particularly important for us here that the well-recognizable adjective *mutamakkīn*, which appears in both the *MF* and the *al-Adwīyya al-qalbiyya*, does not occur by contrast in the *Nafs*. It is also worthwhile to notice that hectic fever [*diqq*] is compared in the *Nafs* with tertian fever [*ġibb*] rather than with the acute one [*muḥriqa*], as in the fragment on *Cardiac Remedies*, and that the diseases such as hectic fever are rubricated under the label of «concordant ill temperament» [*sū’ al-mizāġ al-muttafiq*] rather than «equal» [*mustawīn*]; compare *supra*. See also the Latin translation of the passage of the *Nafs* in VAN RIET 1972: 137.79-86:

Complexiones etenim malae, cum quiescunt postquam corruerunt complexiones naturales, ita quod hae malae factae sint quasi naturales, non sentiuntur; et ob hoc non sentitur calor hecticorum, quamvis multo fortior sit quam calor tertianorum; sed si naturales adhuc habuerint esse, istae extraneae quae adversantur, sentientur; et haec nominatur infirmitas complexionis diversae, et illud quietum vocatur infirmitas complexionis convenientis.

Cf. also HASSE 2000: 264 (h) for a list of parallel passages for this Avicennan doctrine in Latin authors such as Petrus Hispanus, Albert the Great and Thomas Aquinas. As for Albert in particular, see also SIGNORI 2019: 556-557 and fn. 16 for the *ethicus* / *hecticus* confusion, transmitted most likely to Albert’s *De homine* (ANZULEWICZ-SÖDER 2008: 461.34, number [108] in SIGNORI 2019) from Algazel’s (rather than Avicenna’s) text. For Avicenna’s own explicitly medical treatment of the hectic fever cf. *Canon* IV.1.3 (cf. the relevant reference in VAN RIET 1968: 193 fn.). For a synoptic overview of Greek and Arabic terminology for fevers it is useful to look at VEIT 2003 (which focuses on the text and tradition of Isaac Israeli’s *Book of Fevers* [*Kitāb al-ḥummayāt*]): see esp. 169. In conclusion, it is worth mentioning that also in the parallel Persian text of the *DN* (ed. MEŠKĀT 1952: 111.1) the term used to describe the phenomenon that is here at stake is *dīqq* (although the French translation wrongly renders it as «atrophie»: see ACHENA-MASSÉ 1958: 70.22). All this is evidence enough to underline once more the fruitful collaboration of medicine and philosophy in Avicenna’s texts. In particular, I find it very noteworthy (and hope to further explore the topic in a future contribution) that hectic fever

produces in the senses a sort of self-unconsciousness, which conceals the symptoms themselves of the disease, since a partially parallel case of an illness disguising the ill body's own needs, *i.e.* bulimy, was already presented *supra*, *Metaphysics* III.b.11, §233. Bulimy and hectic fever will thus be particularly interesting, parallel cases of self-concealing diseases (diseases of unawareness, as it were), and this might be precisely the reason why they bear philosophical, and not only medical, relevance.

THEY DO NOT PERCEIVE THEMSELVES | For symmetry with the other signs hitherto presented, the subject «they» should refer to the senses. However, the following reference to the estimative faculty suggests to include here in the consideration, besides the five external senses, also the internal ones.

[§413] D363.12-364.1

Three further reasons for the immateriality of intellect are given, by opposition to the behaviour of the faculties bound to materiality: (5) a strong sensory perception prevents the senses to perceive a less intense one shortly afterwards; (6) again, strong and sudden sensory perceptions damage the senses (cf. *supra*, §412, [(1)]); (7) senses age and weaken with the aging of the body. The paragraph concludes by stating that the exact opposite of the listed seven reasons holds true for the intellect, which is then to be considered immaterial.

IMMEDIATELY FOLLOWING IT | Arabic *'aqīb*, Latin *statim... post illud*.

SOUND | Arabic *ṣawt*, Latin *tonitruum* (lit. 'thunder': the Latin translation emphasizes the intensity of the sound).

ALL THIS THAT WE HAVE MENTIONED [...] THE INTELLECTUAL FACULTY | The sentence clarifies the reason why the seven characteristics of bodily faculties listed in what precedes can function as signs of the immateriality of intellect. This reason is that in the case of intellect everything mentioned above «is reversed» [*yan'akisū*]: if all bodily faculties do *x*, and the intellect does not do *x* (or better: does non-*x*), the intellect can be inferred to be non-bodily. This reasoning is of course not demonstrative, hence the qualification of these arguments as signs rather than demonstrations (for which cf. *infra*, §§415-419).

LIKE THE HEART AND THE BRAIN | Arabic *ka-l-qalbī wa-l-dimāġī*, Latin *scilicet cor et cerebrum*. For the tight connection of heart and brain, which might betray an (already Avicennan) conciliatory strategy between the two opposite doctrines of cardio- and cerebrocentrism, cf. *supra*, *Physics* IV, §383 and *infra*, §419.

PLAIN | Arabic *ġalī*, Latin *manifestum*.

[§414] D364.2-17

The paragraph deals with a 'physiological' objection against the immateriality of the intellect, based on the fact that the intellectual activity is often interrupted or hindered due to bodily damages. The answer defends the intellect's immateriality by describing two ways in which an impaired body could in principle affect even an immaterial soul: (i) the first implies the (pre)occupation of the soul for and with the physical damage occurred to the body, which distracts her from her own intellectual activity; (ii) the second admits the need that the soul has of the body at the beginning of her activity, in order to trigger thought and intellection, but denies that this need should persist also afterwards.

ITS FALLING SHORT OR ITS INACTIVITY IN CONCOMITANCE WITH THE HINDERING | Arabic *quṣūr^h-hā aw ta'aṭṭul^h-hā 'inda ta'ṭil [ālāt^h-hā]*, Latin *impedimentum eius cum impeditur [eius instrumentum]*.

OF ITS INSTRUMENTS | Reading *ālāt^h-hā* (آلاتها) as in BĪĠŪ 2000: 205.3 instead of Dunyā's misprint آلهتها.

ARE NOT A SIGN OF THE FACT THAT IT HAS NOT AN ACT [ON ITS OWN] | Arabic *lā yadullu 'alā anna-hā lā fi'^h la-hā fi nafsⁱ-hā*, Latin *non significat quod ipsa non habeat actionem in se ipsa*.

SHE TURNS AWAY | Arabic *iṣṣarafa*, Latin *retrahetur*.

WITH AN INTELLIGIBLE KIND | Arabic *bi-fannⁱⁿ ma'qūlⁱⁿ*, Latin *circa aliquam sententiam intelligibilem*.

RESTORATION | Arabic *iṣlāḥ*, Latin

A RIDING ANIMAL | Arabic *dābba*, Latin *vehiculo*. The metaphor of the riding animal, ride, or vehicle, only useful as long as the destination has not been reached, occurs two other times in what follows: cf. *infra*, *Physics* V.3, §428 and V.4, §430.

A SIGN OF THE FACT THAT IT HAS AN ACTION IN ITSELF | Arabic *yudallu anna la-hu fi'^h fi nafsⁱ-hi*. That is, the intellect has an autonomous agency.

THAT IS NOT A PROOF FOR IT | That is to say: admitting the possibility of an influence of bodily circumstances on the activity of the intellect in the two aforementioned respects does not yet constitute proof of the materiality of the intellect itself. «That» [*dālika*] refers in particular to «the inactivity of the action with the inactivity of the instrument» [Arabic *ta'aṭṭul^h al-fi' l-bi-ta'aṭṭul^h l-'ālat^h*], a synthetic expression that can be unpacked as meaning 'the absence of the action of the intellect in concomitance with the inactivity of some corporeal organ'. The key word here is «with» [*bi-*], to be understood in the strong sense of 'in concomitance with', 'together with'. The fallacy committed by the one willing to infer the materiality of the intellect from its possible inactivity due to physiological causes is indeed a fallacy of *cum hoc, non propter hoc*: inactivity of the organ and inactivity of the intellect may indeed be simultaneous, but they are emphatically not the cause of one another. For an identical reasoning applied to the origin of the souls *with*, but not *because of*, the bodies cf. *infra*, §422.

[§415] D364.18-365.4

The paragraph introduces the first of three announced apodictic demonstrations of the immateriality of intellect, after the seven merely probable signs offered *supra* in §§412-413. The first *burhān* is thus numbered as the eighth argument in the series. It argues against the possibility, for an immaterial knowledge, to reside in a divisible material body, since the indivisibility of knowledge is as such opposed to the divisibility proper of the body. According to JANSSENS 2019: 118 and fn. 130, this demonstration «is a substantially reworded version of a large part of DN c. 41, i.e. 113,9 – 118,3, but, as far as I can see, it never affirms something that would be strange in an Avicennian perspective».

THE ABSTRACT UNIVERSAL KNOWLEDGE | Arabic *al-'ilm al-muḡarrad al-kullī*, Latin *scientia abstracta universalis*.

INHERES IN A DIVISIBLE BODY | Arabic *an yaḥulla fi ḡismⁱⁿ munqasimⁱⁿ*, Latin *non existit in re divisibili*.

IT IS NOT POSSIBLE THAT THERE IS ANY CONTROVERSY ABOUT THESE PREMISES | The denial of any dispute or «controversy» [Arabic *nizā'*, Latin *contradicere*] concerning the assumptions of the reasoning is explicitly grounded on the geometrical refutation of the existence of the atoms conducted in *Metaphysics* (see *infra*). This has some parallel in two interconnected passages of the Eighteenth Discussion of the *TF*, taken respectively from the first and the second proof therein presented, and also quoted in DHANANI 2015: 88-89 (transl. MARMURA 2000: 182.28-183.1 + 183.8-11 + 183.18-19 [i] and 187.4-9 [ii]):

[i]

The first standpoint is to say: "With what [argument] would you deny one who says, 'The receptacle for knowledge is single, indivisible, space-occupying substance'?" This is known from the doctrine of the speculative theologians. The only response that remains [for the philosophers] is to deem [this doctrine] unlikely [...]. We, however, will not favor this position [here]. For the discussion of the question of the indivisible part is lengthy, and [the philosophers] have concerning it geometrical proofs that would take long to discuss. [...] [prova dei tre atomi abc metti riferimenti interni a MF sia qui sia supra] This is a difficulty that will take long to resolve, and we have no need to get involved in it; so let us, hence, turn to another position.

[ii]

If one were then to say, "Why did you not refute these demonstrations by [arguing] that knowledge indwells in the body in a substance occupying space that is indivisible – namely, the single atom?" we would say: This is because discussing the single atom is connected with geometrical matters, the discussion of whose resolution takes too long.

As shown by DHANANI 2015: 89, al-Ġazālī's unwillingness to accept his fictional interlocutor's atomistic objection against the philosophers – the embracing of which would entail accepting the existence of the atoms, however soundly rejected by the philosophers *via* geometrical proofs – shows his «lukewarm commitment to *kalām* atomism». On this issue, then, there seems to be perfect agreement between the *MF* and the *TF*, since in the *MF* as well the burden of the proof concerning the indivisibility of the knowledge receptacle appears to be entirely charged upon the aforementioned demonstrations of the non-existence of atomic substances. An air of family between the two texts is also given by al-Ġazālī's apparent desire to cut the discussion short by referring back to lengthy geometrical proofs, whose demonstrative value is always – although more or less explicitly – acknowledged.

THE SINGLE PART [...] HAS ALREADY BEEN INVALIDATED | For the series of arguments against the atoms – here «the single part which is not partitioned» [Arabic *al-ġuz' allādī lā yataġazza'a*, Latin *corpus...indivisible ut athomus*] – cf. *supra*, *Metaphysics* I.1, §§111-116.

IS NOT PARTITIONED | Reading [*lā*] *yataġazza'a* instead of the misprint *yaġazza'a* as in Dunyā.

IT WOULD SUBDIVIDE ITSELF IN IT | Namely, it will be effused in its parts.

ACCORDING TO THE CLAIM OF SOME | Arabic *bi-za'm al- zā'im*, not translated into Latin.

[§416] D365.5-end of page

An objection and answer concerning the actual indivisibility and unity of knowledge are presented. Not only the knowledge of that which is simple, but also the knowledge of that which is divisible is unitary and simple, because complex objects also become known in their essential unity, and not through their parts. Cf. *supra*, *Metaphysics* I.4, for the discussion on one and manifold.

THE KNOWLEDGE OF THE TEN | Comparison with the Arabic *al-'ilm bi-l-'ašara* clarifies that the Latin translation «*scientia de denario*» (ST. CLAIR 2005: 78.442) is perfectly sound, while demanding to interpret *denarius* as the adjective (with the meaning of 'containing and related to the number ten'), rather than as the corresponding noun (the Roman coin, which would have presupposed an entirely different Arabic text).

THE KNOWLEDGE OF THE MAN [...] HIS GENUS AND HIS DIFFERENTIA | Animal [Arabic *ḥayawān*, Latin *animali*] and rational [Arabic *nāṭiq*, Latin *rationali*] are the two parts, respectively genus and

differentia, of the Aristotelian definition of man: for its previous occurrence in the *MF* cf. *supra*, *Logic* II, §13. The other examples refer to non-definable beings ('existence', 'unity'): cf. *supra*, *Metaphysics*, I.1, §§101-102.

[§417] D366-367.10

After the discursive claims for the unity of knowledge presented in the preceding §416, the text aims here to advance an actual demonstration of the impossibility of the division of knowledge. This demonstration is long and articulate, as it characteristically proceeds by means of dilemmatic exhaustion of the possible alternatives that could be surmised once having assumed a subdivision of knowledge.

LET US RAISE | Arabic *'alā annā nuqīmu*, Latin *verumtamen inducemus*.

OF THE IMPOSSIBILITY OF THE DIVISION | Arabic *'alā istiḥālat' l-qismat'*, Latin *impossibile est scientiam dividi*.

THE DIFFERENTIATION OF THE GENUS FROM THE SPECIES | Arabic *muḥālafā al-ḡins li-l-naw'*.

AND IF IT FALLS WITHIN IT | Arabic *wa-in kāna dāḥil^m fi-hi*. This sentence looks puzzling. One could perhaps also translate it as «even though [the species] falls within [the genus]».

I WISH I KNEW | Arabic *layta širī*. The optative exclamation, which expresses with rhetorical emphasis the idleness of the contrasted theory, is not translated into Latin.

AND WHY | Interpreting the *scriptio defectiva* ↓ as a *limā*, in accordance with the Latin translation («*cur una illarum meruit esse subiectum generis et alia subiectum differentiae?*»; ST. CLAIR 2005: 80.472-473).

IF THEN IT IS NOT A KNOWLEDGE | The sentence is an example, among many possible ones, of Dunyā's erroneous and often misleading choices of punctuation: here he posits a comma between *yakun* and *'ilm* – thus making it hard to follow the syntax of the sentence – instead of putting it regularly after *'ilm*.

PARTS WHICH ARE NOT KNOWLEDGES | They are not so by hypothesis, since we are now considering the branch of the alternative that presupposes the considered parts as different from a knowledge.

«IT RESULTS FROM TWO PARTS WHICH ARE SHAPE AND BLACK» | Arabic *ḥaṣala min ḡuz'ayni humā šakl^m wā-sawād^m*. The Latin translation «*quasi ex partibus quae sunt figurae proveniret nigredo*» (ST. CLAIR 2005: 80.481) can be explained if one supposes the absence of the *wa-* preceding *sawād* in its Arabic antigraph, and its subsequent interpretation as the subject of the sentence (as in 'the black results from two parts which are shape'). This is not impossible, but Dunyā's text is also acceptable if one assumes that 'shape' and 'black' are merely examples, willingly absurd, of the *mare magnum* of possible things that could account for the origin of a knowledge without being a knowledge themselves.

[§418] D367.11-21

The ninth argument for the immateriality of intellect within the human soul corresponds to the second apodictic demonstration given for it. It is based on the fact that abstract intelligibles known by the soul are devoid of material bounds such as considerations of location or size, which is possible only in the case of an immaterial receptacle for their notions. The final part of *DN* §41 (118.5-119.1) is qualified by JANSSENS 2019: 119 as merely a «source of inspiration» for this ninth demonstration.

THE ABSTRACT INTELLIGIBLE RESULTS IN THE SOUL OF MAN, AS IT WAS SAID BEFORE | Cf. *supra*, §409 and esp. §410.

ITS ABSTRACTION | Arabic *tağrīd^u-hu*, Latin *eius abstractio*. For *tağrīd* in the *MF* and its Avicennan background cf. *supra*, *Physics*, Preface, §315.

RECEIVES | Here: *yatalaqqī*, Latin *offendit*.

FREE | Arabic *munazzah*, Latin *abstractus*.

[§419] D367.22-368.16

The tenth argument, *i.e.* the third apodictic demonstration, argues for the intellect's capacity of self-perception.

HAS POWER OVER | Arabic *qādir 'alā*, Latin *potest...apprehendere*.

CAN DO | Arabic *yaqduru*, Latin *id quod ponunt*

BE IT HEART OR BRAIN | Arabic *mīn qalb^m aw dimāğ^m*, Latin *ut cor et cerebrum*. If I am not mistaken, the text of the *MF* is in this point willing to keep somewhat indeterminate the priority of a cardiocentric or else cerebrocentric model in the explanation of the higher functions of the soul. This reading is in keeping with the analogous interpretation of the joint mention of heart and brain in similar contexts *supra*, *Physics* IV, §383 and §413, although afterwards, in *Physics* V.5, §433, the heart is by contrast mentioned alone.

IT RESEMBLES IT | Arabic *tamāṭala*, Latin *consimilis*.

SINCE ONE TIME IT INTELLECTS IT | That is, the form of the organ, *i.e.* the organ of the sense in its action.

IT TURNS AWAY | Arabic *yu'riḍu*, Latin *praetermittit*.

COMMUNICATION | Arabic *mušāraka*.

DIFFERENT IN THE INDIVIDUALIZATION | Arabic *al-muğāyira fi l-ta'ayyun*, Latin *alia numero*.

SEPARATION | Arabic *muḥāraqa*.

WE HAVE CLARIFIED [...] HAS ALREADY APPEARED MANIFESTLY | Cf. *supra*, *Logic* II, §17; *Metaphysics* I.2, §141; *Physics* I.2, §328.

[§420] D368.17-22

In contrast with the programmatic claim of §412, where ten arguments for the immateriality of intellect had been announced, this paragraph presents an eleventh sign. This last argument is based on the contrast between the necessary finiteness of bodily faculties, and the potential infinity of the intellectual faculty. Since the intellect potentially has infinite objects, it cannot be material.

THE ELEVENTH SIGN | The numbering of this argument has no correspondence in the Latin text (see St. CLAIR 2005: 81.520). Moreover, it is neither compatible with the original program of inquiry laid out in §412 *supra*, because there the incorporeality of the intellect was said to be demonstrated in ten points. The ordinal number «eleventh» might then be a non-Ġazālian addition.

WE HAVE ALREADY MENTIONED [...] [SOMETHING] FINITE | Despite being rather intuitive, the connection of what is infinite to the immaterial intellect, and conversely of what is finite to the material body

(and the bodily faculties) does not seem to be assessed explicitly before this passage, which makes the backward reference somewhat suspended. JANSSENS 2019: 119 and fn. 131 states, albeit somewhat implicitly, that the argument to the effect that no infinite power exists in a body is added in the text by al-Ġazālī, although he also references Avicenna's *K. al-Nağāt*, ed. DĀNĪSPĀŽŪH 1985: 257.2 as a possible source.

[§421] D368.23-369.6

The paragraph introduces the demonstration of the immortality of the intellectual part of the soul, which in its immateriality does not perish with the material body. The demonstration starts however *ab ovo* by arguing for the opposite end of the intellect's existence, *i.e.* for its origin together with the body. The existence of the soul before the body leads indeed to a contradiction, because such a preexisting soul would not possibly be one, nor manifold. For Avicenna's teachings on the common origin of the soul and the body cf. MOUSAVIAN-MOSTAFAVI 2017; on the specifics of the soul-body relation in Avicenna's understanding (with special reference to the *K. al-Nafs* of the *Šifā'*) cf. now also ALPINA 2021^a: esp. 117-129. For the problem of the (non) causal relation between body and soul, and the consequences it bears for the demonstration of the immortality of the rational soul, cf. also DRUART 2000.

IT DOES NOT PERISH | I use «it» rather than «she» as the subject of this clause because I interpret the subject to be the «intellectual faculty» mentioned at the end of §420, rather than the more generic 'soul'.

DIFFERENTIATION | Here: *iḥtilāf*.

HETEROGENEITY | Here: *tağāyur*.

IF, [BY CONTRAST,] THEY WERE ONE | That is, if all the souls pre-existing to the body were reduced to only one soul.

BODIES | Arabic *abdān*. As already noticed in what precedes, in the *MF badan* usually refers to the human body, as opposed to the more generic *ğism*.

[§422] D369.7-12

The short, but dense paragraph argues first of all for one of the premises that were assumed in the preceding §421 in order to prove the impossibility of a soul autonomously preexisting her body, *i.e.* the fact that souls in human bodies are manifold, and not just one. The demonstration of this multiplicity is that every individual of the human species knows and ignores in his or her own right, while – should the intellect be only one for everybody – everybody would know what everybody else knows. This *ante litteram* anti-Averroist principle is the same that will be commonly expressed in later Latin thought with the handy formula «hic homo intelligit». Having shown that souls come to exist together with their bodies, the text specifies however that this does not mean at any rate that their existence is due to or caused by those bodies. Their cause is rather the eternal Bestower of forms; but the caused of an eternal cause is eternal, hence the souls as well are eternal.

THE SIGN OF THEIR MULTIPLICITY [...] THAT IS IMPOSSIBLE | JANSSENS 2019: 119 and fn. 132 remarks that this argument, which has an *ante litteram* anti-Averroist flavour, is a Ġazālīan addition, which however finds «clear support» in Avicenna's *K. al-Nafs*, ed. RAHMAN 1959: 226.4-5. Cf. *e.g.* on this issue the paradigmatic text by THOMAS AQUINAS, *De unitate intellectus*, c. 3: «Virtus autem huius demonstrationis et insolubilitas apparet, quia quicumque ab hac via divertere voluerint, necesse habent inconueniens dicere. *Manifestum est enim quod hic homo singularis intelligit*: nunquam enim de intellectu quaeremus, nisi intelligeremus; nec cum quaerimus de intellectu, de alio principio quaerimus, quam de eo quo nos intelligimus» (emphasis added). Cf. Latin: *non quicquid scit Ioannes scit Petrus*.

TOGETHER WITH THE BODIES | Arabic *ma'a l-aḡsām*ⁱ, Latin *cum corporibus*.

BY VIRTUE OF THE BODIES | Arabic *bi-l-aḡsām*ⁱ, Latin *propter corpus*. For an analogous reasoning of *cum hoc, non propter hoc*, applied however to the malfunctionings of the intellect in concomitance with physiological harms, cf. already *supra*, §414.

IT HAS ALREADY BEEN SAID BEFORE [...] ANYTHING AT ALL | For the denial of any proper causal action to the body, with the exception of mechanical contact, cf. *supra*, *Metaphysics* IV.b.3.3, §292.

AND ESPECIALLY | Arabic *lā sḡyyamā*.

THAT WHICH IS NOT A BODY | In my copy of Dunyā's edition the reading appears to be *labisa*, but this is perhaps only due to a material erasure of the second dot of *laysa*, the obviously correct reading.

THEIR CAUSE IS THE BESTOWER OF THE FORMS, WHICH IS AN ETERNAL INTELLECTUAL SUBSTANCE | As for this argument concerning the origin of the souls through the Giver or Bestower of forms, JANSSENS 2019: 119 and fn. 133 remarks – although somewhat implicitly – that it is a Ġazālīan addition with respect to the *DN*, but he references Avicenna's *Ta'liqāt*, ed. BADAŪI 1973: 110.7-10 for comparison. Cf. also JANSSENS 2002: 555 and fn. 24, and see here *supra*, §402. It is noteworthy that here an explicit identification of the «bestower of forms» [*wāhib al-suwar*] with an «eternal intellectual substance» [Arabic *ḡawhar 'aqlī azalī*, Latin *substantia intelligibilis aeterna*] – although not directly with the Agent intellect presiding over the sphere of the Moon – is presented. This is an important fact, since such an identification – albeit not entirely straightforward – is in any case more precise than what is to be found in Avicenna's own works on this topic. The *MF* could thus provide important evidence in the direction of the referential identity of giver of forms and agent intellect: cf. *supra* the commentary on *Metaphysics* V, §302 for further remarks (and scholarly debate) on this crucial doctrinal issue.

THAT SUBSTANCE | The effect, *i.e.* the soul.

EVERLASTING | Arabic *bāq*ⁱⁿ, Latin *semper permanent*.

[§423] D369.13-370.9

The paragraph presents an objection to the aforementioned demonstration (§§421-422) to the effect that the body might also be considered to be necessary for the souls' permanence, just as it has been shown to be necessary for their origin. The answer restates very clearly what had been briefly said in §422 *supra*, *i.e.* that the body must be seen as a condition, but never as a cause, of the existence of the souls, which last even in the absence of the body.

JUST AS HER ORIGIN NEEDS THE BODY | Arabic *ka-mā yaftaqiru ḡudūt^u-hā ilā l-badanⁱ*, Latin *sic ad incipiendum esse eguit corpore*. The presence of *ḡudūt* in a clear sense of temporal origination is noteworthy here, in the light of the parallel passages in which the same root is applied to the idea of the origin in time of the world, in order to further dispel any doubt that might arise apropos of the real temporal meaning of the term in al-Ġazālī's usage. The same term is used again *infra* in this

paragraph, always with the same meaning (and cf. also the Latin translation with the verb *incipio*, clearly connotated in a temporal sense). On the issue of the anti-eternalist statements interspersed throughout the text see the Introduction, §1.8.2.

THE BODY IS A CONDITION FOR THE ORIGIN OF THE SOUL | For the qualification of the body as «condition» [šarṭ] for the existence of the soul, absent in the *DN*, JANSSENS 2019: 119 and fn. 134 references Avicenna's *Ta'liqāt*, ed. BADAWĪ 1973: 81.26.

NOT ITS CAUSE | The suffix pronoun is masculine because it properly refers to the «origin of the soul», rather merely to the soul itself (*nafs* being typically feminine in Arabic).

NO [MORE] NEED OF THE PERMANENCE OF THE NET | For the metaphor of the net cf. also *infra*, *Physics* V.3, §428. The net is there paired with the further simile of the «ride» (useful until destination but then futile) which appears – although with different terminology – two further times in the last treatises of the *Physics*: cf. *supra*, *Physics* IV, §414 (with the term *dābba*); *Physics* V.4, §430 (with the term *markab*).

IN EVERY MOMENT | Arabic *fī kullī laḥẓatīn*, Latin *in unoquoque momento*.

THERE IS NO PREPONDERANCE OF ONE OVER THE [REST OF THE] NUMBERS | The affirmation of the absence of a «preponderance» [Arabic *tarǧīḥ*, Latin *electio*] according to which a certain number of souls should be worthier to exist than another number chosen *ad libitum* is equivalent to the statement of the absence of a sufficient reason. Cf. *infra* in this paragraph for the active participle *muraǧǧīḥ*, which I rendered in all its occurrences in the text as «selectively determining factor».

WERE LIMITED | Arabic *iqtaṣara*.

APPORTIONED | Arabic *muḥaṣṣaṣ*.

BECAUSE THE POSSIBILITY [...] LIKE THE POSSIBILITY OF THE FIRST | If the body could produce one soul, it could likewise produce two of them, since nothing would force it – under this hypothesis – to limit the number of the created souls to only one.

[COMING] FROM IT | *i.e.*, from the body, which is presupposed – *via* the hypothesis that the reasoning aims to invalidate – to be the cause of the existence of the souls.

IS NOT PREPONDERANT | Arabic *lā yatarāǧǧaḥu*, Latin *non est possibilis*. The terminology of preponderance is dominant in this paragraph: cf. *supra* and *infra*.

SETTLED | Arabic *mustaqirr*, Latin *remansit firmum*.

IT IS ENGAGED | Arabic *taṣtaḡilu*, Latin *quod occupetur*.

HER NUMBER IS INDIVIDUALIZED [...] IN THE WOMBS | The individualization (verb *iḥtaṣṣa*) by number of the souls is determined by the number of the «sperms» [*nuṭaf*] present in the «wombs» [Arabic *arḥām*, Latin *in uteris*]: natural reasons of physiology influence the origin of the human rational soul, which preserves however her supernatural induction.

ITS PERMANENCE | Here and in what follows the suffix pronouns are masculine, but they can be maintained by assuming that they refer to the existence of the soul, rather than directly to the soul herself.

THE SELECTIVELY DETERMINING FACTOR | Arabic *muraǧǧīḥ*, Latin *potius est*. As this last expression most clearly reveals, all the discussion is reminiscent of the metaphysical analysis of the preponderance of the existence over the non-existence, for which cf. *supra*, *Metaphysics*, I.5, §160. For the terminology of preponderance cf. also *Metaphysics* III.b.7, §220, and *supra* in this paragraph. JANSSENS 2019: 119 and fn. 135 remarks indeed that the insistence on the argument from the preponderance of the existence is Ġazālīan, although it «might have been inspired» by Avicenna's *K. al-Nafs*, ed. RAHMAN 1959: 229.8-11.

[§424] D370.10-end of page

The paragraph, which concludes the Fourth treatise of the *Physics* of the *MF* – started back at §376 –, deals with the demonstration of the falsity of the doctrine of metempsychosis, or transmigration

of souls. Such a refutation is absent in the *DN*, but is indeed present in various other Avicennan *summae* – cf. in particular *K. al-Nafs* of the *K. al-Šifā'*, *K. al-Nağāt*, *Išārāt* and *Risāla Aḏḥawīyya* –, as remarked by JANSSENS 2019: 119. Without giving references to the relevant passages of these various works, Janssens argues that «[t]he argument of the *Maqāsid* is in line with the basic argumentation in the latter [*i.e. Aḏḥawīyya*], but the actual wording is rather different». The difference of lexicon is indeed well perceivable, especially as for what concerns the final luminous metaphor (see *infra* in the commentary). Among the passages mentioned by Janssens, I was able in particular to locate the relevant texts of the *Šifā'* (*Nafs*, V.4, ed. RAHMAN 1959: 233.6-234.11) and of the *K. al-Nağāt* (ed. DĀNIŠPAŽŪH 1985: 386.12-387.17). For Avicenna's strong refusal of metempsychosis in the *Risāla Aḏḥawīyya* cf. JAFFER 2003; for al-Ġazālī's willingness to polemically entertain that notion in the Twentieth (and last) discussion of his *TF*, concerned with the resurrection of the bodies, cf. MARMURA 1989. For a series of important texts that link Avicenna's teaching against the metempsychosis to the Hebrew tradition see also FENTON 2009. It is worth noticing, with JAFFER 2003: 164 (and again 173), that Avicenna's treatment of the metempsychosis seems to ignore the fundamental objection given by its supporters, *i.e.* the unavoidability of positing an infinite number of actually existing souls when one accepts their eternity while refuting transmigration. This feature is common to the *MF* as well, and even more strikingly so, because the problem of the infinity of souls was indeed treated in the text (cf. *supra*, *Metaphysics* I.6, §162), but receives no further mention here.

METEMPSYCHOSIS | Arabic *tanāsuḥ*. The Latin translators, not having at their disposal a single, immediately corresponding term such as the Arabic and the Greek ones, are forced here to a long periphrasis: «Probatio autem ad destruendum sententiam eorum qui dicunt animas intrare alia corpora haec est» (ST. CLAIR 2005: 83.562-563).

WHEN THE SOUL LEAVES [...] TEMPERAMENT | Long periphrasis for the severance of the soul from the body caused by death.

LEAVES | Arabic *tarakat*.

[THIS] IS WHAT A GROUP BELIEVES | That is, the supporters of the metempsychosis. As JAFFER 2003: 164 usefully pointed out as for the treatment of the issue in Avicenna's *Aḏḥawīyya* (but this holds true for the *MF* as well): «[i]n his refutation of metempsychosis, the third and final doctrine he refutes, Avicenna does not specify his opponents. Since Greek and Islamic doctrines of metempsychosis were well known by this time, Avicenna could have had any number of thinkers in mind when he attacked this doctrine». *Ivi*: fn. 3, JAFFER suggests as a particularly viable candidate the name of Abū Bakr al-Rāzī (d. 935), for which cf. DRUART 1996.

REQUIRES | Arabic *istaḥaqqat*, Latin *meretur*. As specified soon afterwards, this requirement is of a natural – that is, essential – kind, not due to an «inclination» [*inḥirāf*] or a «choice» [*iḥtiyār*]. This is to say that the 'bestower of the souls' (for which see *infra* in the commentary) performs its action of emanating the soul in the predisposed «body» [*badan*] essentially and necessarily, not voluntarily. Such denial of a teleological will is constant in Avicenna's emanative philosophy: cf. *e.g. supra*, *Metaphysics* I.5, §159, but also the discussion on the absence of a goal for the intellectual movers of the heavens in *Metaphysics* IV.b.2.3, §§275-281.

THE LIGHT OF THE SOUL FROM THE BESTOWER OF THE SOULS | The illuminationist lexicon that equals the «soul» [*nafs*] with a «light» [*nūr*] supervening upon the predisposed semen is coupled with the peculiar expression «bestower of the souls» [Arabic *wāhib al-nufūs*, Latin *a datore animarum*], not listed in the survey of the occurrences of the similar phrases *wāhib al-šuwār* and *wāhib al-'aql* provided by JANSSENS 2002. A few indications can however lead to a safe identification of this newly mentioned entity with the several times aforementioned «bestower of forms» / *wāhib al-šuwār* (for a list of whose occurrences in the *MF* cf. *supra*, *Metaphysics* V, §302): (i) the identification *supra* in this paragraph of the *wāhib al-nufūs* with «the intellectual substance which is the principle of the

souls» [Arabic *al-ğawhar al-‘aqlī allādī huwa mabda’ al-nufūs*, Latin *a substantia intelligibili quae est principium animabus*] is parallel to the identification of the *wāhib al-šuwār* with an eternal intellectual substance in §422 *supra*; (ii) the soul is a form in Aristotelian and Avicennan terms, so that *wāhib al-nufūs* can be seen as a more specific denomination of the *wāhib al-šuwār*, just like ‘soul’ is the specific denomination of the form of a living being in Peripatetic philosophy; (iii) as documented by JANSSENS 2002: 555, a soul-engendering function is also attributed to the Giver of forms in Avicenna’s *Ta’līqāt*, especially in BADAŪĪ 1973: 110.7-10 (already quoted *supra* in the commentary to §422), but also, with specific reference to the very refutation of the metempsychosis which is here at stake, *ivi*, ed. BADAŪĪ 1973: 67.13-14. For the emanation of the human soul on the predisposed body by the agent intellect cf. also the brief reconstruction provided by ACAR 2003: 75-78. All this considered, the phrase «bestower of the souls» [*wāhib al-nufūs*] can probably be considered as a characteristic Ġazālīan variation on Avicenna’s terminology, not present in Avicenna’s own writings, but nonetheless critically pondered and well-fitting into the master’s doctrinal system. Its link with a – for Avicenna fairly atypical (but see SEBTI 2006) – illuminationist terminology is also witness of al-Ġazālī’s mature and free interplay with Avicennan concepts and doctrines. For a development of the lexicon of light in al-Ġazālī’s own works cf. the *Miškāt al-anwār*; for a reprise in a different, and major author, consider al-Šuhrawardī’s *Ḥikma al-išrāq*, where light metaphors famously abound.

FACE TO FACE TO | That is to say, ‘identical’, ‘homologous to’.

WHEN THE VEIL IS LIFTED FROM ITS FACE | The «veil» [*hiğāb*] is here the concrete garment shielding the light from one’s face. *Infra*, *Physics* V.4, §430, the expression «veiled» [*maḥğūba*], with the same root, will be rather employed in a metaphorical sense to describe the soul’s hindrance to the enjoyment of happiness after death (with the implication that her misery means being left in darkness, without the enjoyment of any light; cf. *infra* the commentary to that passage).

LIKEWISE, THEN, THE INFLUENCE [...] WITH A BODY | The general meaning of the analogy is that, just like the light of the Sun continues to shine [*ašraqa*] without being prevented by that of the lamp, in the same way the bestower of the souls infuses in the predisposed semen the soul prepared for it, even if another soul deprived of her preceding body – and thus in line of principle capable to ensoul and govern a new body – is simultaneously present in the world. The «light» effused by the bestower of souls/Sun is indeed so strong that no smaller light (such as that of an isolated soul/lamp) can prevent its illuminating action. An identical luminous analogy, involving both the Sun and a lamp, will occur again *infra*, *Physics* V.2, §427.

BY THE EXISTENCE IN THE WORLD OF THE SOUL WHICH IS NOT OCCUPIED WITH A BODY | Or, more clearly: the emanation is not prevented ‘even if there is in the world a soul not occupied [at that moment] with a body’. Cf. the Latin translation: «quamvis aliqua anima sit in mundo non occupata circa corpus» (ST. CLAIR 2005: 84.578-579).

THERE IS NO ONE WHO DOES NOT INTUITIVELY KNOW [TO HAVE] ONE SINGLE SOUL | Arabic *wa-mā min šaḥṣⁱⁿ illā wa-huwa yaš‘uru bi-naḥṣⁱⁿ wāḥidatⁱⁿ*, Latin *nullus autem hominum est qui non percipiat se habere unam animam*. Cf. *Aḍḥawīyya*, ed. LUCCHETTA 1969: 133 (and see JAFFER 2003: 174).

Treatise V

[§425] D371.1-19

The introductory paragraph of the Fifth and last treatise of the *Physics* of the *MF* – which also concludes the entire work – presents the general topic of the treatise, *i.e.* the influence that the agent intellect exerts on rational souls (seen from the point of view of the soul herself), and a quite detailed table of contents of the ten psychological/eschatological subtopics that will be discussed in what follows.

ITS ESTABLISHMENT AND ITS DESCRIPTION HAVE ALREADY BEEN ANTICIPATED | Cf. *supra*, *Metaphysics V*, §§299-301.

ITS ESTABLISHMENT | Arabic *itbāt*. While the technical existential import of the term (as ‘establishment of the *existence*’ of the thing) is very clear in Avicenna, in this passage of the *MF* the phrase seems to be used untechnically: the following sentence maintains, indeed, that, once given the *itbāt* of the agent intellect, there will be no need of further discussing its *essence* – and not rather its *existence*, as it would have been legitimate to expect in a context of technical Avicennan lexicon.

[§426] D371.20-372.15

(1) The first topic of the Fifth treatise is the way in which the human soul, with its intellectual knowledges, is in herself a sign of the existence of an immaterial substance perpetually acting, which is her cause. This substance is the agent intellect.

AS IT WAS SAID BEFORE | For the strictly bodily causal action of the body cf. *supra*, *Metaphysics IV.b.3.3*, esp. §292.

THE INTELLECTUAL KNOWLEDGES | Arabic *al-‘ulūm al-‘aqliyya* (as in the title of Avicenna’s *Epistle on the Divisions of the Intellectual Sciences*). Muckle’s Latin text (MUCKLE 1933: 183.30) reads here *scire vero intelligibiles [constituuntur]*, where the incongruous infinite *scire* should be emended in the noun *scientiae*.

AGENT INTELLECT | Arabic *‘aql fa‘āl*, Latin *intelligencia agente*. In the technical philosophical expression «agent intellect», the noun *‘aql* is glossed as meaning «abstract» [Arabic *muğarrad*, Latin *nudum*], *i.e.* entirely separate and immaterial, while *fa‘āl* is explained with the simpler form of the active participle of the same verb, *fā‘il*, with the meaning of «acting» or ‘active’. However, *fā‘il* as well might be translated in English as «agent» in appropriate contexts.

WHOSE ESTABLISHMENT HAS COME BEFORE IN *METAPHYSICS* | For the *itbāt* of the celestial intellects cf. *supra*, *Metaphysics IV.b.3.1*, esp. §282. In this case, the backwards reference to the metaphysical discussion was already in Avicenna’s *DN*.

THE WORTHIEST [...] WHICH WE HAVE MENTIONED | For the tenth intellect, which presides over the sphere of the Moon, cf. in particular *supra*, *MF*, *Metaphysics V*, §297; for its causal action cf. also *ivi*, §302, and see especially the commentary *ad loc.* for a discussion of the likely, but still debated equivalence of tenth intellect = agent intellect = bestower of forms in Avicenna’s system.

TO CORRELATE | Arabic *tansubu*, Latin *ut hoc attribuatur ei*.

THE REVEALED LAW TOO [...] BY MEANS OF THE ANGELS | The clarification is very important, since it shows with sharpness the idea – crucial in the *MF* – of the validation of the philosophical reflection through «revealed law» [Arabic *šarī'a*, Latin *lex*]. In particular, the use of the Arabic *aydī^m* («too») underlines the perfect agreement between the two envisioned here by al-Ġazālī. On the general issue, cf. Introduction, §1.7.2; for further discussion of this important piece of evidence for that general Ġazālīan attitude cf. SIGNORI 2018: 377-379; SIGNORI 2020^a: 88 [T2]. For the usage of the angelical lexicon (here: «angels» [Arabic *malā'ika*, Latin *angelis*]), cf. Introduction, §1.7.2.

[§427] D372.16-373.7

(2) The second topic of the Fifth treatise is a discussion on how knowledge can flow from the agent intellect down to the human souls of the sublunary world. The process is described with a luminous visual metaphor, in which the agent intellect is likened to the Sun, the intellectual things to the sensible things, and the capacity of intellectual knowledge proper of the rational soul is equalled to the sense of sight of the animal one.

IN THE STATE OF A DARKENED FORM | Arabic *fi hukmī šūrat^m muḏlamat^m*, Latin *quasi forme tenebrose* (plural *pro singular*).

IS PERFECTED | Here: *kamala*.

IN CONCOMITANCE WITH THE SHINING [...] IN THE FAULTLESS VISIONS | As will be explained shortly *infra*, the Sun and the «faultless visions» [Arabic *al-abšār al-salīma*, Latin *sanis visibus*] are the sensible correlatives of the agent intellect and of the intellectual insight of the soul. The luminous metaphor is used at first without explanation, and in a context which was at the beginning not metaphorical. Indeed, when the text speaks of universal forms, it is already describing a higher level of the process of cognition than the one implied by vision alone, so that the occurrence of Sun and faculty of vision in that context appear *prima facie* surprising. However, the metaphor was partially prepared by the aforementioned usage of «darkened» to describe the abstract notions not fully developed due to young age.

IN THE IMAGINATION ^{1,2} | Arabic *fi l-ḥayāl^{1,2}*, Latin *in phantasia^{1,2}*.

THE SUN IS THE IMAGE [...] LIKEWISE. | The passage articulates the terms of the simile, which was first presented as a metaphor, without explicit declaration of *comparatum* and *comparandum*. These terms can be summarized as in the following Table 58.

TABLE 58. *Comparison between sensible and intellectual knowledge (simile of vision)*

	ACTUALIZING CAUSE	FACULTY OF THE SOUL	KNOWN THINGS
SENSIBLE	Sun <i>šams</i> <i>sol</i>	faculty of vision <i>quwwa al-tbšār</i> <i>virtus visionum</i>	sensible forms <i>maḥsūsāt</i> <i>sensibilia</i>
INTELLECTUAL	agent intellect <i>'aql fa'āl</i> <i>intelligentia agens</i>	insight of the soul <i>bašīra al-naḥs</i> <i>prudentia animae</i>	imaginative forms <i>mutaḥayyilāt</i> <i>ymaginata</i>

THE INSIGHT OF THE SOUL IS THE IMAGE OF THE FACULTY OF THE VISION | Given the normal order in which the terms of comparison are presented, it should be the concrete element (*i.e.* the faculty of vision) to be the «image» [Arabic *mitāl*, Latin *exemplum*] of the more abstract one (in this case, the insight of the soul). In this sentence, the order is thus inverted with respect to the more logical one, with the intellectual level being presented as the image of the sensible one. I wish to thank Paul Hullmeine for this useful observation. From the point of view of lexicon, it is noteworthy that the abstract and the more concrete elements share here the same root, *b-ṣ-r*: compare *baṣīra* («insight») and *ibṣār* («vision» also in the physical meaning of 'sight'). The plural that appears in the Latin translation for 'faculty of the vision' [Arabic *quwwa al-ibṣār*, Latin *virtus visionum*, lit. 'of the sights/visions'] reveals that the translators rather interpreted the Arabic text as *quwwa al-abṣār* (plural of *baṣar*).

DISCERNED | Arabic *mubṣara*, Latin *visibilia*.

THEY DO NOT PASS | It might be better to read *tahruḡu* instead *yaḥruḡu* (as in *Dunyā*).

DISTINGUISHES | Arabic *mayyazat*, Latin *discernit*.

PAINTED | Arabic *muntaqiša*, Latin *recepta* (!).

THE TRUE NATURES | Arabic *ḥaqā'iq*, Latin *ipsam esse rei*.

THE PARTICULARITY | Arabic *ḡuz'iyya*, Latin *singularitatem*.

BY MEANS OF THE CURTAILING [...] FROM THE ESSENCE | For a similar description of the process of intellectual removal or curtailing [Arabic *ḥadḡf*, Latin *removendo*] of the accidental – that is, non-essential [Arabic *ḥariḡa min al-dāt*, Latin *praeter essenciam*] – characteristics [*muḥaṣṣaṣāt*] cf. the discussion of the process of abstraction given *supra*, *Physics* IV.3, §§406-409.

[§428] D373.8-374.2

(3) The third topic addressed in the Fifth treatise is the full enjoyment of intellectual happiness in the hereafter, when the soul will not be hindered anymore by the shackles of the body.

THE HAPPINESS | Arabic *sa'āda*, Latin *felicitate*.

WELL PREDISPOSED | lit. 'predisposed with the predisposition'.

FLUX | Arabic *fayḡ*, Latin *infusionem*. *Fayḡ*, 'flux', is a crucial term of Avicenna's emanative metaphysics (for a general presentation, see *e.g.* JANSSENS 1997^a). This is its first occurrence in the *MF*, but its cognate *fayḡān* (which I render as «flowing») already appeared twice in what precedes: cf. *supra*, *Metaphysics* III.b.4, §207, and III.b.7, §214. The corresponding verb is also used often in the text.

ACCUSTOMED | Arabic *anisat*, Latin *et confidenter letatur* (!).

IN PERPETUAL | Arabic *'alā l-dawām*, Latin *insolubilem*.

[WHICH TAKES HER] AWAY FROM THE SPECULATION | Arabic *'anī l-naṣarī*.

TO CONTEND WITH HER | Arabic *yuḡāḡibu-hā*, Latin *retrahere eam*. The same verb is also used *infra*, V.4, §431 to describe the tension between intellectual and sensible pleasures experienced by a soul which has perfected her intellectual faculties, but is still drawn to the inferior side.

THE COMPLETION | Arabic: *tamām*, Latin *perfeccione*.

DECLINES | Arabic *inḥaṡṡa*, Latin *liberatur*.

THEN THE CONJUNCTIONS LASTS | Reading *fa-dāma l-itṡiṡāl* instead of *wa-dāma...*, in order to complete syntactically the clause introduced with *fa-idā* («When, then,...»)

REMAINS FOREVER | Arabic *bāq^m abad^m*, Latin *permanet semper*. Also: 'is everlasting'.

GIVEN GENEROUSLY | Arabic *mabḡūl*, Latin *largissima*.

BECAUSE IT IS FOR ITS ESSENCE | The notion of creation through the essence itself of the Creator, and not rather through a direct act of volition on His part, is a very typical asset of Avicennism, whose remote

Neoplatonic origin is apparent. However, here the predicate is applied to the agent intellect, which normally is not identified with God Himself, but rather with the tenth intellect, presiding over the sphere of the Moon. Cf. *supra*, *Metaphysics* V, §297.

THE UNION PERSISTS | Arabic *fa-dāma l-wiṣāl*, Latin *cum presencialiter (vel immediate) coheret*. The presence of the double translation and the periphrastic character of the rendition betray the difficulty experience by the Latin translators with this passage.

THE IMAGINATIVE [NOTIONS] | Arabic *taḥayyulāt*, Latin *imaginata* (used also for «images» [*ḥayālāt*], appearing shortly after in the text).

BY MEANS OF [THOSE] | That is, by means of the «images».

ACQUISITION | Arabic *kasb*.

AS A NET | Arabic *ka-l-ṣabakat*, Latin *sicut rete*. For the simile of the net cf. already *supra*, *Physics* IV, §423.

AS A RIDE CARRYING TO THE DESTINATION | Arabic *ka-l-markūbⁱ l-muwaṣṣilⁱ ilā l-maqṣidⁱ*, Latin *et equitatura que perducunt ad id quod intenditur*. For the image of the ride or vehicle, useful only as long as one has not reached his or her destination, cf. also *supra*, *Physics* IV, §414 (where the notion is expressed with the term *dābba*) and *infra*, *Physics* V.4, §430 (with the term *markab*).

OBSOLETE | Arabic *bāl^{an}*.

LIBERATION | Arabic *ḥalāṣ*, Latin *liberari*.

AN OBJECT OF CONCERN | Arabic *šāḡil*, Latin *impediencia*.

IN THE ENJOYMENT OF THE INTENDED [OBJECT] | Arabic *min al-tamattu^c bi-l-maqṣūd*, Latin *ab eo quod intenditur*.

A MAGNIFICENT PLEASURE | Arabic *ladḍa ‘aẓīma*, Latin *delectacio...adeo magna*.

FOR WHAT WE HAVE CLARIFIED BEFORE | For the anticipation in metaphysical context of the following definition of pleasure cf. *supra*, *Metaphysics* III.b.11, §228, where the «perceptive faculty» [*quwwa mudrika*] was mentioned as an umbrella term (instead of the indefinite adjective «every» used here).

[§429] D374.3-18

The paragraph further elaborates on the intellectual happiness proper of the soul. From the point of view of both topic and lexicon, it has a close resemblance with *Metaphysics* III.b.11, on God's happiness, and especially with the paragraphs therein devoted to the nature of intellectual pleasures (§§228-233).

KNOWLEDGES | Arabic *ma‘ārif*, Latin *cognoscere*.

AT ALL | Arabic *aṣl^{an}*, Latin *nullo modo*. The neat separation between the level of sensible and that of intellectual knowledge is here reaffirmed with the greatest clarity, as opposed to the continuity emphasized in the path of abstraction described in *Physics* IV.3, §§406-409.

NO PROPORTION | Arabic *lā qiyās^a*, Latin *nulla est comparacio*.

THE CAUSE OF OUR BEING DEVOID [...] [PRECISELY] THE OCCUPATION OF THE BODY | The text as printed by Dunyā (and BĪĠŪ 2000: 213,6-7) reads *wa-ẓahara an sabab ḥuluwwⁱ-nā ‘an idrākⁱ ladḍatⁱ al-‘ulūmⁱ wa-naḥnu fī šāḡlⁱ l-badanⁱ mādā*. The sentence as it stands is however unacceptable, because one would not know what to do of the interrogative *mādā* placed at the end of the clause. While substituting it with a plainer *hādā* would already give a better sense, the reading of ms. *Y*, combined with the Latin translation, offers an even sounder possibility of emendation. *Y* reads [...] *wa-naḥnu fī šāḡlⁱ l-badanⁱ šāḡl^{an} l-badanⁱ amām^{an} (?)*, while the Latin version of the entire sentence is: «Et ostensum est quod causa de hoc quod dum sumus inpediti corpore, immunes sumus ab apprehensione huius delectationis que est propter ciencias, non est alia nisi inpedimentum corporis» (MUCKLE 1933:

186.3-7). Despite the *ordo verborum* makes it less obvious than in the Arabic text of *Y*, it is indeed clear that the Latin translators read an antigraph with the same duplication of the phrase *šajl al-badan*. The loss of the second *šajl al-badan* in Duniyā's and Biḡū's text is well explainable as a case of haplography, while *mādā* can have been generated in an attempt to make sense of the final *amām^{am}* (maybe to be read as *tamām^{am}*, 'entirely?'). I follow the lead of the Latin rendition also in translating the clause *wa-naḥnu fī šajl l-badanⁱ* as a temporal proposition («while we are [taken] in the occupation of the body», Latin *dum sumus impediti corpore*).

THIS HAS ALREADY BEEN SAID IN *METAPHYSICS* | As mentioned in the introduction to the paragraph, the reference is to the psychological insertion on sensible and intellectual pleasures (and pains), used to demonstrate the uttermost superiority of divine pleasure *supra*, *Metaphysics* III.b.11, §§228-233. The Latin translation «predictum est autem de his omnibus individuīs» (MUCKLE 1933: 186.7) betrays the misreading *fī l-a'yān* for *fī l-ilāhiyyāt*.

THE KNOWLEDGE OF GOD [...] AND THE OTHER KNOWLEDGES | This important passage includes a list of the basic tenets which are traditionally considered as crucial to the Muslim faith. Cf. WENSINCK 1932: 188 and see for instance ABŪ ḤANĪFA (?) (d. 767), *Al-Fiqh al-Akbar* [*The Greater Knowledge*], in IBN YUSUF 2004: 63:

It is obligatory [for a person] to state: I believe in Allāh, His angels, His scriptures, His messengers, resurrection after death, that destiny, good and evil, is from Allah Most High, the Reckoning, the Scale, Paradise, and Hellfire; and that they are all true.

Moreover, and all the more interestingly, this text finds a perfectly parallel passage in the final discussion of the *TF*, where al-Ġazālī, in a list of the «beneficial parts» of knowledge, enumerates almost exactly the same pieces of doctrine listed here in the *MF*. Cf. *TF*, Discussion 20, transl. MARMURA 2000: 211:

This, then, is the manner in which knowledge is needed. The beneficial parts of it are those purely intellectual sciences – namely, knowledge of [(i)] God, [(a)] His attributes, [(ii)] His angels, [(iii)] His books, and [(v)] the way in which things come to exist through Him.

As can be seen from the added bracketed numbers, the sole variation between the two texts is the presence in the *MF* of the «messengers» [*rusul*, sg. *rasūl*, commonly used as an epithet for Muḥammad], *i.e.* of the prophets [(4)], replaced, in the *TF*, by the knowledge of the «attributes» of God (which could however, in turn, be adumbrated in the *MF* by «the other knowledges» appearing at the end of the list [(6)]. As I have noticed elsewhere (SIGNORI 2020^a: 89-90, T3), it is important to stress that the realm of this kind of knowledges is markedly religious, as these are not purely speculative doctrines, attainable outside the true faith, but represent on the contrary theological tenets, whose knowledge cannot be reached but through revelation. In the *MF*, this is made even more explicit than in the *TF* by means of the twofold reference to the prophets and to the (sacred) books [*kutub*, sg. *kitāb*], the Book *par excellence* of the Islamic tradition being, of course, the Qurʾān revealed to Muḥammad. The «angels» [(2)] appearing in this context are thus all the more a religious feature, since the term cannot be interpreted solely as a synonym for the separate intellects, but rather calls for a distinctly revealed (and more specifically Qurʾānic) connotation. What is striking is, however, that all these revealed tenets are said to be the requirements of the «intellectual faculty» [*al-quwwa al-ʿaqliyya*] – this being in itself a paradigmatic representation of the harmony between faith and reason showcased by al-Ġazālī in the *MF*. JANSSENS 2019: 119 remarks as well that this addition is «undoubtedly religiously inspired», but tries to undermine the religious value of the example by saying once again that «the underlying Avicennian basic idea» remains the same. This, again, might certainly be true, but I think it is precisely in this surreptitious hollowing out of some of Avicenna's arguments that the philosophical (and theological) interest of the *MF* ultimately lies.

ALL-ENCOMPASSED IN THE ZEAL FOR THOSE | I have translated this difficult passage following the reading *mustaw'aba li-himmat'-hā* chosen by Dunyā, interpreting the passive participle of the X form as dependent from the preceding '*an an tašīr^a*' ('from her becoming...') and the suffix pronoun *-hā* as referring to 'the body and its accidents'. This involves in turn interpreting the 'zeal' [*hīmma*] of the soul as a negative feature, since it is focused on bodily concerns. Ms. Y has the variant reading *mustaw'aba al-hammī bi-hi*, which I read as an improper genitive construction, with the participle as *nomen regens* and the masculine singular suffix pronoun referred to the preceding 'body' [*badan*]. The whole clause might thus be translated as «encompassed with the concern of it», with a meaning very near to Dunyā's chosen text. I wish to thank Professor Amos Bertolacci for his enlightening help with this translation.

THEN HER STATE | I correct in *fā-* («then») the *wa-* chosen by Dunyā, in order to complete syntactically the sentence beginning with *fā-idā*. The correction might be supported by the reading of ms. Y, whose scribe wrote here a detached *fā'*, or possibly dotted a preceding *wāw* in order to make sense of the difficult syntax of the sentence.

DESIRE | Arabic *šawq*, Latin *desiderium*.

APPETITE | Arabic *raǧba*, untranslated.

ARE NOT INTENSE | Arabic *lā yaštaddu*, Latin *non est modo intensum ad hoc*.

ONLY NOW | Arabic *innamā...al-ān^a*. Namely, only in this world, during earthly life (cf. also *infra* in this paragraph the more explicit expression «in this world»).

TASTE | The important and polysemous term *ḍawq* has here the sense of direct experience (of a pleasure, of a knowledge, of a truth), as opposed to the mere thought of it. Already in *Metaphysics* III.b.11, §229, «taste» in this sense was described as the act of the faculty of longing. For the role of *ḍawq* in the full enjoyment of pleasures cf. also the passage from the *Mizān al-'amal* quoted in the commentary to §231 *supra*.

HE MIGHT [EVEN] LOATHE THE IMAGE OF THE SEXUAL INTERCOURSE | For the notion that even the image [lit. 'form', *šūra*] of the greatest sensible pleasures can be «loathed» [*ya'āfu*] if not previously experienced (or if the subject is not yet well-predisposed to them), cf. *supra*, *Metaphysics* III.b.11, §231, esp. (iv.b), also for further Ġazālīan texts to the same effect (for the sexual intercourse see also *Physics* IV, §380). In *Metaphysics* III as well, the aim of the example is to show that intellectual pleasures, even if not desired as such, might indeed be the greatest conceivable ones. If they are not desired, as a matter of fact, this is just because they are not known, just as the unexperienced youth might not desire sex (which is however pleasurable in itself). In particular, the passage from the Twentieth Discussion of the *TF* quoted in the commentary to §231 is particularly close to the present one of the *MF*. This conceptual closeness is also confirmed by the fact that the passage on the pleasure of sexual intercourse is contiguous in the *TF* to the mention of the 'beneficial parts of knowledge', which occurs in this paragraph of the *MF*, as well (cf. *supra* in the commentary for the relevant excerpt of the *TF*). Interestingly, the same example of a «prepubertal child» or «impotent person» unaware of sexual pleasures is also to be found in the appendix on the afterlife which comes at the conclusion of al-Mas'ūdī's *Šarḥ al-Ḥuṭba al-ǧarrā'* [*Commentary on (Avicenna's) Glistening Homily*]: cf. the paraphrase of the relevant passage provided by GRIFFEL 2021: 466, who however does not quote this place of the *MF* as a parallel. While the image of the impotent man is already present in the *Ilāhiyyāt* of the *K. al-Šifā'* (IX.7), the reformulation with the youth or prepubertal child seems to be Ġazālīan in origin. Cf. the Latin text: «Sicut si narraretur delectatio cohitus eis qui sunt immunes a cohitu, non solum non appeterent sed eciam abhorrerent formam cohitus» (MUCKLE 1933: 186.20.21).

THIS INTELLECTUAL PLEASURE [...] IN THIS WORLD | The notion of an intellectual perfection (cf. «is perfected» [*kamalat*]) already attainable «in this world» [Arabic *fi ḥādā l-'ālam*, Latin *in hoc mundo*] is very relevant, also in connection with the eschatological developments of philosophical psychology in subsequent Latin thought (*quaestiones de felicitate*, debate on the vision of God *in statu viae*, etc.).

FREE FROM THE VICIES | Arabic *munazzaha 'anī l-radā'il*, Latin *abstinet a turpibus*.

DISJOINED FROM THE KNOWLEDGES | Arabic *munfakka 'an' l-'ulūm'*, Latin *expers scienciarum*. For the same expression (also analogously translated into Latin) cf. already *supra*, *Metaphysics* III.b.4, §209.

CONCERN | Arabic *hamm*, Latin *intencio* (!).

SLEEP | Arabic *nawm*, Latin *quasi in sompnis*. The notions of sleep and dreams will become central in the subsequent sections of this last treatise of the *Physics* of the *MF*: cf. *infra*, *Physics* V.5-8.

A DESCRIPTION OF THE PARADISE IS MODELLED FROM THE SENSIBLE [THINGS] | Arabic *yatamattalu...wasf^{an} fi l-ğannat'*, Latin *et id quod dicitur sibi de paradiso, exemplificare secundum sensibilia*.

CELESTIAL BODIES | Arabic *al-ağrām al-samāwīyya*, Latin *corporibus celestibus*.

ACT OF IMAGINING ^{1,2} | Arabic *taḥayyul* ^{1,2}, Latin *phantasie* ¹, *imaginacio* ². I do not take this term to refer necessarily to an internal faculty of the soul, but rather to the act of producing images [*mutaḥayyilāt* or *ḥayalāt*]. However, should the term designate one of the inner senses, it would most likely refer to the compositive imagination, elsewhere called with the present participle of the same v stem which produces the maṣdar *taḥayyul*. For the terminology cf. *supra*, §394, Table 53 (where *taḥayyul* is not listed separately).

[§430] D374.19-375.8

(4) After the treatment of happiness in §§428-429, the fourth topic is the painful misery endured by the soul in the hereafter. This is interpreted as the soul's prevention from those very intellectual knowledges that have just been presented as the source of the utmost intellectual pleasure: not attaining what the soul desires implies sorrow and pain. More particularly, the souls that got accustomed to bodily pleasures in this life will obviously be hindered from attaining them after their detachment from the body, but the bodily desires will remain, thus provoking a great, and everlasting, sufferance.

MISERY | Arabic *šaqa'wa*, Latin *cruciatu*s. The misery of the soul is made coincide with the soul's being «veiled» [Arabic *maḥğūba*, Latin *remota*] from what she desires. Cf. *supra*, *Physics* IV, §424, for the usage of the concrete *ḥiğāb*, 'veil', to describe the element that covers the light of the Sun, hindering its shining forth on one's face. In the present, metaphorical context, thus, the term *maḥğūba* implies that the miserable soul is hindered from the enjoyment of light – i.e. happiness –, and that misery itself is thus a sort of darkness. This is also in keeping with the network of luminous metaphors that connect knowledge and sight, and also the intellect and the Sun: see in particular *Physics* V.2, §427 (but cf. also the light-analogy brought forth in the same §424, which equals the soul itself to a light).

AN OBSTACLE | Reading *ḥā'il* instead of *ḥayl* (with the here incongruous meaning of 'strength, power') printed by Dunyā.

THE LONGINGS | Arabic *šahwāt*, Latin *voluptates*.

SHE CONFINES | Arabic *taqşuru*, Latin *totum eius studium*.

BODILY | Here: *badanī*. The terminological choice is particularly accurate, because *badan* in the *MF* designates more precisely the human body (as opposed to the more generic *ğism* and *ğirm*), and what is at stake here is specifically the nature of the body which the soul animates, and which may draw her to the inferior side.

THIS VILE AND CORRUPTIBLE WORLD | Arabic *hādā l-'ālam al-ḥasīs al-fānī*, Latin *huius mundi vilis et corruptibilis*.

THE HABIT | Arabic *'āda*, Latin *illa dispositio*.

GETS DEEPLY ROOTED | Arabic *tarsuḥu*, Latin *imprimatur*.

HER DESIRE | Reading *šawq^u-hā*, with a feminine suffix pronoun referred to the soul, instead of *šawq^u-hu* as in Dunyā.

GETS URGENT | Arabic *yata'akkadu*, Latin *inheret vehementer*.

THE INSTRUMENT OF THE ATTAINMENT OF THE DESIRED | Arabic *āla darak al-mašūq*, Latin *instrumento rei desiderate*.

THE STRIVING | Arabic *nuzū'*, Latin *desiderium eius*.

A TREMENDOUS PAIN | Arabic *al-alam al-'azīm*, Latin *cruciatus ineffabilis*.

THE UNION AND THE CONJUNCTION WITH THE AGENT INTELLECT | Arabic *min al-wiṣāl wa-l-ittiṣāl bi-l-*, Latin *aplicari et adherere intelligencie agentis*. For both terms to designate the conjunction, which share the same trilateral root *w-ṣ-l*, cf. already *supra*, *Physics* V.3, §428.

AS WE HAVE CLARIFIED | For a clear-cut affirmation of the soul's not being a body, nor in the body, cf. *supra*, *Physics* IV.3, §411; for the body as a condition, but not a cause, of the soul's existence cf. also *Physics* IV.3, §423.

ITS ACCIDENTALS [...] AND ITS NATURAL LOVE | All the possessive in this clause refer to the body.

WHICH ARE INTERPOSED | Arabic *yahūlu*, Latin *separat*.

SHE DOES NOT SENSE THAT | *i.e.* that which is required by her nature. It would perhaps be plainer to read *tuḥassu* instead of the masculine *yuḥassu* printed by Dunyā, but the masculine form is not impossible from the point of view of grammar.

AS THE ONE OCCUPIED WITH THE FIGHT OR THE FEAR IS NOT AWARE OF THE PAIN | For the unawareness of pain when the mind is engaged in other thoughts – with analogous examples of aggression or fear – cf. al-Ġazālī's *Iḥyā'* XXXVI (Book of Love), ch. 14, English transl. ORMSBY 2016: 154:

First, sensitivity to pain is abolished: one can run up against a painful thing and not feel it, or one can be wounded without feeling pain. For example, in war a man in a state of fury or of fear may be wounded and not feel it until he spots blood and then infers that he is wounded. Even more, someone absorbed in an urgent task may step on a thorn and not perceive the pain because his mind is so taken up. Then, too, someone undergoing cupping or having his head shaved with a dull razor feels pain but if his mind is absorbed in some weighty concern, the barber and the cupper do their jobs without his noticing it. This is all because the mind, when plunged in its own affairs and dealing with them, apprehends nothing else.

FIGHT | Arabic *qitāl*, Latin *in bello*.

WE HAVE ALREADY COMMENTED ON THE CAUSES OF THAT | Arabic *wa-qad šaraḥnā asbāb^a dālika*, Latin *cuius rei causas iam assignavimus*. Cf. *supra*, *Physics* IV.3, §414, on the reasons why, and the circumstances in which, the body can affect the soul despite her immateriality.

PASSES AWAY | Arabic *fātat*, Latin *removetur* (Muckle *removeter*).

THE VEHICLE | Arabic *markab*, Latin *instrumentum*. For an analogous metaphor cf. *supra*, *Physics* IV, §414; *Physics* V.3, §428.

THE DESIRE PROCEEDS [HOWEVER] TO THAT TO WHICH IT WAS ACCUSTOMED | Arabic *wa-šāra l-šawq ilā mā ta'awwada*, Latin *concupiscencia revocat eam ad id quod amisit*.

A TREMENDOUS, EVERLASTING AFFLICTION | Arabic *al-balā'^z al-'azīm al-muḥallad* (or *al-muḥlad*), Latin *pena maxima eterna*.

SULLIED BY THE PURSUIT OF THE LONGING | Arabic *mulaṭṭaḥa bi-ttibā'^d l-šahwatⁱ*, Latin *sordida propter consecucionem voluptatum*.

[§431] D375.9-16

After having presented in §430 the case of a perpetual *post mortem* affliction, the text analyses here the different case of a possible temporary punishment (in keeping with Sunnī understandings of the temporariness of hell; cf. *infra* the commentary). The philosophical explanation of this is that the pain is temporary when the soul did perfect herself through intellection during life, but is still somewhat prone to sensible pleasures. The clash between the two opposing tensions produces pain

in the afterlife, but this is bound to finish, because the intellectual perfection is substantial, while the bodily affections merely accidental.

HAS BROUGHT THE INTELLECTUAL FACULTY TO PERFECTION | Arabic *istakmala l-quwwat^a l-‘aqliyyat^a*, Latin [*in quo*] *perfecta est virtus intelligibilis*.

THE KNOWLEDGES | Here: *ma‘ārif*.

YET HE PURSUES | Reading *ittaba‘a*, in accordance with the *maṣdar* of the VIII stem («pursuit» [*ittibā‘*]) employed just a few lines before (*supra*, §430), even though the position of the *hamza* in Dunyā’s text would seem to suggest the different reading *utbi‘a* (as the passive voice of the IV stem; but the syntax would be worse under that reading).

the desires/longings

WILL ATTRACT [HIS SOUL] | Arabic *yuḡāḍibu-hā*, Latin *trahunt eams*. This specific sense of the III stem is not attested in WEHR: 138^a, but the general meaning of the root is entirely compatible with the sense required by the text. Given that shortly *infra* the verb appears in the I stem, and seemingly with the same meaning («will draw» [Arabic *yaḡḍibu*, Latin *pertrahit*]), one might also choose to emend the III stem here, although this could result in a trivialization.

THE LOFTY CONGREGATION | Arabic *al-mala’ al-‘lā*, Latin *ad plenitudinem* [sic pro *plenitudinem*] *superiorem*. The Latin translation *plenitudo* for *mala’* [ملا] betrays its confusion with *mal’* [ملء] or – perhaps more likely – *mal’a* (or *mil’a*) [ملأ], two possible *maṣdar*-forms of the verb *mala’a*, ‘to fill’. For further occurrences of this very characteristic phrase in the *MF* cf. *supra*, *Metaphysics* III.b.11, §238 and *Physics* IV.3, §405. In both those cases, the lexical confusion of the Latin translators had been even greater, because the rendition *vastitas* there employed presupposed the Arabic *mal^m*, from the different root *m-l-w*.

THE COLLISION OF THE TWO ATTRACTING [POLES] | Arabic *taṣādum mutaḡāḍibayni*, Latin *ex contrarietate attrahencium*. The cause of the «tremendous, dreadful pain» [Arabic *alam ‘aẓīm hā’il*, Latin *cruciatuſ maximus formidandus*] suffered by the soul of the intelligent person who is however still subject to bodily desires is identified with the violent clash of his two conflicting desires. Due to this spiritual ‘collision’, the person will be torn between two irreducible aspects of his or her personality, thus enduring a great amount of pain (and cf. also *supra* the further occurrences of the root *ḡ-d-b*). The rationalistic, Avicennan explanation of the eschatological tenets of revelation betrays here an already sophisticated – although still undoubtedly premodern – understanding of some deep mechanisms of the human mind.

IS ALREADY PERFECTED | Here: *kamala*.

THIS [EXTERIOR] APPEARANCE IS ACCIDENTAL | It is worth quoting here a parallel text taken from the *TF* (Discussion 20, MARMURA 2000: 213), in which the one who has the theoretical virtue but not the practical one is called «knowing sinner» [*al-‘ālim al-fāsiq*]. Such a sinner will be tormented only temporarily, because some corporeal obstacles have stained him or her only accidentally, as opposed to the pure «substance of the soul» [*ḡawhar al-nafs*]. The affinity between the text of the *TF* and this one of the *MF* is almost perfect, especially when considering the clear-cut juxtaposition advanced in both cases between the substantiality of the intellectual soul and the accidentality of the external dispositions proper of the body.

IT WILL BE EFFACED AFTER A TIME | Arabic *tanmaḡī*, Latin *removetur*.

HE WILL NOT SUFFER PUNISHMENT FOREVER | The logical subject of the verb *yata‘addabu* seems once again the person who is in the described condition of substantial intellectual development and accidental bodily distraction, hence my translation.

THE REVEALED LAW [...] FOREVER IN THE FIRE | The discussion on the eternity or temporariness of hell was vivid in Islamic theology, *iuxta* some concurrent and partially ambiguous passages of the *Qur’ān*

(cf. *Qurʾān* 10.52; 32.14; 41.28 for the idea of eternal punishment; *Qurʾān* 6.128 for a possible temporal limitation to it depending on God's will). In particular, Muʿtazilites and Ḥārīgītes generally argued for an eternal punishment, while Sunnīs tended to deny it. For further information on the issue cf. ROBSON 1938; SMITH-HADDAD 1981: 93-95; 142-143; GWYNNE 2002; THOMASSEN 2009; on this passage of the *MF* cf. also the discussion in SIGNORI 2020^a: 90-91 (T4). JANSSENS 2019: 119-120 remarks that this notion has been added here by al-Ġazālī, «in line with Ashʿarite *kalām*» (but cf. the aforementioned bibliography for more details on the extent of the idea). Janssens connects however immediately this text with the passage of D374.9 (see *supra*, §429) about the knowledge of God, of the prophets, etc., stating that once again the addition, albeit Ġazālīan, does not undermine Avicenna's «profound meaning». Once again, I have to notice that I have no quarrel with this analysis, as long as it is not meant to undermine the intrinsic value of al-Ġazālī's statements, inasmuch as they reflect a proper cultural stance on the theologian's part (cf. Introduction, esp. §1.9). As shown by both SHIHADDEH 2016: 42-43 and GRIFFEL 2021: 466, the same notion is also present in the appendix on the afterlife within al-Masʿūdī's *Šarḥ al-Ḥuṭba al-ġarrāʾ* [*Commentary on (Avicenna's) Glistening Homily*], where al-Masʿūdī explains the Sunnī teaching on the temporariness of hell «by appropriating Avicennan ideas» (Griffel, *ibidem*). The last sentence of this paragraph is omitted in the Latin translation.

THE SINFUL BELIEVER | Arabic *al-muʿmin al-fāsiq*.

[§432] D375.17-end of page

The paragraph, which concludes the fourth topic (§§430-432), deals with a third case of punishment, the worst one, *i.e.* the pain endured by the one who has tasted the intellectual pleasures and yet abandoned the pathway of knowledge. The notion that such a person will suffer the most in the afterlife, because of his knowledge of the import of what he or she has lost, is confirmed by means of a set of two traditionist quotations.

PERFECTING | Arabic *istikmāl*, Latin *perfeccione*.

BY VIRTUE OF THE PRACTICAL APPLICATION OF ITS PRINCIPLES | Arabic *bi-mumārāsa mabādī-hi*, Latin *propter exercitationem sui in principiis earum*.

HIS PUNISHMENT REDOUBLES | Arabic *yataḍāʿifu ʿiqāb^u-hu*, Latin *multiplicatur eius pena*.

REGRET | Arabic *taḥassur*, Latin *dolor*. The notion of regret is a key word for the last kind of punishment described in the text, because it is precisely the distress caused by the grief for what one is missing to produce in this case the increase of suffering.

TOGETHER WITH HIS BEING COVETOUS OF IT | Arabic *maʿa kawnⁱ-hi muštāq^{am} ilay-hi*, Latin *cum ipse esset cupidus discendi illud*. This is to say, the sufferance is caused precisely by the desire of the science experienced during life, but not brought to satisfaction.

MEASURE | Arabic *qadr*, Latin *precium*.

JUST AS IF A KING [...] PAINFULLY ESCAPED HIM. | The image involves a king and the legacy of his wealth, as already in the theological image of *Metaphysics* III.b.4, §208, for which cf. also the Introduction, §1.8.1.1. The older [*akbar*] of the two children would be greater in grief [*aʿzam ḥasratⁱⁿ*], because of his continuous exercise [*istidāma*] and experience of the reign. The other, younger brother will on the contrary be indifferent [*dāhil*] with respect to the greatness of kingship.

DESCENDANTS | Arabic *awlād*, Latin *filii suis*. Also: 'children'.

«HE WHO WILL BE TORMENTED [...] HIS KNOWLEDGE» | Cf. the Latin text: «propterea lex dicit quod maior pena in die iudicii illorum hominum est, qui cum sapientes essent, male vixerunt» (MUCKLE 1933: 188.12-14). The implicit assumption is that the knowledge attainable through human means alone is not the proper knowledge of God obtained through revelation: without the help of God, then, man

is damned to misery even if he is knowledgeable and learned. This *ḥadīṭ* is considered to be very weak [*daʿif ḡidd^m*] but is nonetheless reported by AL-BAYHAQĪ (d. 1066), *Šuʿab al-īmān* [*The Branches of Faith*], 1642 and AL-ṬABARĀNĪ (d. 971), *Al-Muʿjam al-ṣaḡīr* [*The Small Lexicon*], 1/183. It also appears twice in the *Book of Science* [*Kitāb al-ʿilm*] of al-Ġazālī's *Ihyāʾ ʿulūm al-dīn* [*Revivification of the Religious Sciences*]. Cf. *The Book of Knowledge*, transl. FARIS 1962, Section IV [*On the reasons which induced men to persue (sic) the science of polemics (...)*]: 117; Section VI [*On the Evils of Knowledge and on Determining the Distinguishing Features of the Learned Men of the Hereafter and those of the Teachers of Falsehood*]: 147.

«HE WHO IS INCREASED [...] IN THE DISTANCE [FROM HIM]» | Cf. the Latin text: «dicit eciam quod qui crescit in sciencia et non crescit in bona vita, elongabitur a deo» (MUCKLE 1933: 188.14-16). This *ḥadīṭ* as well is reported by al-Ġazālī in the *Book of Science* of the *Ihyāʾ*, shortly after the second occurrence of the other one. Cf. *The Book of Knowledge*, transl. FARIS 1962, Section VI: 148, where the translator references AL-DĀRIMĪ (d. 869), *Sunan, Introduction*, 34.25 as a source. The two passages are also discussed, with the same references here given, in SIGNORI 2020^a: 91-92 and fnn. 34-35 (T5).

[§433] D376.1-15

(5) The fifth topic is about the cause of the truthful visions. The section of the Fifth treatise constituted by this doctrine (5) and the following (6), (7) and (8) – §§433-442 – globally deals with the theme of visions and dreams, which bears a crucial importance in Islamic tradition also outside the scope of *falsafa*. The main Aristotelian source for oneirology, the *Parva naturalia* (and within them in particular the treatise *De divinatione per somnum*), underwent a substantial alteration in the Arabic tradition, which added the idea of a divine origin of divinatory dreams, and explained at length the psychological processes involved in their generation. For the specificities of the Arabic version of the *Parva naturalia*, cf. at least PINES 1974 and HANSBERGER 2008; for an overview especially focused on the reception of this set of doctrines in Jewish milieu, but also rich of information on the Islamic context, cf. KAHANA-SMILANSKY 2011.

While the problem of the *visio* – specifically of God – is also extremely vivid in the medieval Latin tradition (cf. on this the essential pages of TROTTMANN 1995), the issue is further complicated, in the Arabophone world, by the semantic coincidence of ‘vision’ and ‘dream’ in the same term, *ruʿyā*. This circumstance can determine, in some contexts, a partial superimposition of the onirical and the wakeful experience of visions. Thus, al-Ġazālī is not by chance particularly careful to distinguish in what follows the «visions» he will deal with not only on the basis of their being veridical or deceitful, but also on the basis of their occurrence during sleep or during wakefulness. The quadripartition of the aforementioned four doctrines is precisely based on the combination of these two criteria, as shown in the following Diagram 12.

DIAGRAM 12. *Articulation of the treatment of visions and dreams in the MF*

	SLEEP	WAKEFULNESS
TRUE	[(5)] veridical dreams §§433-436	[(7)] veridical wakeful visions §§438-440
FALSE	[(6)] confused dreams §437	[(8)] false wakeful visions §§441-442

For the fundamental distinction between false and veridical dreams, and its prophetological implications, cf. SAḤĪḤ AL-BUḤĀRĪ 6983, book 91, *ḥadīṭ* 2: «Narrated Anas bin Malik: Allāh's Messenger said, "A good dream (that comes true) [*ru'yā*] of a righteous man is one of forty-six parts of prophetism"», and SAḤĪḤ AL-BUḤĀRĪ 6984, book 91, *ḥadīṭ* 3: «Narrated Abū Qatāda: The Prophet said, "A true good dream [*ru'yā*] is from Allāh, and a bad dream [*ḥulm*] is from Satan"»; cf. also *Qur'ān* 12.44 and 21.5, where *ḥulm* is applied to confused dreams.

For a broader introduction to the – here mainly philosophical – issue treated in the following paragraphs, it is worth recalling that the theme of the *ru'yā* in Islamic theology soon becomes the theme of the *ru'yā Allāh*, i.e. of the eschatological vision of God: a dogma for Aš'arites on the basis of *Qur'ān* 75.22-23 («[Some] faces, that Day, will be radiant / Looking at their Lord»), such a doctrine was on the contrary rejected by the Mu'tazilites on the basis of *Qur'ān* 6.103 («Vision [*ibṣār*] perceives Him not, but He perceives [all] vision»); for all this cf. GARDET 1967: 338-343, and the excellent, concise reconstruction by ZILIO-GRANDI 2010: xxvi-xxvii (and *passim*). As a side note, and in order to underline the richness of the Islamic reflection on the complex of problems centred on the concept of 'vision', I also wish to remark here that the problem of the vision – onirical or wakeful – of God, and more generally of the upper world, is also pivotal in the exegetical debate on the various versions of the *Night Journey*, the account of the 'travel' [*isrā'*] of Prophet Muḥammad to Jerusalem on the back of the mythical winged creature Burāq, and his subsequent 'ascension' [*mi'rāğ*, lit. 'ladder'], through the seven heavens, up to God. On this topic as well cf. the well-researched pages by ZILIO-GRANDI 2010. On the value of reality of the onirical experience and its veridicity cf. FAHD 1987: 247-367; on *mi'rāğ* and its nature see VAN ESS 1996.

«SLEEP» | Arabic *nawm*, Latin *dormicio*. Sleep is defined as the «obstruction» [Arabic *inḥibās*, Latin *retractio*] of the spirit, which elicits in turn a physiological definition of spirit.

«SPIRIT» [...] THE HUMOURS | For the notion of «spirit» [Arabic *rūḥ*, Latin *spiritus*] as a «fine body» [Arabic *ğism laṭīf*, Latin *corpus subtile*], cf. *supra* the commentary to the previous occurrence of the same concept at *Physics* IV, §383 (a preliminary, and partially different, definition), and the bibliography therein quoted.

HUMOURS | Arabic *aḥlāt*, sg. *ḥilṭ*. In itself, the Arabic word indicates any 'component of a mixture' or 'ingredient', but WEHR s.v. *ḥilṭ* specifies that *aḥlāt al-insān* has the values of 'four humours'.

BOUND | Arabic *mu'taṣaba*, Latin *cuius sedes* [*est cor*].

THE HEART [...] FACULTIES | This mention of the «heart» [Arabic *qalb*, Latin *cor*] as the «vehicle» [Arabic *markab*, Latin *vehiculum*] of the faculties of the soul seems *prima facie* to assign to the cardiac organ the priority over the brain, and thus to recognize authority to Aristotelian cardiocentrism over Galenic cerebrocentrism. In the preceding psychological treatise, however, heart and brain were mentioned together in three different passages – cf. *supra*, *Physics* IV, §383, §413, and §419 –, the last of which seems particularly keen on avoiding too sharp a choice between the two anatomic models. The textual and conceptual uncertainty of the *MF* on this issue might well be the trace of a similar undecidedness on Avicenna's part: cf. SMITH 2013 and see also the initial chapter of Avicenna's *Canon* for an interesting attempt at conciliating philosophy and medicine on this issue, which accounts for Aristotle's cardiocentric arguments but still allows physicians to stick to the cerebrocentric model in their practice (English translation in FRAMPTON 2008: 370). For a possible parallel passage in the *MF* giving priority to heart alone over brain (although in an entirely different, and likely far more generic, doctrinal context) cf. *supra*, *Metaphysics* III.b.11, §233.

OF THE PSYCHIC AND THE ANIMAL FACULTIES | Arabic *al-quwā al-naḥsāniyya wa-l-ḥayawāniyya*, Latin *virtutum vitalium, et animalium*. The relative adjective *naḥsāni* appears only one other time in the *MF*, in relation to the movement of the celestial spheres («a psychic movement», see *supra*, *Metaphysics* IV.b.2.1, §271). There, the Latin translation was *motus animalis* – for the equivalence *naḥs* = *anima* –

while here the simultaneous presence of *ḥayawāniyya* 'animal' (*animales*, in the zoological sense) has led the translators to a different choice for *naḥsāniyya*, i.e. 'living' (*vitales*). This rendition, together with the following 'animal', seems to make the 'psychic faculties' or powers lean towards the vegetative ones. Such an interpretation might be correct in this context, since a general sense of *naḥsāniyya* as referring to anything within the soul's powers would rather make the following addition *ḥayawāniyya* superfluous (because under that assumption the animal faculties would certainly be contained within the soul faculties taken together). The term occurs indeed also in a medical context in Avicenna: cf. the passage from the *Canon* discussed *supra* in the commentary to *Physics* IV, §379. However, the parallel passage from *Metaphysics* quoted above seems to speak against such an interpretation and rather for a general understanding of *naḥsānī* as 'relative to the soul', given that the souls of the celestial bodies certainly do not have vegetative or lowly 'vital' functions.

BY MEANS OF IT | I take the suffix pronoun in *bi-hā* to refer to the preceding «spirit», as *rūḥ* can be feminine in Arabic.

A BLOCK | Arabic *sadda*, Latin *si aliquid obstruserit*.

in its channels | Arabic *fi maḡārī-hā*, Latin *cursum eius*.

THE EPILEPSY | Arabic *ṣarʿ*, Latin *caducus morbus*. Cf. *infra*, *Physics* V.7, D379, for a mention of the epileptic people.

THE APOPLEXY | Arabic *sakta*, Latin *stupor*.

TIGHTLY FASTENED | Arabic *šuddat... šadd^{am} muḥkam^{am}*, Latin *cum...ligatur prudenter*.

NUMBNESS | Arabic *ḥadar*, Latin *stuporem*.

FORMICATION | Arabic *namal* (?), Latin *et destruitur mox sensus eius* (the Latin translation is clearly *ad sensum*). *Dunyā* reads *anāmil*, the plural of *unmula*, with the meaning of 'fingertip'.

FOLLOWS CLOSELY | Arabic *yālī*, Latin *mox*.

HE IS UNTIED | Arabic *yaḥullu*, Latin *donec solvatur [brachium]*.

BY THE MEDIATION OF THE ARTERIES | Arabic *bi-wāsītatⁱ l-ʿurūqⁱ l-ḍawāribⁱ*, Latin *mediantibus arteriis*. Lit. 'beating veins' (cf. by the way the «polsi» 'arteries' of Italian medieval literature, with analogous idea of the heartbeat – a paradigmatic case in DANTE, *Inferno* I 90: «ch'ella mi fa tremar le vene e i polsi»).

TOWARD THE EXTERNAL [PART] OF THE BODY | Since what is a stake is a flux transmitted by the arteries, the «external» cannot be something actually extrinsic to the human body. Thus, it will be reasonable to interpret the phrase as referring to the peripheral areas of the body (farther away from the heart), to which blood circulation gets, in general terms, weakened with respect to more central organs.

IT IS ARRESTED | Arabic *yanḥaḡizu*, Latin *torpescit*.

RELAXATION | Arabic *istirāḥa*, Latin *sicut ex longa quiete*.

FOR THE DIGESTION OF THE FOOD | Arabic *li-naḍḡⁱ l-ḡidāⁱ*, Latin *cum maturat cibum*. For the term *naḍḡ*, here rendered as «digestion», in its connected sense of «ripening» (of fruits), cf. *supra*, *Metaphysics* V, §299; *Physics* II.6, §351.

THE REPLETION | Arabic *imtilāⁱ*, Latin *cum repletus est [stomachus]*.

ITS INFLUENCE | Despite referring once again, in all likelihood, to the spirit, the suffix pronoun is in this case masculine (cf. instead *supra* in this paragraph for a usage of *rūḥ* in the feminine).

[§434] D376.16-21

In a physiological aside, which completes the treatment of spirit already presented in §433 *supra*, the text deals with the notion of weariness or tiredness.

«TIREDNESS» | Arabic *iʿyāⁱ*, Latin *lassitudo*.

BECAUSE OF THE HEAT | Arabic *bi-sababⁱ l-ḥarāratⁱ*. The Latin rendition *ex motu* reveals the misreading **bi-sababⁱ l-ḥarakatⁱ*.

ITS REDUCTION IS APPRECIATED [...] FOR THE BRAIN | While the meaning of the passage is clear, its syntax is not obvious (compare in particular *wa-tanāwala-hu* followed by a further accusative). The Latin translation is not particularly helpful: «diminucio spiritus propter resolucione ex motu, et sicut cum humiditas, et gravitas contingunt ei, inpeditur a velocitate motus, sicut fit in balneo, et postquam exit ab eo, et sicut propter id quod humectat cerebrum» (MUCKLE 1933: 189.1-5).

ITS REDUCTION | Arabic *wuqū^ʿ*. What is meant is the reduction of the spirit.

IS APPRECIATED | Arabic *yuḡli*.

SOMETHING REFRESHING | Arabic *muraṭṭib*.

ARE MOTIONLESS | Arabic *rakada*, Latin *cum igitur quieverint*.

BECAUSE OF THE OBSTRUCTION OF THE SPIRIT CARRYING [INFORMATION] | Arabic *bi-sababⁱ inḥibāsⁱ l-rūḥⁱ l-ḥāmilatⁱ*, Latin *eo quod spiritus defferens...retractus est ab illis*. The Latin translation construes the sentence in a different way than mine. For the *inḥibās*, obstruction, of the spirit as the defining aspect of sleep cf. *supra*, *Physics* V.5, §434. The spirit was defined as the «carrier» [*ḥammāl*] of sense information also *supra*, *Physics* IV, §383.

SINCE SHE [NORMALLY] [...] BRING TO HER | The default occupation of the soul in the body is the consideration or «thought» [Arabic *tafakkur*, Latin *meditari*] of the pieces of information brought to her by the senses (*supra* defined, in a remarkable passage, as the «spies» of the soul: cf. *Physics* IV, §401). Only in few particular occasions, *i.e.* when the spirit carrying that information is inactive, can the soul be «empty» [Arabic *fāriḡa*, Latin *libera*], *i.e.* free from her standard labour.

ABOUT THAT WHICH THE SENSES BRING TO HER | Arabic *fī-mā tūridu-hu l-ḥawāss^ʿ ʿalay-hā*, Latin *de his que refferunt sibi sensus*.

[§435] D376.22-377.7

By reconnecting to the preceding physiological treatment, the paragraph explains how the diminishment of the amount of information carried by the vital spirit from the sense organs to the central siege of the soul is important for the soul's conjunction with the intellectual knowledge coming from above, and thus for the generation of a vision. In this paragraph, the vision is likened to the reflection occurring in a mirror, with a simile typical of al-Ġazālī's descriptions of knowledge (see *infra* the commentary).

WITH THE SPIRITUAL, NOBLE, INTELLECTUAL SUBSTANCES | Arabic *bi-l-ḡawāhirⁱ l-ruḥāniyyatⁱ l-ṣarīfatⁱ l-ʿaqliyyatⁱ*, Latin [*coniungī*] *substanciis spiritalibus nobilibus intelligibilibus*. This emphatic phrase sums up two important adjectives used to refer to the separate substances, *i.e.* «spiritual» [*ruḥāniyya*] and «intellectual» [*ʿaqliyya*]. While 'intellectual' is generally preferred in the *MF*, being the more 'philosophical' term, the less *falsafa*-laden *ruḥāniyya* appears prominently in this last treatise of the work, as well as in an important, and distinctly 'religious', previous occurrence in the *MF*: cf. *supra*, *Metaphysics* IV, §245, and *infra*, *Physics* V.6, §437; *Physics* V.7, §440. The expression «intellectual substance(s)» also appears in *Physics* V (see *supra*, V.1, §426, and *infra*, V.7, §438, both in the plural), as well as in *Physics* IV, §422 and §424 (both in the singular).

IN THE REVEALED LAW | Arabic *fī l-ṣar^ʿ*, untranslated in Latin.

«WELL-PRESERVED TABLE» | Arabic *al-lawḥ al-mahfūz*, Latin *liberi* [sic pro *libri*?] *servati*. The Arabic expression is Qurʾānic (*Qurʾān* 85.22). The notion here expressed does not seem to have a direct antecedent in the corresponding passage of the *DN*, so that the addition appears to be properly Ġazālīan. In the *TF*, however, the expression occurs with the same metaphorical value that it

assumes here, and the association between the Table and the celestial souls is attributed precisely to the philosophers: cf. *TF*, Discussion 16, MARMURA 2000: 153 ff. The Qur'anic quotation appears indeed already at the level of the long title-summary of the Discussion (MARMURA 2000: 153):

On refuting their statement that the souls of the heavens know all the particulars that occur in this world; that was is meant by “the preserved table” [Qur'an 85:22] is the souls of the heavens; that the impressions of the world's particulars in them is similar to the impressions of the retained [images] in the retentive faculty [*al-quwwa al-hāfiẓa*] entrusted in the human brain, not that the [preserved tablet] is a solid wide body on which things are inscribed in the way boys write on a slate, since the abundance of this writing requires a widening of the thing written on and, if the thing written is infinite, the thing written on would have to be infinite – but an infinite body is inconceivable, and it is impossible to have infinite lines on a body, and it is impossible to make known infinite things with limited lines.

In order to grasp just how sharp the contrast that al-Ġazālī posits between the philosophers' and the religious thinkers' interpretation of the Qur'anic verse actually is, cf. also *infra* in the *TF* (MARMURA 2000: 157): «Nor do you have a proof [for your interpretation] of what the religious law conveyed regarding “the tablet” and “the pen”. For the people versed in the law do not understand by “the tablet” and “the pen” the meaning [you have given to these terms] at all». As I wrote elsewhere, «[i]n this particular case, the religious validation» of the Avicennan philosophical notion of the conjunction with the intellectual substance(s) «introduced by al-Ġazālī in the *MF* seems [...] to be gainsaid in the *TF*» (SIGNORI 2020^a: 93).

THE GOALS | Arabic *ajrād*, Latin *intencioni*.

IMPORTANT | Arabic *muhimm*, Latin *quod magis est cordi eius*.

IN THE SOUL FROM THEM | That is, from the intellectual substances.

THE IMPRESSION OF THAT FORM [...] IN PROPORTION TO IT | The idea of the mirror and the reflection, in this context, strongly recalls the anecdote of the Chinese and the Byzantine painters reported by al-Ġazālī in his *Scale of Action* [*Mizān al-'amal*], ch. VII, Italian transl. in CAMPANINI 2005: 135-136:

Si racconta che alcuni cinesi e altri bizantini si vantavano, in presenza di un re, della loro abilità nell'arte della pittura e del disegno. Il re decise allora di mettere a loro disposizione una stanza: una parete sarebbe stata affrescata dai cinesi e una dai bizantini. Una tenda sarebbe stata calata onde gli uni non vedessero il lavoro degli altri. Una volta terminata la prova e sollevata la tenda, si sarebbero esaminate le decorazioni e si sarebbe deciso quale dei due gruppi avesse avuto la preminenza. Così fu fatto. I bizantini dipinsero il loro lato con colori meravigliosi, indescrivibili. I cinesi passarono dall'altra parte della tenda senza portare con sé colori e si misero a lisciare e a pulire. La gente si stupiva del fatto che avessero rinunciato ai colori; ma quando i bizantini ebbero finito, anche i cinesi affermarono di aver terminato. [...] Fu levata la tenda, ed ecco che sulla parete dei cinesi si riflettevano luccicando tutti i meravigliosi colori dipinti dai bizantini! I cinesi, infatti, avevano tanto strofinato e polito il loro lato da renderlo simile a uno specchio, la cui bellezza e limpidezza era accresciuta dalla riflessione su di esso dell'opera altrui. [...] Ciò che sta all'esterno deve essere inteso qui come le Tavole Ben Conservate e gli Spiriti Angelici, che sono la sede permanente ed effettiva del meraviglioso disegno delle autentiche scienze.

For an English paraphrase of this important passage cf. GARDEN 2015: 219-220; for a discussion of the text, and its underlying message that Sufi and philosophical knowledge (at least broadly construed) are indeed capable to attain analogous results, although through largely different ('synthetical' and intuitive vs. 'analytical' and discursive) means, cf. also TREIGER 2012: 68. For a broader study of the sources of the *Mizān*, and in particular for the role of Avicenna in al-Ġazālī's ethical writing, cf. JANSSENS 2008. The closeness of the text of the *MF* with the passage from the *Mizān* is confirmed by the common presence in the two passages of a reference to the «well-preserved Table» (cf. *supra*), celestial archetype of the Qur'an and, consequently, of all the theoretical and ethical knowledges

that can be impressed in a soul. The consistent usage of the terminology of ‘painting’ (cf. *supra* «the spiritual, noble, intellectual substances, in which all existent things are *depicted*» or ‘painted’, emphasis added) is also a confirmation of the relevance of the cross-reference between the two texts, which is then in itself a very important element for arguing in favour of the doctrinal continuity of the *MF* – despite its *prima facie* purely philosophical stance – with the rest of al-Ġazālī’s production. On the issue cf. the Introduction.

A parallel passage for this important text of the *Mizān* is also to be found in al-Ġazālī’s *Ihyā’ ‘ulūm al-dīn*, ed. Lağna, vol. III: 28.17-29.3. The story was later made famous by its literary reprises in masterpieces of Persian literature such as the *Šarafnāme* [*Book of Honour*] of Niẓāmī Ganğāvi’s *Iskandarnāme* [*Book of Alexander*], belonging to his *Quintet* [*Ḥamsa*] (see NIẒĀMĪ 1934-1938 (v): pp. 401-404, *Šarafnāme*, ll. 5111-5153), and Ġalāl al-Dīn Rūmī’s *Maṭnavī*, book 1 (see RŪMĪ 1925-1940 (II): 189-190 ll. 3467-3499). While Niẓāmī is faithful to al-Ġazālī’s version of the anecdote, Rūmī alters it by giving prevalence to the polishing, and thus to the ‘mystical’ pathway to knowledge (which he attributes to the Greeks rather than to the Chinese), against al-Ġazālī’s attention not to give prevalence to one or the other of the methods of decoration adopted by the two groups of artists. The specificity of al-Ġazālī’s uncommitted attitude towards the two alternative methods is well underlined by GRIFFEL 2009: 355 nn. 132-133, to which I owe also the preceding references to the Persian literary reprises of the *exemplum*. Griffel also usefully notices that SOUCEK 1972: 14 and MOOSA 2006: 254 255 both erroneously «understand the text as if the Chinese painters are judged superior over the Greek and that al-Ghazālī thus favored the Sufi method. That is, however, not expressed anywhere in al-Ghazālī’s texts».

IN PROPORTION TO IT | Arabic *bi-qadr^ī-hā*.

IN THE SOUL FROM THE CONCEPTION | I propose to emend Dunyā’s printed text *min al-naḥs^ī fī al-šūrat^ī* («from the soul in the form») in *fī naḥs^ī min al-taṣawwūr^ī*. The inversion of *min* and *fī* is warranted by the meaning – the form is first conceptualized and then appropriated by the soul –, as well as by the reading of ms. Y: *fī naḥs^ī min al-šūwar*. I further corrected Y’s *min al-šūwar* in *min al-taṣawwūr*, according to the required sense of the passage, which would be redundant if it included a further mention of the ‘form’. The restored *taṣawwūr* might also have the value of ‘faculty of forms’ (cf. *supra*, *Physics* IV.2.2, §394, where the participle *mu(ta)ṣawwira* is employed, and see Table 53 for the terminology), and this seems to be the interpretation given by the Latin translators (see *infra* for the text), although this is not strictly needed for the comprehension of the passage. This further correction is far from onerous, since the *rasm* من الصور can easily derive by mistake from an original *min al-taṣawwūr* due to fall of the first stroke in handwriting, especially in a text without diacritics. The last emendation is corroborated by the reading of the Latin translation: «ab anima venient in imaginacionem» (MUCKLE 1933: 189.21-22), which appears to presuppose the Arabic text **min al-naḥs^ī fī l-taṣawwūr^ī*.

THE RETAINING [FACULTY] | The term *ḥāfiẓa* [Latin *servatrix*], in itself generic, is technically used to designate the faculty of memory in Avicenna’s *K. al-Nafs*, while it is the name that al-Ġazālī gives in the *TF* to the faculty of forms, also called *muṣawwira* in the *MF* (cf. *supra*, *Physics* IV.2.2, §394). Since the text mentions here a «form» [*šūra*] as the object of the *ḥāfiẓa*, we can be reasonably certain that the technical *usus* of the *MF* is in keeping with the *TF*, rather than with Avicenna’s *Nafs* (on the point, and its implications for the chronology of the *MF*, cf. the *Introduction*, §1.2). While *ḥāfiẓa* means in itself only ‘retentive’, the specialization of the term in the direction of memory is very common and well attested: it will suffice to remember, limiting the scope of attention to medieval Persia, that the literary pseudonym of the famous Persian poet Šams al-Dīn Muḥammad al-Šīrāzī (Šīrāz 1315/1321-1389/1390), *Ḥāfeẓ* (or *Ḥāfiẓ*, with Arabic vocalization), was meant precisely to designate «the one who knows [the Qur’ān] by heart» (cf. on this PELLÒ 2008: VI). Thus, al-Ġazālī’s usage of the root *ḥfẓ* as antonomastically referring to the retentive faculty of forms (*i.e.* the *muṣawwira* or *muṣawwira*), rather than to the retentive faculty of concepts (*i.e.* memory) seems to be a noteworthy feature of his philosophical lexicon, worthy of further examination. For the same

sense of 'retentive faculty of forms' attributed to the verbal noun *ḥifẓ* rather than to the present participle cf. also *infra*, §436, §439, §441; for another occurrence of *ḥāfiẓa* in the same sense see §437.

THE IMAGINATIVE FACULTY | Arabic *al-quwwa al-mutaḥayyila*, Latin *virtus fantastica*.

WHICH IMITATES THE THINGS | Arabic *al-ḥākiya bi-l-ašyāʾ*, Latin *quae adulatur (!) rebus*. For the sense of 'faithful reproduction', and thus also 'report', 'account', of the verbal noun of the same root *ḥikāya* cf. the Prologue of the *MF* (*supra*, §1).

BY VIRTUE OF THE REPRESENTATION | Reading, on the basis of *Y*, *bi-tamṭīl-hā* instead of *bi-tamām-hā* printed by Dunyā, which appears here to be the *lectio facilior*. The idea of 'perfection' [*tamām*] in the reproduction of existing things is indeed implicit in what follows, since immediately afterwards the text claims that in such visions, which are «truthful» [*taṣduqu*], there is no need for «interpretation» [*taʿbīr*]. However, the phrase *lam tataṣarraf* (which I rendered with the English «has not acted without restriction») implies that the imaginative faculty or phantasy does *not* perform its function, which will then be best described in the neutral terms of a «representation» [*tamṭīl*], rather than in the implicitly appreciative terms of a «perfection» [*tamām*].

WHAT HE SAW IN ITSELF | The subject of the sentence, generic, refers to the one who had the vision.

[§436] D377.8-24

The paragraph, which concludes the fifth section of the fifth treatise (§§433-436), deals with the interpretation of visions and with its possible shortcomings in terms of obscurity and arbitrariness. The chain of the interpretation starts because sometimes the imaginative faculty of the soul alters the intellectual image received by the soul with something similar – for instance, in the example given in the text, a son instead of a daughter. The vision then is the in itself still veridical, but the alteration produced by the imaginative faculty makes a conscious interpretation necessary. However, this further passage requires human intuition and thus most often produces mistakes.

THE IMAGINATIVE [FACULTY]^{1,2} | Arabic *mutaḥayyila*^{1,2}, Latin *fantasia*^{1,2}.

TO REPLACE | Arabic *tabdīl*, Latin *ad commutandum*.

«INTERPRETATION» | Arabic *taʿbīr*, Latin *interpretacione*. For *taʿbīr al-ruʿyā* (or *ruʿya*) as the Arabic counterpart of premodern *Traumdeutung* (dream interpretation), its equivalence to *tafsīr al-aḥlām*, and its religious and exegetical aspects cf. FAHD 2012. For further information on *taʿbīr* as interpretation of dreams and its distinction from *taʿwīl* as allegorical interpretation of the Qurʾān cf. also *infra* the commentary to §439.

THE INTERPRETER | Arabic *muʿabbir*, Latin *interpres*.

THINKS | Arabic *yatafakkaru*, Latin *premeditetur*.

IN HIS RETENTION | The chosen Arabic expression is in this case *ḥifẓ*, with the generic root of 'retention'. Thus, the faculty designated with this expression could in principle be either one of the two retentive faculties, *i.e.* either the formative faculty (or faculty of forms or retentive imagination), or the memorative faculty (or memory). In Avicenna's *K. al-Nafs*, moreover, the present participle *ḥāfiẓa* usually designates memory. Probably on this basis, the Latin translators of the *MF* chose to render the Arabic expression *fi ḥifẓ-hi* as *in memoria eius*. Since however the text of the *MF* makes it explicit immediately afterwards that the retained items are in this case «forms» [*ṣuwar*], the retentive faculty here called *ḥifẓ* is certainly to be considered the formative or retentive imagination; cf. also *infra*, §439 and §441 for two further similar occurrences of the same term. This is in keeping with the *usus* of the *TF*, in which *ḥāfiẓa* is the faculty of forms and not memory; cf. also *supra*, §435, and *infra*, §437, for the same feature. The further terminology referring to the internal senses used in this paragraph is consistent with the one employed in the psychology of the *MF* (*Physics* IV.2.2, §394, Table 53). In

particular, the term *mutaḥayyila* coherently designates in both treatises the imaginative faculty (or phantasy or compositive imagination), *i.e.* the faculty that composes and divides forms and intentions (cf. *supra*, *Physics* IV.2.2, §398).

until he forgets [*nasiya*]

HIS WAY OF RECALLING AND IMAGINING | Arabic *ṭarīqa-hu fi l-tadakkur wa-l-taḥayyul*, Latin *modus igitur reminiscendi fiet per resolutionem* (probably deriving from a misreading of the unpunctuated *rasm* of *taḥayyul*, as if deriving from the root ḥ-l-l of 'solving'). The second occurrence of 'imagining' in this paragraph also translates the Arabic *taḥayyul*, taken as the act of imagining (cf. *supra*, *Physics* V.3, §429, for an analogous interpretation of the term).

HE WILL CONSIDER...CAREFULLY | Arabic *yata'ammalu*, Latin *et sic resolvendo* (cf. *supra* for a possible explanation of this mistranslation).

HE MIGHT...STUMBLE | Arabic *ya'turu*, Latin *offendet*.

HE WAS DRIVEN | Reading *inḡarra* (with subscribed *hamza* as opposed to Dunyā's superscribed one).

TRANSITIONS OF THE IMAGINATION | Arabic *intiḡālāt al-ḥayāl*, Latin *commutationes fantasiarum* (!). are GRASPED | Arabic *maḍbūṭa*, Latin *retinentur*.

BY VIRTUE OF A KIND OF INTUITION | Arabic *bi-ḍarb' min al-ḥads*, Latin *secundum modum estimacionis* (sic pro *intuicionis*?). While the Arabic *ḍarb* has in logic the technical meaning of «mood» of a syllogism (cf. *supra*, *Logic* IV), its usage here is generic. As for the notion of «intuition» [*ḥads*], it is a central idea of Avicenna's epistemology: cf. GUTAS 1988: 159-176 = GUTAS 2014^a: 179-201. When one bears in mind the importance and trustworthiness of this notion in Avicenna, it is fairly remarkable that «intuition» is rather described here as the source of error and obscurity.

DUBIOUSNESS | Arabic *iltibās*, Latin *velamen* (with concrete rendition of the root *l-b-s*).

[§437] D377-25-378.19

(6) The sixth topic deals with the confused, deceitful dreams, *i.e.* with false visions occurring during sleep. These have physical and physiological causes, since the imaginative faculty produces images conformable to what the sleeping body is experiencing in terms of humoral complexion (*e.g.* predominance of the yellow or black bile in the temperament) or of heat and coldness.

CONFUSED DREAMS | Arabic *aḍḡāt al-aḥlām*, Latin *de vanis sompniis*. Reading *aḍḡāt* (as in BīḡŪ) instead of *aḍḡāt* (as in Dunyā); lit. 'the mazes', or 'bundles', or 'muddles of the dreams', with *aḍḡāt* as the plural of *ḍiḡt*. It is worth noticing that from the same Arabic root comes however also the word *ḍāḡūt*, with the meaning of 'nightmare' (cf. WEHR 634^a). JANSSENS 2019: 120 translates the phrase as «'weak' dreams» and remarks (*ivi*: fn. 136) that «an additional source of inspiration can be found in *Ishārāt*» (ed. FORGET 1892: 215.3-19).

NAMELY THE DREAMS | Arabic *manāmāt*.

WHICH DO NOT HAVE A ROOT | The Arabic term *aṣl*, «root», 'principle', cannot have here a causal meaning, since the confused dreams would otherwise be said to be uncaused, and they would thus invalidate the principle of sufficient reason; but such a situation, in itself utterly unlikely, is denied by the continuation itself of the text, which immediately mentions their «cause». More sensibly, then, the «root» which the confused dreams lack will indicate here an external root, *i.e.* a foundation in actual reality. Rather, as will become apparent in what follows, such deceitful dreams have their origin in the excessive and falsifying work of the imaginative faculty.

PERTURBATION | Arabic *iḍṭirāb*, Latin *instabilitas*.

WITH THE SPIRITUAL SUBSTANCES | For the usage of *rūḥāniyya*, «spiritual», to designate the separate substances (*i.e.* the moving intellects of the spheres) cf. already the «spiritual celestial angels» of

Metaphysics IV, §245. Apart from that highly religious expression, which reinterprets a philosophical tenet in ‘revealed’ terminology, the term *rūḥāniyya* appears only here in *Physics* V: cf. *supra*, V.5, §435 («spiritual, noble, intellectual substances», where however also the more philosophical term ‘intellectual’ occurs) and *infra*, *Physics* V.7, §440.

IN THE RETAINING [FACULTY] | Here again, as already *supra* in §435, the generic term *ḥāfiẓa* [Latin *in virtute conservatrice*] indicates the retentive faculty of forms, rather than memory as the retentive faculty of concepts. See also §436, §439 and §441 for the same sense attributed to the verbal noun *ḥifẓ*, and cf. *supra* the terminological comparison provided by Table 53.

IN THE SLEEP | Arabic *fī l-manām*. Wehr specifies that it is only the plural form *manāmāt* to bear the meaning of ‘dreams’.

THE YELLOW BILE | For previous occurrences of the humour of «yellow bile» [Arabic *ṣafra*’, Latin] – responsible for coleric temperament in Galen’s theory of the four humours – in the *MF* cf. *supra*, *Logic* IV, §62; *Metaphysics* I.5, §161.

THE BLACK BILE | Arabic *sawdā*’, Latin. That is, the humour responsible for melancholic complexion in the traditional theory: on melancholy in Aristotle and in the Greek tradition see the acute and very well-researched essay by VAN DER EIJK 1990.

SHE FORGETS BECAUSE OF THE IMAGINATION | The Latin text *et adheserit fantasie intencio meditationis* misunderstands the sense of the Arabic original.

THE IMAGINATION ¹² | Arabic *ḥayāl* ¹², Latin *fantasie*¹, *fantasia*². As opposed to the identification between *ḥayāl* and faculty of forms (*i.e.*, retentive imagination) expressed in §407 *supra*, here *ḥayāl* appears to be synonymous with *mutaḥayyila* (elsewhere in this paragraph rendered with ‘imaginative [faculty]’), and thus with the compositive imagination. Compare *supra*, §394 and Table 53, for the terminological issues.

TO SHIFT REPEATEDLY | Arabic *yataraddadu*. For the idea of the frantic movement of the imaginative faculty (or compositive imagination) cf. *supra*, *Physics* IV.2.2, §398.

PASSES ON TO | Arabic *tata‘adda*.

IT IS INFLUENCED BY IT | Arabic *tu’attaru bi-hi*, with the «imaginative faculty» [*al-quwwa al-mutaḥayyila*] as the subject. The masculine *yu’attiru* printed by Biḡū, although not impossible in terms of grammar, would by contrast lead to consider the masculine «hot body» [*al-ḡism al-ḥārr*] as the subject of the sentence, but the following *bi-hi* could not then be referred sensibly to the feminine ‘imaginative faculty’. I propose to read the II stem in the passive (*tu’attaru* rather than *tu’attiru*) – thus retrieving the meaning of V stem *ta’attara*, normally construed with the *bi-* of the influencing object – because the corresponding active verb of the II stem would require a different preposition (such as *fī* or *‘alā*) to introduce the object of the influence. The text later goes on to explain how exactly a psychic faculty which is not in itself a body can receive an influence on the part of the body: this happens through the mediation of forms, which provide the necessary link between external and internal (or mental) reality.

[§438] D378.20-24

(7) After the treatment of dreams in sections (5) and (6), the seventh topic of discussion is the wakeful veridical vision. The present paragraph explains that visions usually occur in dreams, but that there are some cases in which the same conditions apply also in the state of wakefulness, thus allowing for proper visions, as it were, with open eyes.

ABOUT THE CAUSE OF THE KNOWLEDGE OF THE UNKNOWN | Restoring the logical ordering *fī sababⁱ ma‘rifatⁱ al-ḡaybⁱ* (as in Biḡū) with respect to the inversion *fī ma‘rifatⁱ sababⁱ al-ḡaybⁱ* («about the knowledge

of the cause of the unknown») printed by DUNYĀ. Cf. the Latin text: «de causa cognoscendi futura» (MUCKLE 1933: 191.14).

IN THE WAKEFULNESS | Arabic *fī l-yaqza*, Latin *in vigilando*.

KNOWLEDGE OF THE UNKNOWN | Here: *ilm*.

BY MEANS OF THE VISION | Here: *ru'yā*.

WHAT WE HAVE ADDUCED | Arabic *mā awradnā*, omitted in Latin. Cf. *supra*, *Physics* V.5, esp. §§434-435.

THE SENSES ARE MOTIONLESS | Arabic *rakadat al-hawāss*, Latin *qui cum quiescunt*.

[§439] D378.25-379.9

The text presents here the first possible cause of the truthful visions in the wakefulness. This is explained to be a particular strength of the faculties of the soul, such that they are able to be simultaneously aware of both the inferior side (*i.e.* this world with its sensible objects) and the superior side (*i.e.* the world of the unknown, homeland of the intellectual knowledge).

OVERCOME | Arabic *tastawlā*, Latin [*nec*] *submergunt* [*eam*].

TO ABSORB HER | Arabic *tastāgrāqu-hā*, Latin *ut...prohibeatur*.

WIDENS | Arabic *yattasi'u*, Latin *dilatatur*.

THE [ACT] OF SPEAKING AND WRITING | Arabic *an yatakallama wa-yaktaba*, Latin *ut simul possit et scriber et loqui et intelligere loquentem*.

THEY ASCEND TOWARD THE WORLD OF THE UNKNOWN | Arabic *yaṭlu'u ilā 'ālamī l-ġaybī*, Latin *elevetur ad mundum superiorem*.

LIKE THE FLEETING FLASH | Arabic *ka-l-barq al-hātīf*, Latin *quasi fulgor cito pertransiens* (*supra*, *Physics* III.4, §372, the Latin *fulgur* was rather used to translate the Arabic *ṣā'iqa*, while *barq* was rendered as *corruscatio*). A fascinating comparison of the felicitous Latin rendition of this passage with the final lines of Dante's *Comedy*, and in particular with the «fulgore in che sua voglia venne» of *Pd* XXXIII 141, has been proposed by FALZONE 2010: 46 fn. 1. Although cursory, the parallel seems to me very acute, and it might deserve further critical attention. Cf. also the possibly parallel passage of Albert the Great, *De somno et vigilia*, 3.1.10, ed. BORGNET 1890 (IX): 192^a:

Septimus autem gradus est, quando adhuc in somno vere et expresse apparent intelligentiae sine simulacris: et tale videtur fuisse somnium Scipionis de colentibus justitias, quod ad aethereas sedes recipiantur. Causa autem talis somnii est fulgor intellectus agentis et splendor, qui sua radiacione ad se totam animam trahit, et avertit ab imaginum motu: intentio autem animae quando tota fertur ad intellectum et excellenter est in ipso, distrahitur a consideratione sensibilium in vigilia, et a perceptione imaginum in somno.

IN THE RETENTION | Arabic *fī l-hifz*, Latin *in conservatrice* (cf. *infra*, §441, the alternative form *in conservante* for the same Arabic expression, and *supra*, §437, the usage of Latin *conservatrix* for Arabic *ḥāfiẓa*). For *hifz* in the sense of 'retentive faculty of forms' cf. *supra*, §436 and *infra*, §441; for the usage of the present participle *ḥāfiẓa* in the same sense see also §435 and §437.

THAT WHICH WAS UNVEILED OF THE UNKNOWN | Arabic *mā inkaṣafa min al-ġayb*, Latin *id quod revelatur ei de occultis*.

AN UNADULTERATED REVELATION | Arabic *wahy^{an} ṣariḥ^{an}*, Latin *verum presagium*. The Latin expression appears much weaker with respect to the Arabic original. For the notion of *wahy* as specifically reserved to prophetic revelation in al-Ġazālī cf. TREIGER 2012: 65-66.

THIS REVELATION [...] IS IN NEED OF THE [DREAM] INTERPRETATION. | Arabic *fa-yakūnu hādā l-wahy^u muftaqir^{an} ilā l-ta'wīlⁱ, ka-mā taftaqiru tilka l-ru'yā ilā l-ta'bīrⁱ*, Latin *hoc igitur est presagium cui opus*

est interpretacione, sicut visio in hoc eget etiam interpretacione (with failure to distinguish semantically between *ta'wīl* and *ta'bīr*, both rendered as *interpretatio*). As noticed by JANSSENS 2019: 120 and fn. 137, the distinction between these two kinds of revelation/vision (and the related forms of interpretation) is added by al-Ġazālī with respect to the *DN. Ivi*, however, Janssens aptly references Avicenna's *Iṣārāt* IV.22, ed. FORGET 1892: 216.15-217.3 as a «possible source» for the addition. Compare indeed the English translation by INATI 1996: 102 (round bracketed Arabic words are already present in Inati's text, square bracketed ones have been added by me on the basis of Forget's text):

That which is among the traces under consideration and is maintained in memory with stability, whether in the state of wakefulness or sleep [*fī ḥālī yaqḏatⁱⁿ aw nawmⁱⁿ*], is either an inspiration (*ilhām*) [rectius *ilhām^{an}*], a pure revelation (*wahī*) [rectius *wahy^{an} ṣurāh^{an}*], or a dream that does not require interpretation [*ta'wīl*] or expression [*ta'bīr*]. But that which itself has ceased, while its semblances and effects remain, requires one of the two: revelation [*wahy*] requires interpretation and dream [*ḥulm*] requires expression. This varies in accordance with individuals, times, and habits.

Much like in our text, in the *Iṣārāt* as well «revelation» is connected to *ta'wīl*, while dream-like visions (*ḥulm* 'dream' in Avicenna's text, *ru'yā* 'vision' in al-Ġazālī's one) are linked to *ta'bīr*. Of *ta'bīr* as dream-interpretation the text of the *MF* has indeed already spoken quite at length before (see *supra*, §§435-436), while the *ta'wīl* – a kind of allegorical interpretation typically performed on the text of the Qur'ān; see *infra* – appears in this passage for the first and only time. A parallel passage in al-Ġazālī for the discursive connection of *ta'wīl* and *ta'bīr* (and thus of prophethood and oneiromantics) can be found in his treatise *Jewels of the Qur'ān* [*Ġawāhir al-Qur'ān*], ed. KĀMIL 2011: 90ff., for which cf. the assessment by TAMER 2015: 59 and fn. 39. For a discussion of this connection in the broader field of al-Ġazālī's Qur'ānic exegesis, and its possible derivation from the epistles of the Brethren of Purity, cf. also WHITTINGHAM 2007: 47 ff. The same passage of the *Ġawāhir al-Qur'ān* was heavily criticised by the Damascene theologian Ibn Taymiyya, on the basis of its theologically unacceptable reduction of prophetology (which requires *ta'wīl*) to oneirology (which merely requires *ta'bīr*): cf. MICHOT 2015: 371 for a discussion.

ALLEGORICAL INTERPRETATION | Arabic *ta'wīl*, Latin *interpretacione* (same term also employed for *ta'bīr*, cf. *supra* in this paragraph). For the rendition of the Arabic term *ta'wīl* as «allegorical interpretation» cf. GRIFFEL 2015: 89-90 fn. 3, who aptly underlines the sense of the word as extraction of an inner meaning from the outward expression. The entire essay by GRIFFEL 2015 presents in detail al-Ġazālī's *al-Qānūn al-Kullī fī l-Ta'wīl* [*The Universal Rule for Allegorical Interpretation*], which has very important philosophical bearings for the project of refutation of the *TF*. The word, despite its seemingly casual occurrence in the *TF*, appears thus to have a very meaningful role in al-Ġazālī's overall thought.

[§440] D379.10-18

The second possible cause of wakeful visions is physiological, as it has to do with the melancholic temperament, in which the black bile prevails. Despite producing truthful visions, this second cause is an imperfection, while the first one – addressed in the preceding §439 – is said to be a perfection of the soul.

BY VIRTUE OF THE PREDOMINANCE OF THE BLACK BILE | Reading [*bi-ḡalabat^t*] *l-sawdā'* instead of *Dunyā's* [*bi-ḡalabat^t*] *l-sawād*, which would have the less precise sense of 'blackness'; cf. indeed shortly *supra*, §437, for a previous occurrence – in a similar physiological context – of the humour of the black bile. The correction is also confirmed by the Latin translation *quod homo fit caducus propter dominium*

melancolie, which seems however to be based on a partially different Arabic text than Dunyā's, because *quod homo fit caducus* ('the fact that man becomes epileptic') has no parallel in the Arabic edition. Cf. however *infra* for a reference to epilepsy in the extant text.

THE SOURCES OF THE SENSES | Arabic *mawārid al-ḥawāss*, Latin *ab his que solent afferre sensus*.

WHILE HIS EYES ARE OPEN | lit. 'together with the opening of the two eyes' [*ma'a faṭḥi 'aynayni*].

ASTONISHED | Arabic *mabhūt*, Latin *turbidus*.

INADVERTENT | Arabic *ġāfil*, Latin *stupidus*.

ABSENT | Arabic *ġā'ib*, Latin *absens*. The experience which is described is a sort of catathonic trance that makes the person completely unaware of the external reality.

FROM THE SPIRITUAL SUBSTANCES | For further occurrences of the phrase *al-ġawāhir al-rūḥāniyya* in the *MF* cf. *supra*, *Physics* V.5, §435 and *Physics* V.6, §437. As it is apparent from the present passage, the connection between the «spiritual substances» and the world of the «unknown» [*ġayb*] is a prominent element of the non-sensible access to knowledge described in these paragraphs of the last treatise of the *MF*.

HE CONVERSES | Arabic *yataḥaddaṭu*, Latin *quod loquatur*.

HE UTTERS [IT] ACCORDING TO HIS TONGUE | Arabic *yaġri 'alà lisān-hi*, Latin *discurrat per linguam eius*.

IN SOME POSSESSED [...] CONFORMABLE TO WHAT WILL HAPPEN | In SIGNORI 2020^a: 93-94 (T7), I have proposed to recognize in this passage another (yet feeble) attempt at comparing the philosophical and the religious traditions, since the pre-Islamic «soothsayers of the Arabs» [Arabic *kuḥhān min al-a'rāb*, Latin *aliquibus divinis arabicis*] can be considered in some ways to be the forerunners of the Qur'ān and of its rythmical prose [*saġ'*] (on which cf. FAHD-HEINRICHS-BEN ABDESSELEM 2020).

POSSESSED | Arabic *maġānīn*, Latin *aliquibus qui dicuntur demoniaci*.

EPILEPTIC [PEOPLE] | Arabic *maṣrū'ūna*, Latin (*aliquibus qui dicuntur...*) *caducis*.

THE FIRST CAUSE IS A SPECIES OF PERFECTION | The remark is interesting inasmuch as it suggests that both the goal and the means of the visions are important in their evaluation. The first cause addressed, as a matter of fact, is considered among the perfections (since it derives from an outstanding strength of the soul's intellect), while the second cause – which is purely physiological, and which produces the vision only as a byproduct of a temperament dysfunction – is considered *tout court* as defective. On the physiological causes of visions, which could be linked to a pathological condition, see also *infra*, §442.

[§441] D379.19-380.5

(8) The eighth section completes the treatment of visions, by addressing the case of false wakeful visions. These occur through a process – described in great detail – that involves the internal senses, rather than their external counterparts: sometimes, a form occurring within the inner senses can impress itself in the common sense, just like an external form, coming from a sensible object, is impressed in it through the sense of sight. Thus, a proper 'vision' takes place, whose origin is however entirely internal to the soul, because its object is not existent in the external world.

FORMS WHICH HAVE NO EXISTENCE | Arabic *ṣuwar^{an} lā wuġūdⁿ la-hā*, Latin *formas que non habent esse*.

IN THE RETENTION | Arabic *fi l-ḥifẓ*, Latin *in conservante* (*supra*, §439, one finds rather the feminine form *in conservatrice* for the same Arabic expression). For further occurrences of *ḥifẓ* in the same sense of 'retentive faculty of forms' cf. *supra*, §436 and §439; for an analogous usage of *ḥāfiẓa* see §435 and §437.

THE IMAGINATIVE [FACULTY] | In this case, as opposed to the normal *usus* of the *MF*, the term printed by Dunyā is *muḥayyila* (active participle of the II stem) rather than *mutaḥayyila* (V stem, occurring

infra in this paragraph). The two participles appear to bear exactly the same meaning in the framework of the doctrine of the internal senses, hence their common technical translation. The absence of the infix *-ta-* might however be also due to a mere misprint in Dunyā's text. Cf. Latin «virtus fantasie», which provides *ad sensum* the Latin counterpart of Arabic *quwwa* ('faculty', 'potency'), absent in Dunyā's edition.

SHE IMITATES IT | The subject of the sentence might also be the «imaginative faculty» mentioned shortly before, rather than the soul altogether. In this case, it would be best to read «it imitates it». The object of the imitation is the item of the world of the unknown appraised by the soul, which is disguised through «a sensible form» [Arabic *ṣūra maḥsūsa*, Latin *forme sensibilē*] due to the intervention of the imaginative faculty.

IN THE FORMATIVE [FACULTY] | Arabic *fi l-muṣawwira* (Biḡū vocalizes the participle as if in the passive: *muṣawwara*), Latin *in imaginativa*.

THE COMMON SENSE TAKES [IT] AS COMPANION | Arabic *istaṣhaba al-ḥiss al-muṣṭarak*, Latin *descendit (!) ad sensum communem*. The process here described is the reverse of the normal perception, described in *Physics IV supra*. While external forms of perceived objects normally enter the system of the internal senses from the hallway of the common sense, here the soul receives internally a form that makes its way through the internal senses and up to the common one.

TRAVELLING TO IT FROM THE FORMATIVE AND THE IMAGINATIVE [FACULTIES] | Arabic *sāriya* (sic pro *sarāya* printed by Dunyā and Biḡū) *ilay-hi min^a l-muṣawwiratⁱ wa-l-mutaḥayyilatⁱ*, Latin *defluens in eum ab imaginativa et fantastica*.

THE VISION IS THE FALLING OF A FORM IN THE COMMON SENSE | Arabic *al-ibṣār huwa wuqū^a ṣūrat^m fi l-ḥissⁱ l-muṣṭarakⁱ*, Latin *videre enim est cadere formam in sensum communem*. The sentence contains the theoretical core of the passage, which will be addressed more widely in the remainder of the paragraph. Since seeing is not but receiving a form in one's apparatus of internal senses, and in particular in the common sense, there is in concrete no difference between 'seeing' an external object and 'seeing' a non-existent one, the latter 'vision' being caused by the falling of a form, which has no existence whatsoever outside the mind, in the common sense. Both events, indeed, result in the subjective experience of «vision», despite the difference of their causes.

INDEED, THE FORM EXISTING FROM OUTSIDE [...] IN THE COMMON SENSE | It is not «the form existing from outside» [Arabic *al-ṣūra al-mawḡūda min ḥāriḡ*, Latin *forma enim que extra est*] as such that is sensed. Rather, the perception occurs when a form in all similar to the form of the real object 'falls' within the common sense. Since however it is merely a mental form, and not an extramental one existing in outside reality, that properly causes sight perception, there is no difference in our perception that is produced by the origin of said form. In other words, perception of objects having real existence is in principle not distinguishable from perception of objects that only have a mental, or psychic, existence.

WHICH RESEMBLES IT | Arabic *tamātilu-hā*, Latin *consimilem ei*.

THEN, THE SENSED [...] WITH ANOTHER MEANING | Since it is not the form itself of the outside object that falls in our senses, but rather a copy of it (cf. *supra* in this paragraph), the real object can be said to be «sensed» [Arabic *maḥsūs*] only in a different, equivocal meaning with respect to that which applies to the form that actually falls in the sense perception.

THE SENSED [...] IS THE FORM | Reading *al-maḥsūs...huwa l-ṣūra* instead of *al-maḥsūs...hiya l-ṣūra* printed by Dunyā, which would presuppose a feminine subject.

THERE IS NO DISTINCTION | Arabic *lā farq^a*.

OBTAINMENT | Arabic *ḥuṣūl* (used as synonym of the preceding «falling» [wuqū^l]).

ITS POSSESSOR BECOMES A SEER FOR IT | Arabic *ṣāra ṣāḥib^a-hu muḥṣir^m la-hu*. This is to say that the one who possesses the common sense in which a form has fallen – wherever this form might have come from – 'sees' that form. The usage of the polysemous Arabic word *ṣāḥib* is related to the preceding occurrence of the verb *istaṣhaba*, which shares the same root. While I think that «possessor» is in this clause clearer, also «companion» might thus be a good literal translation of the Arabic

expression. The Latin rendition *homo erit videns eam*, although doctrinally correct, trivializes the richness of the Arabic expression, in keeping with the failure of the Latin translators to render also the preceding *istaṣḥaba* (trivialized in *descendit*, see *supra*).

THE EYELIDS ARE SHUT | Arabic *al-aḡḡān*^u (sg. *ḡaḡn*) *muḡammaḡat*^{um}, Latin *palpebre eius sint clause*.

IN DARKNESS | Arabic *fi zulmat*ⁱⁿ, Latin *in tenebris*. Neither a subjective impediment to the perception of the eyes (*i.e.* shutting the eyelids), nor a more objective one such as environmental darkness can prevent the ‘vision’ caused by a form imprinting itself in the internal senses.

[§442] D380.6-17

The paragraph goes on to present the physiological causes of these visions, linked to a state of illness. In particular, the intellect has a falsifying and limiting function with respect to the pretensions of the imaginative faculty, but when the intellectual faculty is weakened by an illness the imaginative can get the upper hand. This often happens in the case of nocturnal fears, but it is also possible that a strong desire might produce analogous, and deceitful, visions.

SO THAT IT BECOMES SEEN | Arabic *ḡattā yaṣīra muḡṣar*^{um}, Latin *ut fiat visum*.

ITS CONCEPTION | Arabic *taṣawwur*^u-*hā*, Latin *imaginatio illarum*. What is meant is the conception of the imaginative faculty. In parallel with the rendition of *tawahhum* and *taḡayyul* in what follows (cf. *infra*), *taṣawwur* could also be taken to mean ‘the act of producing forms’ (not *ex nihilo*, but from other images).

WHENEVER THE INTELLECT [...] ITS FALSIFICATION | That is, the «refutation» [Arabic *radd*^l-*hā*, Latin (*ratio*) *refellit*] and the «falsification» [Arabic *takḡib*ⁱ-*hā*, Latin *falsificat*] of the imaginative faculty (objective genitive, expressed by the feminine suffix pronoun).

THE ACTS OF ESTIMATING AND IMAGINING | Arabic *al-tawahhum wa-l-taḡayyul*. As already *supra*, §429 and §436, I take the two *maṣḡdar*-forms of the *v* stem to indicate the act of the two internal faculties usually designated with the active participle of the *v* stem. Both terms have been widely used in the preceding treatises of the *MF*: for the oscillating terminology of the inner sense cf. *supra*, §394 and Table 53.

SEES | Arabic *yabṣuru*, Latin *videat*. The usage of the same verb normally employed for the external vision (root *b-ṣ-r*) is significant, because it emphasizes precisely the genuine character of ‘vision’ enjoyed by the representation that the interaction of the inner senses is able to produce.

HENCE THE FEARFUL COWARD SEES DREADFUL FORMS | Arabic *wa-li-hāḡā yarā al-ḡabān al-hā’if ṣuwar*^{um} *hā’ilat*^{um}, Latin *ob hoc fantasia formidolosi videt formas formidabiles* (with insistent alliterations, and a probably intended pun between the roots of *forma* ‘image’ and *formid-* ‘fear’).

THIS IS [ALSO] THE CAUSE [...] OF ITS WORDS | Arabic *wa-l-qawlu llāḡī yuḡadditu bi-hi fi l-ṣaḡārī, wa-bi-mā yusma’u min kalāmⁱ-hi, hāḡā sabab^u-hu*. ALONSO 1963: 296-297 translates: «Y ésa es la causa del cuchicheo que se oye en el desierto y veces hay que oyen algunos discursos». The Latin translation of this passage is also quite free: «et hec est causa illarum que dicuntur iane (*sic*), que sunt, et locuntur et audiuntur in silvis» (MUCKLE 1933: 193.7-9). MUCKLE 1933: 247^a showed his perplexity for the reading *iane* by dubitatively writing: «iane is read in all three texts; is it for vane? or perhaps the Arabic word “jinni”». SALMAN 1935-1936: 123 fn. 3, while correctly rejecting Muckle’s hypothesis of a corrupted Arabic word, proposed with excessive confidence that *iane* should be «une distraction de copiste pour iāne = inane», basing himself on the reading of ms. Paris, BNF lat. 16605, f. 69^v. ALONSO 1963: 296-297 fn. 37 retraces the Latin term *ianae* to the ‘xanas’, sort of witches, nymphs or fairies whose tradition was fervent in medieval Andalus. According to Alonso, Gundissalinus’ *ianae* would be «las diosas de las selvas (del ṣaḡārā) y el rumoreo de éstas es el habla de aquéllas» (*ibidem*).

Classical Latin *Iana*, from which *xanas* most likely derives, is the feminine of *Ianus*, thus indicating most properly the goddess Diana; for the Asturian mythological tradition of the *xanas* see now also SÁNCHEZ VICENTE-CAÑEDO VALLE 2003: 28 ff.

AILING [PERSON] | Arabic *alīl*, Latin *infirmi*.

WHAT HE DESIRES | Reading *yuštahī-hu* as in BĪĠŪ 2000 instead of *yašbuhu-hu* ('which is similar to him/it') printed by DUNYĀ.

TOWARD IT | *i.e.* toward the image created by the sick person's fervid imagination.

[§443] D380.18-end of page

(9) The ninth topic is the crucial one of prophecy. Three properties, or kinds, of prophecy are introduced, and the first kind is presented with greater detail. (9.1) This first property is related to the soul in her complex, and it translates to a doctrine of action at distance (*Fernwirkungstheorie*) produced by a particularly strong soul.

THE MIRACLES OF THE PROPHETS AND OF THE SAINTS | I choose this partially periphrastic rendition for the Arabic *mu'ǧizāt wa-l-karāmāt* [Latin *miraculorum et prodigiorum*], in which two almost perfectly synonymous terms occur. The first term, *mu'ǧizāt*, refers however more specifically to a miracle performed by a prophet, while the second, *karāmāt* – besides a wider meaning encompassing the notions of 'nobility', 'magnificence' – can also indicate a miracle operated by God through a 'saint' or 'holy person', with reference to various popular Islamic beliefs: for all this, cf. respectively WEHR: 692 and 962. Cf. also *infra*, §446, for the recurring of the same two expressions in the singular.

THREE PROPERTIES | Here begins the treatment of three «properties» [*ḥawāṣṣ*] or kinds of prophecy, which are traced back respectively (9.1) to the soul *qua* soul, (9.2) to her speculative faculty and (9.3) to her imaginative faculty. These three properties are globally the object of a greater attention in the *MF* than in the *DN*, both from a quantitative and in a way from a qualitative point of view, although the added material is in any case for the most part Avicennan in nature. For an analysis of this same prophetological theme in both al-Ġazālī and Avicenna, see the discussion by AL-AKITI 2004. For a more specific focus on al-Ġazālī see GRIFFEL 2004; for Avicenna's well-studied treatment of prophecy see in particular the monographical essays by ELAMRANI-JAMAL 1984, MICHOT 1986 and BERTOLACCI 2020^b.

FIRST PROPERTY | Arabic *ḥāṣṣa*, Latin *primum quod proprietatis*.

THE MATTER | Here and in what follows in this paragraph: *hayūlā* (cf. Latin *in hyle mundi*).

REMOVAL | Arabic *izāla*, Latin *removendo*.

PRODUCTION | Arabic *īǧād*, Latin *conferendo*.

TRANSFORMATION | Arabic *istiḥāla*, Latin *convertendo*.

A RAIN LIKE THE FLOOD | Arabic *maṭar^{an} ka-l-tūfānⁱ*, Latin *pluvia sicut diluvium*. For a previous occurrence of the rather rare *tūfān* in the *MF* in a context of theodicy cf. *supra*, *Metaphysics* V, §307. or in the measure of the need for the irrigation | *qadr istiḥāṣā⁷*

IT HAS ALREADY BEEN ESTABLISHED IN *METAPHYSICS* | Cf. *supra*, *Metaphysics* IV.a.1, §246 (in which the souls are said to have an influence on matter, while not being influenced by it); see also for instance *Metaphysics* IV.b.2.1, §270 and following, for the celestial souls' and intellects' causal action on their material spheres.

MATTER IS SUBDUED TO THE SOULS | Arabic *al-hayūlā muṭayya'at^{an} li-l-nufūsⁱ*, Latin *hile subiecta est animabus*. It is worth mentioning that the passive participle of the I stem of the same root, *al-muṭā'* ('the one who is obeyed') is prominently used by al-Ġazālī in his *Niche of Lights* [*Miškāt al-anwār*], III.3, ed. BUCHMAN 1998: 51.9, 51.15 in order to designate a celestial being to which everything responds,

and which is like the Sun among the stars. Cf. also the introductory remarks by BUCHMAN 1998: xxviii for a contextualization of this doctrine of al-Ġazālī's also in light of the harsh criticisms it elicited in Averroes (for the texts cf. GAIRDNER 1914: esp 133). I briefly touched upon the relation between the *MF* and the *Miškāt* in the Introduction, esp. §1.10.

THESE FORMS FOLLOW ONE ANOTHER UPON IT | That is, upon matter.

FROM THE TRACES OF THE SOULS OF THE [CELESTIAL] SPHERES | Arabic *min āṭār al-nufūs al-falakiyya*, Latin *ab impressionibus celestium animarum*.

[§444] D381.1-10

The paragraph illustrates the reason why a strong human soul can act over matter at a distance. This is because the human rational soul is consubstantial with the heavenly souls, which do act at a distance, for instance by influencing the sublunary world. The human soul, being much weaker, usually has power only on her proper and closest matter, *i.e.* her body, but is capable in principle of having an influence on matter which is farther removed from herself.

HER RELATION TO IT | The only way to salvage *ilay-hi* printed by Dunyā is to refer the masculine suffix pronoun to the preceding *ġawhar*, «substance» (of the celestial souls). Reading *ilay-hā*, with the feminine suffix pronoun referred to those souls themselves, might however feel more natural in the context.

LIKE THE RELATION OF THE LAMP TO THE SUN | The simile of the Sun [Arabic *šams*, Latin *sol*] and the lamp [Arabic *sirāġ*, Latin *candela*] already appeared *supra*, *Physics* IV.3, §424, in the discussion directed against the doctrine of the metempsychosis.

ON THE HEATING AND THE BRIGHTENING | Arabic *fī l-tašhīn wa-l-iḏā'a*, Latin *in caleficiendo et illuminando*. ELEMENT | Arabic *ʿāmil*. It is likely that the Latin translators read *ʿālam* (with identical *rasm*, apart the inversion of *lam* and *mim*), because they render the phrase as *in suo mundo proprio* (MUCKLE 1933: 193.27, in itself a possibly meaningful reading). With its active value, *ʿāmil* – which can also mean 'constituent', or even '(causative) agent' – seems to stress the role of the body with respect to the soul, probably in keeping with the frequent observations of the Fourth treatise on the certain kind of dependence that the soul has on her body.

PERSPIRATION | Arabic *ʿaraq*, Latin *sudoris*.

EVAPORATING | Arabic *mubaḥḥira*, Latin *vaporalis*. What follows is a psycho-physiological description of sexual excitement.

EXCITING FOR THE WIND | Arabic *muhayyiġa li-l-rīḥ*, Latin *movens ventum*.

IN THE VESSELS OF THE SEMEN | Arabic *fī awʿiyatʿ (sg. wiʿāʿ) al-minā*, Latin *in comeatu spermatis*.

COITION | Arabic *wiqāʿ*, Latin *cohitus*.

[§445] D381.11-21

The paragraph further elaborates on the reasoning of §444, explaining that in principle the soul could act on other bodies just like it acts on her own, producing tangible physical effects (such as heating or cooling, for instance) without an external cause. This, however, does not normally happen because the soul is bound by love to her own body. This restraintment is sometimes overcome, for instance by a mother who loves so deeply her child as to throw herself in the fire in order to save him or her; but this only happens because the child's body derives from her own body. Thus, the own

body of the soul will be *a fortiori* much more loved, which is enough to explain the limited action of the soul on that body alone.

THESE HEAT, COLDNESS, WETNESS, AND DRYNESS | That is, these qualities actually produced in external reality.

WORTHIER AND GREATER IN IT | That is, in the body that the souls informs, as opposed to the other bodies that she does not ensoul (and upon which as well, however, she can – exceptionally – exert some kind of influence).

BY VIRTUE OF THE BOUND OF DEPUTATION | Arabic *bi-ḥukmī ‘alāqatī l-ba‘tatī*.

DUE TO HER BEING ORIGINATED TOGETHER WITH IT | For the common origin of the soul with her body, which does not entail however at any rate a causal dependence of the psychic on the bodily part, cf. *supra*,

ANOTHER BODY WHICH DERIVES FROM HER BODY | *i.e.* the body of her child, as specified immediately afterwards.

[§446] D381.22-382.6

After having presented all the premises of the reasoning in the preceding §§443-445, this paragraph – which concludes the treatment of the first kind of prophecy, (9.1) – expresses with the greatest clarity the actual possibility of a proper action at distance, performed by a powerful soul. This possibility is introduced *via* a tradionist source, *i.e.*, two *aḥādīṭ* concerning the so-called «evil eye». The existence, confirmed by prophetic authority, of a phenomenon of telekinesis such as the one here described – *i.e.*, the killing of a man or of a camel due to envy – is also proof of the possibility of prophetic miracles performed by souls of particular strength, which may act on the matter of this world outside their bodies.

ESTIMATION | Arabic *tawahhum*, Latin *estimacione*.

«EVIL EYE» | Literally: «injury [provoked by] the eye» [Arabic *iṣāba al-‘ayn*, Latin *fascinacio*]. On the evil eye in the Arabic-Islamic tradition cf. ELWORTHY 1895, and more recently the entry ‘*Ayn – Evil eye*’ by MARÇAIS 1960, which also quotes the commentary by al-Qaṣṭallānī to SAḤIḤ AL-BUḤĀRĪ VIII, 390, 463 (and cf. the further *aḥādīṭ* quoted *infra* in this commentary).

«THE EYE [...] IN THE COOKING POT» | Arabic *inna l-‘ayn^a li-tadāḥul^l l-raḡul^l l-qabr^a, wa-l-ḡamal^l l-qidr^a*, Latin *quod oculus mittit hominem in fossam et camelum in caldarium*. For this *ḥadīṭ* cf. AL-ALBĀNĪ, *Silsila al-ḥadīṭ al-ṣaḥīḥa*, n. 1249; ABU-RABĪA 2005: 241 appears however to consider it merely as an «Arab-Bedouin saying». Scholarship on the power of fascination, on the evil eye, and of the doctrines of action at a distance (*Fernwirkungstheorien*) in the Middle Ages is quite rich: cf. for instance HASSE 2016 (who focuses on Arabic and Latin commentaries to Aristotle’s *De insomniis*, devoting by the way much attention to the example of the camel – «der Sturz des Kamels»), DELAURENTI 2016^a and DELAURENTI 2016^b. From all these studies the passage of AVICENNA, *K. al-Šifā’, K. al-Nafs*, IV.4 emerges as the single most relevant parallel. On the specific presence in the *MF* (especially in their Latin version) of the doctrine of the action at distance, and on the Latin reception of the example of the camel, cf. MINNEMA 2017. I have personally discussed this passage in SIGNORI 2018: esp. 375-276 and relative footnotes, and (more briefly) in SIGNORI 2020^a: 94-95 (T8).

«THE EYE IS TRUE» | Arabic *al-‘ayn^u ḥaqq^{um}*, Latin *quod homines fascinari verum est*. Cf. SAḤIḤ MUSLIM 2188; book 39, *ḥadīṭ* 56: «Ibn ‘Abbās reported Allah’s Messenger as saying: The influence of an evil

eye is a fact; if anything would precede the destiny it would be the influence of an evil eye, and when you are asked to take bath (as a cure) from the influence of an evil eye, you should take bath». Cf. also SAḤĪḤ AL-BUḤĀRĪ 5740, b. 76, *ḥadīṭ* 55: «Narrated Abu Huraira: The Prophet said, “The effect of an evil eye is a fact.” And he prohibited tattooing». This and the preceding *ḥadīṭ* are added by al-Ġazālī, as they are absent from the corresponding passage of the *DN*. The addition of the two *aḥādīṭ* is recognized as well by JANSSENS 2019: 120, who recalls in fn. 138 that the notion of «evil eye» also appears in Avicenna’s *Iṣārāt*, ed. FORGET 1892: 231.

THE ONE INJURING WITH THE EYE | Arabic *al-muṣyib bi-l-‘ayn*.

IT HAPPENS THAT HIS SOUL IS WICKED AND ENVOUS | As I noticed elsewhere (SIGNORI 2020^a: 95), a Qur’ānic source for the notion of the evil and fateful influence caused by envy can be found in the brief sūra of the Daybreak, where the pious man is said to «seek refuge in the Lord of daybreak [...] from the evil of an envier when he envies [*min šarr’ ḥāsidiⁱⁿ idā ḥasada*]» (cf. *Qur’ān* 113.1, 113.5).

HE ESTIMATES | Arabic *yatawahhamu*, Latin *estimat*. The verb, together with the various further occurrences of «estimation» in this paragraph, emphasizes the role of this faculty for the action at distance of the soul.

THE FALLING OF THE CAMEL | Arabic *suqūṭ al-ḡamal*, Latin *casum cameli*.

RARELY | Arabic *‘alā l-nudūr*.

DISSIMILARITY | Arabic *taḡāyur*.

CASES | Arabic *ḥawādīt*.

«MIRACLE OF SAINT» | Arabic *karāma*, Latin *magnificentia*. GRIFFEL 2021: 201 briefly discusses a still unedited «short epistle on prophetic miracles and on the wondrous deeds (*karamāt*) that the “friends of God” (*awliyā’*) produce», written by al-Sāwī.

«MIRACLE OF PROPHET» | Arabic *mu’ǧiza*, Latin *miraculum proprie*. For this rendition of the two terms see *supra*, §443, and cf. also *infra*, §449.

[§447] D382.7-16

(9.2) The paragraph introduces the second typology of prophecy, connected to the speculative faculty of the soul. If this is strong enough, the soul can conjoin to the agent intellect and thus perform a theoretical kind of prophecy. A philosophical basis for this is provided by the factual existence of people who can learn even without a teacher. Indeed, all sciences must have been at first invented by someone who did not have a teacher at his or her disposal (otherwise, there would be a *regressus ad infinitum*).

WITH SUCH CLARITY | Arabic [*taṣfū*]... *ṣafā^{am}*, Latin [*clarificatur*]...*in tantum*.

IT [GETS] STRONG [...] THE SCIENCES UPON HER | The strength of the speculative faculty (for which cf. *supra*, *Physics* IV.3, §403) is linked to her capacity to the «predisposition» [Arabic *isti’dād*] and the «conjunction» [Arabic *ittiṣāl*] with the agent intellect, in keeping with what has been recently labelled ‘Avicenna’s outsourced rationalism’ (an expression which gives the title to KAUKUA 2020).

TEACHING | Arabic *ta’līm*, Latin *doctrina*.

WHEREAS OTHERS LEARN QUICKLY | As already underlined by GRIFFEL 2004: 114 and fn. 44, the possible existence of someone endowed with extraordinary intellectual faculties is one of Avicenna’s key arguments for the necessary existence of prophecy, which al-Ġazālī never explicitly disproves in his works.

ALL THE SCIENCES [...] LEARNING FROM A TEACHER | This is a typical aspect of Avicenna’s theory of knowledge, in which the possibility of outstanding intellectual gifts is always taken as a factual (and rather, as an autobiographical) *datum*. Interestingly, al-Ġazālī himself endorsed Avicenna’s doctrine,

although replacing the originally Aristotelian concept of ‘intuition’ [Arabic *ḥads*], central in Avicenna’s epistemology (cf. the following §§448-449 for more detailed information) with a more clearly revealed ‘inspiration’ [*ilhām*]. In this direction, a passage of the *Munqid* (ed. BĪĠŪ: 73.19-74.1) is central, because it demonstrates the necessary existence of prophecy precisely through the necessity of an inspired origin of knowledge in subjects such as medicine and astronomy, in which experience cannot play a foundational role.

The sign of its possibility (*scil.* of prophecy [*nubuwwa*]) is its existence, and the sign of its existence is that in the world there is knowledge that cannot be conceived to stem from the intellect [*al-‘aql*] such as the knowledge in medicine and about the stars. For whoever looks into [medicine and astronomy], knows necessarily that the knowledge therein can only be obtained through inspiration [*ilhām*] and through God’s granting of success. It cannot be attained through experience [*taḡriba*]. Among the astronomical laws are some that apply only once in a thousand years. How could that be attained through experience? The same applies to the properties of medicaments. It is clear from this demonstration that there is, in possibility, a method to perceive these things, which cannot be perceived by the intellect – and that is what is meant with ‘prophecy’, because ‘prophecy’ is an expression that refers to those things alone (transl. GRIFFEL 2021: 257, augmented and modified)

For a discussion of this Ġazālīan notion cf. GRIFFEL 2021: 256-258.

[§448] D382.17-383.3

The paragraph elaborates on the possibility of learning without a teacher, by giving two examples of purely speculative inferences that a fine speculator can draw on his or her own, without the need of an instructor. Interestingly, these two examples of untaught pieces of knowledge are both metaphysical doctrines already treated in the relevant section of the *MF*.

INFERENCES | Arabic *istinbāṭ*, Latin. For the frequent pairing of the notion of *istinbāṭ* (there technically rendered as ‘discovery’) with that of intuition [*ḥads*] in Avicenna’s epistemological and prophetological discussions cf. GUTAS 2014^a: 183 fn. 33. For more information on the doctrine of *ḥads* cf. *infra* the introduction and the commentary to §449. For a previous occurrence of *istinbāṭ* in the *MF* see *supra*, *Physics* II.3, §340.

THE CONCLUSION OCCURS [...] BEING AWARE [OF IT] | It is worth recalling that GUTAS 1988: 159-176 = GUTAS 2014^a: 179-201 explains the function of *ḥads* – often paired in Avicenna with the term *istinbāṭ* that occurs in this passage (see *supra*) – precisely as ‘guessing correctly’ the middle term, or ‘hitting upon the mark’. Analogously, al-Ġazālī speaks here of ‘becoming conscious’ [*yatanabbahu*] and ‘aware’ [*yadrī*] of the middle term, and of a sudden ‘occurring’ [*taḥṭiru*] of the conclusion of the syllogism to the mind [*bāl*] once having achieved the knowledge of the middle.

HE ANTICIPATES THE MIDDLE TERM | Arabic *yabtadīru li-l-ḥadd^h l-awsaṭ^h*, Latin *prius percipit medium terminum*.

THAT ITS EXISTENCE IS INEVITABLE | A long and thorough discussion on the proofs that allow one to infer the existence of a circular surrounding body based on the observation of the existence of rectilinear motion was conducted *supra*, esp. *Metaphysics* IV.b.1.2, §§252-255.

CHAINS UP | Arabic *yatasalsilu*.

HE KNOWS | Arabic *yaʿrifu*.

HE WILL HAVE EXPERIENCED BEFORE [...] IT HAD SEPARATED | Also this second example of knowledge potentially attainable without need for a teacher is taken from the preceding metaphysical discussion: cf. in particular *Metaphysics* IV.b.1.6, §§266-267.

HE WILL HAVE EXPERIENCED BEFORE | Arabic *yasbiqū la-hu*

IT HAD SEPARATED | Arabic *fāraqat*.

[§449] D383.4-14

After the premises of §§447-448, the text concludes the reasoning on the second kind of prophecy (9.2) by affirming the possible existence of a person endowed with such outstanding intellectual abilities as to be capable of learning everything quickly and without any teacher. In the *DN*, Avicenna had attributed this extraordinary learning ability to someone he had directly met: «we ourselves have met someone who was not at this degree and learnt things with reflection and effort, but was nonetheless exempt from excessive effort thanks to the power of his intellectual intuition» (my translation in SIGNORI 2018: 365). The continuation of this rather crucial text, which has no parallel in the *MF*, describes how this man had already mastered at the age of eighteen all the doctrines that other people normally learn only after years of dedicated training; cf. the relevant passage translated in French by ACHENA-MASSÉ 1955 (I): 6-11, and in English by GUTAS 1988: 20-21 (T2) = GUTAS 2014^a: 8-10 (cf. also the reprise of the translation in the following discussion of *ḥads* in GUTAS 1988: 163 (L10) = GUTAS 2014^a: 184-185). This description corresponds almost *verbatim* to Avicenna's own autobiography (see GUTAS 1988: 23-30 (T3) = GUTAS 2014^a: 11-19), so that it is clear that in the *DN* Avicenna was implicitly referring to himself (for a clear-cut affirmation in this direction see GUTAS 2014: 9 fn. 6). Thus, as already remarked by JANSSENS 2019: 120 and fn. 139, al-Ġazālī apparently elaborates quite strongly on his source by eliminating Avicenna's implicit self-reference and by replacing it with the example of the prophet and the *walī*. However, Janssens also downplays the importance of the change, stating that «this affirmation is almost identical with DN 145,5-6 (beginning c. 51)» and that it has moreover a parallel in Avicenna's *K. al-Nafs* (ed. RAHMAN 1959: 249.16-250.4). In the footnote, however, Janssens also quotes AL-AKITI 2004: esp. p. 197 fn. 23 for a different interpretation, more inclined to acknowledging an actual Ġazālīan modification of Avicenna's hypotext. My own impression, in contrast with Janssens' one, is that al-Ġazālī was actually fully aware of the change of emphasis he was giving to his source. In particular, I have argued that he «limits himself to state the logical possibility of the existence of such an individual, without committing to any direct testimony», which «seems to show *e silentio* a certain degree of skepticism, or at least some more discretion» with respect to Avicenna's own bolder statements (see SIGNORI 2018: 367).

A FRIEND OF GOD | Arabic *walī*, Latin *sapientissimus*.

THE MIGHT OF THE INTUITION | Arabic *šidda al-ḥads*, Latin *fortioris animi*. Given the highly epistemological context it appears in, this occurrence of *ḥads* is to be taken in its technical Avicennan sense, *i.e.* as the ability to 'guess correctly' the middle term of a syllogism, for which cf. Dimitri Gutas' compelling case (with plenty of textual sources) in GUTAS 1988: 159-176 = GUTAS 2014^a: 179-201 (and see also *supra* §448). According to Gutas' analysis, *ḥads* in this sense is the Arabic counterpart of Aristotle's εὐστοχία, which appears with the sense of 'hitting the mark', 'rightly conjecturing' in both the *Posterior Analytics* and the *Nicomachean Ethics*: cf. GUTAS 2014^a: 189-192 (and see in particular 189-190 fn. 45 for references); see also Part X, *Intuition and Thinking: The Evolving Structure of Avicenna's Epistemology* in GUTAS 2014^b.

THE STRENGTH OF THE ACUMEN | Arabic *quwwa al-dakā*, Latin *subtilioris ingenii*. Here again, the Arabic term *dakā* conceals an Aristotelian origin in the term ἀρχίνοια ('acumen', 'perspicacity'), which Aristotle saw as a feature of cognition propedeutic to εὐστοχία. Likewise, as maintained by GUTAS 1988: 169 = GUTAS 2014^a: 192, *hads*, 'intuition' or 'guessing correctly', is in Avicenna «a function of» *dakā*, 'acumen'. Both technical terms of Avicenna's epistemology thus appear in the *MF* in close proximity to one another (albeit there is some sort of *hysteron proteron*, since the effect, *hads*, is mentioned here before its cause, *dakā*). Although seemingly cursory in the text, this double reference is thus by no means secondary, as it probably betrays a very attentive reading of the relevant Avicennan texts on al-Ġazālī's part, despite the variations in emphasis he makes with respect to his main source, the *DN*.

THE INCREASE IN THIS TOPIC BELONGS TO THE THINGS WHICH ARE POSSIBLE? | As it is already clear from the preceding discussion, the text ultimately aims to argue that the existence of a hierarchy of intellects is perfectly plausible, and that the existence of such a powerful speculative faculty as to be able to do without any sort of teaching is, likewise, perfectly credible. This strong epistemological notion is substantiated by the specular claim that we have direct and common experience of the opposite, inferior degrees of the hierarchy – *i.e.* of very weak speculative faculties –, as well as by the more general consideration that there are, indeed, well-perceivable individual differences when it comes to learning and instruction. Logically, then, the existence of the opposite, and highest, level of the hierarchy must also be considered possible. For an analogous interpretation, relative to a parallel passage of Avicenna's *K. al-Naġāt* (identical to the passage from the *K. al-Nafs* referenced by JANSSENS 2019: 120 and fn. 139; see the introduction to this paragraph), and rightly emphatic in stating the importance of this doctrine for Avicenna's overall explanation of prophecy, cf. GUTAS 2014^a: 183 fn. 36.

[§450] D383.15-22

(9.3) The paragraph discusses the third and last typology of prophecy, connected with the imaginative faculty. This faculty has a prophetic value inasmuch as it is able to imitate the intellectual knowledge that the soul has perceived by means of wondrous images and sounds. Visions of angels, for instance, belong to this typology. For an analysis focused on Avicenna's treatment of this third kind of prophecy, besides the general and valuable contributions quoted *supra* in the commentary to §443, see also the more specific contribution by LIZZINI 2018. JANSSENS 2019: 120-121 and fn. 140 seems to recognize just a mild source of inspiration in the *DN* for this third property («might have been inspired by DN 145,6-9»), while referencing Avicenna's *al-Mabda' wa-l-ma'ād*, ed. NÜRĀNĪ 1983: 119,5-14 for the notion of the vision or hearing of beautiful forms. Janssens *ivi* also quotes Avicenna's *Iṣārāt*, ed. FORGET 1892: 214-17-215,3 for the «possible use of the common sense».

THE SOUL SOMETIMES [...] AS IT WAS SAID BEFORE | For the strengthening of the imaginative faculty cf. in particular *supra*, *Physics* V.6, §437, but see also the continuation of the reasoning in the following section V.7, to which the subsequent reference in this paragraph (see immediately *infra*) also points. SHE CONJOINS [...] AS IT WAS SAID BEFORE | Cf. *supra*, *Physics* V.7, §§438-440. The «world of the unknown» [Arabic *‘alam al-ġayb*, Latin *saeculo praescientiarum*], in particular, was mentioned at the beginning of §438.

COPIES | Arabic *tuḥākī* (imperfect of the III stem), Latin *assimilat*.

BY MEANS OF BEAUTIFUL FORMS AND WELL-ORDERED SOUNDS | Arabic *bi-ṣuwarⁱⁿ ġamīlatⁱⁿ wa-aṣwāf^ī manzūmatⁱⁿ*, Latin *formis pulchris et vocibus modulatis*.

IT IS THE ANGEL THAT THE PROPHET, OR THE FRIEND OF GOD, SEE | Arabic *wa-huwa l-malak allādī yarā-hu l-nabī aw l-walī*, Latin *et haec est angelus quem videt propheta, vel sapientissimus*. GRIFFEL 2004: 116 fn. 56 remarks on the notion of ‘angel’ occurring here, linking it directly with the subsequent ‘noble substances’, as if it were the origin of the prophetic knowledge here described («the source of prophetic visions», in his words *ivi*). However, it seems that the *malak* here envisaged by al-Ġazālī is also the content, and not merely the origin, of prophetic visions.

KNOWLEDGES | Here: *ma‘ārif*.

FROM HER CONJUNCTION WITH THE NOBLE SUBSTANCES | Arabic *min ittiṣāl-hā bi-l-ġawāhir al-ṣarīfa*, Latin *propter sui coniunctionem cum substantiis excellentibus*.

BECOME SIMILAR | Arabic *yatamattalu*, Latin *sunt quasi*.

IN THE COMMON SENSE | Reading *ḥiss* for Dunyā’s misprint *miss*.

[§451] D383.23-384.6

The paragraph concludes the treatment of the three kinds of prophecy (§§443-451) by explaining that they can occur both alone and together within a single person. The presence or absence of the various classes in different individuals allows one to rank prophets according to different degrees of perfection. When someone is endowed with all three kinds of prophecy, and has got a high degree of each kind, he or she is the most excellent prophet.

CLASSES OF THE PROPHECY | Arabic *ṭabaqāt al-nubuwwa*, Latin *ordines prophetiae*. The *ṭabaqa* is properly speaking a ‘layer’ or ‘stratum’ (cf. *supra*, *Physics* III.2, §§360-363), hence the clear hierarchical sense assumed here by the expression «classes of prophecy»: cf. also *infra* the superlative *al-afḍal* [Latin *excellentissimus*] ‘most excellent’ – attributed to the prophet – and the insistent usage of the noun *daraġa* ‘rank’, ‘degree’ [Latin *gradus*].

IN THE UTMOST DEGREE [...] THE DEGREES OF THE ANGELS | In a hierarchy of beings dominated by a principle of plenitude, there are no missing links in the chain that goes from lowly realities to the most sublime ones; thus, the highest level attainable by humankind is directly conjoined [Arabic *muttaṣila*, Latin *coniunctus*] with the lowest degree of the angelical ranks. For the insistence on the terminology of angels in this and the following paragraphs cf. the Introduction, §1.7.2.

DIFFER IN EXCELLENCE | Arabic *yatafāḍilūna*, Latin *differunt*. The VI stem of the root *f-ḍ-l* is not attested by WEHR, but cf. LANE 2412^a.

HE HAS SOMETHING WEAK OF EACH ONE | This final remark about the possibility of an intermingling between different kinds of prophetic abilities, each one instantiated at a low degree, in the same person has no correspondence in the *DN*. This is noticed by JANSSENS 2019: 121 and fn. 141, who retraces however the lines of a similar idea in Avicenna’s *al-Mabda’ wa-l-ma‘ād*, ed. NŪRĀNĪ 1983: 117.10-13.

SITUATIONS | Arabic *manāzil*, Latin *ordines* (also used *supra* for the different Arabic term *ṭabaqāt*).

[§452] D384.7-15

(10) The tenth, and final, topic of the Fifth treatise of the *Physics* concerns the necessary existence of the legislating prophet – as the vicar of God on earth – for the greater perfection of the world. JANSSENS 2019: 121 remarks on this final passage (§§452-453) by saying that «[i]t develops the very summary affirmations presented in DN 145,9 – 146,3. The insistence on the need for someone who can maintain justice and order in this world, reminds us of *Ilāhiyyāt* of *Shifā’* (notwithstanding differences in the very wording)». Correctly, thus, Janssens (*ivi*: fn. 142) references Avicenna, *K. al-*

Šifāʾ, Ilāhiyyāt, ed. QANAWATĪ-ZĀYID 1960: 441.10-442.9. From a structural point of view, it is extremely remarkable that, despite the inversion between physics and metaphysics in the *DN* with respect to the more traditional ordering of the *K. al-Šifāʾ*, both works similarly end with a political-prophetological section: on this feature cf. the Introduction, §1.4.2, and see also *infra* the commentary to §453. For a recent overview of Avicenna's statements on practical philosophy, and in particular those concerning the necessity of a prophetic legislation, cf. KAYA 2012.

BY VIRTUE OF A RULE LISTENED TO AMONG THE TOTALITY OF THE CREATION | Arabic *bi-qānūnⁱⁿ masmū^{an} bayna kāffatⁱ l-ḥalqⁱ*, Latin *secundum regulam, quae communis est omnibus creaturis*. The idea of obedience to the universal ruling expressed with the passive participle *masmū^{an}* approaches this passage to the notion of *al-muṭāʿ* ('the one who is obeyed'), prominently used by al-Ġazālī in his *Niche of Lights* [*Miškāt al-anwār*], III.3, ed. BUCHMAN 1998: 51.9, 51.15.

BY VIRTUE OF WHICH [ALL BEINGS] ARE JUDGED WITH JUSTICE | Arabic *yuhkamūna bi-hi bi-l-ʿadl*, Latin *ut per eam iuste iudicetur*.

THE WORLD WOULD BE WRECKED | Arabic *halaka l-ʿālam*, Latin *periret mundus*.

THE DIVINE PROVIDENCE | Arabic *al-ʿināya al-ilāhiyya*, Latin. For the metaphysical discussion on God's providence cf. *supra*, *Metaphysics* III.b.7, §§219-221.

LETTING | Arabic *irsāl*, Latin *dandi*.

ABUNDANT RAIN | Arabic *midrār*, Latin *pluviam*.

THE WAY OF THE PROSPERITY OF THIS WORLD AND OF THE HEREAFTER | Arabic *waḡh ṣalāḥⁱ l-dunyā wa-l-āḥira*, Latin *modum quo aptentur homines huic mundo, et alteri*.

NOT EVERYONE [CAN] OCCUPY HIMSELF WITH THAT | And therefore, a prophet is needed. On the presence of this Avicennan teleological argument for the necessary existence of the Prophet in al-Ġazālī's *MF* cf. already GRIFFEL 2004: 114 and fn. 43.

[§453] D384.16-end of page

The paragraph, which provides a fitting doctrinal conclusion for the entire work, elaborates on the figure of the prophet as caliph – *i.e.* vicar – of God on earth. The text substantiates the philosophical claim for the necessary existence of this prophet-*imām* with two Qurʾānic quotations that confirm God's providential guidance of His creation. The second part of the paragraph provides the clear description of a religiously inspired hierarchy, both descending and ascending, which connects the world with God Himself, and conversely God with the world and its inhabitants.

ORDER | Arabic *niẓām*, Latin *gubernacionis*. The root *n-z-m*, of the good ordering or government of the world, is particularly frequent in this and the preceding paragraph.

THE VICAR OF GOD ON HIS EARTH | Arabic *ḥalīfat^u llāhⁱ fī arḍⁱ-hi*, Latin *creatura (!) dei in terra eius*. The incongruous Latin translation clearly presupposes the misreading *ḥalīqa* for *ḥalīfa*, perhaps also due to attraction of the closely following term «creation» [*ḥalq*] (see *infra* in this paragraph, and cf. already *supra* in §452 for a further occurrence). Cf. the parallel passage in Avicenna's *K. al-Šifāʾ*, which significantly appears at the end of the *Ilāhiyyāt*, *i.e.* of the metaphysical, rather than the physical, part of the work (X.5, MARMURA 2005: 378):

[But] whoever combines theoretical wisdom with justice is indeed the happy man. And whoever, in addition to this, wins the prophetic qualities becomes almost a human god (lit. 'lord') [*rabb^m insāniyy^m*]. Worship of him, after the worship of God, exalted be He, becomes almost allowed. He is indeed the world's earthly king (or better: 'the ruler of the earthly world', cf. BERTOLACCI 2007: 825 and see also *infra* the Latin text) [*sulṭān^u l-'ālamⁱ al-arḍi*] and God's deputy in it [*ḥalīfat^u llāhⁱ fi-hi*].

Cf. also the Latin translation of the passage in VAN RIET 1980: 552-553 (which shows no difficulties in translating *ḥalīfa* as *vicarius*):

In quocumque autem convenerit cum illis sapientia speculativa, hic iam factus est felix; et cui cum hoc datae fuerint proprietates prophetiae, fortasse fiet Deus humanus, quem licet adorari post Deum, quia ipse est rex terreni mundi et est vicarius Dei in illo.

For the structural issue of the symmetry between the metaphysics of one work (the *Šifā'*) and the physics of another (the *DN*), cf. Introduction, §1.3 (and see there the intriguing remark by Albert the Great in his *De somno et vigilia*, which perfectly captures the peculiarity of the situation). The presence in the *MF* of the expression *fi arḍⁱ-hi* confirms that it is better to intend 'earthly' or 'terrestrial' as referred to the world, rather than to the ruler/king, in the parallel passage from the *Ilāhiyyāt* of the *K. al-Šifā'*.

THE GUIDANCE [OF GOD] | For the Qur'ānic foundation of the concept of divine «guidance» [*hidāya*], cf. already *supra* the commentary to *Metaphysics* III.b.7, esp. §220, and see the quotations also repeated at the end of this paragraph.

BECOMES COMPLETE IN THE CREATION OF GOD MOST HIGH | Arabic *yatimmu fi ḥalqⁱ llāhⁱ ta'ālā*. The Latin translation «venit creatura ad animadvertendum aptitudinem [...]» (MUCKLE 1933: 197.1-2) is once again incongruous. This, and the preceding difficulty with *ḥalīfa*, likely betray a particularly damaged condition of the Arabic antigraph of the Latin translation in this point.

«[HE] DESTINED AND GUIDED» | Cf. *Qur'ān* 87.1-3. This and the following quotations are not recognized as such in the Latin version and properly translated in their own right, but the Latin text has nonetheless a sort of 'integrated' version which includes the content of the citations: «Et propter hoc dicitur quod deus indidit rebus animadvertendi naturam, quia sicut dedit omni rei creacionem suam, sic et sensum animadvertendi» (MUCKLE 1933: 197.3-5). Cf. the Introduction, §1.9.1 and §2.2.1.

«HE GAVE EACH THING ITS CREATION AND THEN GUIDED [IT]» | Cf. *Qur'ān* 20.50 (erroneously, ALONSO 1963: 301 mentions *Qur'ān* 20.52). For both these Qur'ānic quotations cf. *supra*, *Metaphysics* III.b.7, §220, where a third citation concerning God's *hidāya*, not reported here, also appears. JANSSENS 2019: 121 notices the addition of the two verses in this passage of the *MF* with respect to the *DN*, stating that they «are also quoted in the *Daneshname*, although at a different place, namely at the end of chapter 35 of the metaphysical part». As already in the case of the quotations of §220, and even more so in the present paragraph given its bold relief of *explicit* of the entire work, one should however emphasize al-Gazālī's conscious choice of addition of texts from the *Qur'ān*, rather than downplaying the importance of this circumstance on the basis of analogous – but far less emphatic as for collocation – examples that might be found somewhere in Avicenna's wide-ranging work.

[§454] D385.1-4

The paragraph briefly sums up the operation of uncommitted report of the doctrines of the philosophers that has allegedly been undertaken throughout the work. The text is here very close to formulations contained in the Prologue (see *supra*, §1), as it also contains a prospective reference to the *TF*.

THE LOGIC, THE METAPHYSICS, AND THE PHYSICS | The three main philosophical sciences are mentioned according to the peculiar order with which they are treated in the *MF* and in the *DN*, with the *Metaphysics* preceding the *Physics*; on this crucial structural issue cf. the *Introduction*, §1.3. The manuscripts of the Latin translation make the work end here, as they all omit what follows in Dunyā's Arabic text. See MUCKLE 1933: 197: «hoc igitur est quod nos volumus inducere de scienciis philosophorum logicis, divinis, et naturalibus». Remarkably, the following sentence is not reported by ms. Paris, BNF lat. 16096, either (see f. 120^v, text as in Muckle, immediately followed by the conclusive formula: *Explicit liber philosophiae Algazelis*), although this is the sole among the known manuscripts of the Latin tradition that reports the debated Prologue of the *MF*. This is particularly relevant because the next statement is indeed an explicit reference to themes discussed in the Prologue (see *supra*, §1). The copyist of the Parisian manuscript thus had an Arabic text deprived of the conclusive statements, but still endowed with the even more explicit prologue, with its blatant references to the refutation of the *TF*. In sum, it is thus very interesting to notice a strong gap between prologue and epilogue: while both are explicitly linked to the *TF*, which they both mention in their fuller version, they are not paired either *in praesentia* or *in absentia* in the known Latin tradition. In the Arabic tradition, on the contrary, copyists willing to purge the *MF* of antiphilosophical statements had been more thorough in their cleansing of the text, since they had eliminated references to the *TF* both in *incipit* and in *explicit*. This is the case, in particular, for ms. Dublin, Chester Beatty Library Ar. 5328, well studied and described by SHIHADDEH 2011. In this fundamental essay, Shihadeh underlines that the Latin tradition cannot be traced back to the Dublin codex (see SHIHADDEH 2011: 87):

Although both the CBL copy and the Latin translation lack the preface and part of the concluding statement, the two versions are not related. The two texts, first of all, do not share the same starting point: the Latin translation contains the introduction to the logical part of the book (containing a discussion of what logic is, its benefit and its divisions), but this introduction is absent in the CBL copy, which begins at the first section of the logical part. This discrepancy, alongside a major textual defect from which only the CBL copy suffers, excludes the possibility that this manuscript could be a source for the Latin translation.

Shortly afterwards, Shihadeh underlines the fact that the text of the Dublin manuscript and that of the 'standard' Latin translation end in two different points, as I mentioned before. For Shihadeh, however, this would seem to apply only to the standard Latin text, while he seems convinced of the completeness of the Parisian manuscripts 16096 that transmits the Latin prologue; cf. indeed SHIHADDEH 2011: 80: «Only one extant Latin manuscript, MS Paris, Bibliothèque nationale, lat. 16096, contains al-Ghazali's preface *and concluding statement*» (emphasis added). However, as stated above, the final sentence is also absent in ms. 16096. This, at any rate, only confirms the fact that the Latin translation cannot derive from an Arabic antigraph such as the Dublin manuscript, thus corroborating Shihadeh's thesis.

THE DISTINCTION OF THE MEAGER FROM THE FAT AND OF THE TRUE FROM THE FALSE | The passage clearly refers back to the *Prologue* of the *MF*, for which cf. *supra*, §1. There, al-Ġazālī had used both the basic couple of opposing adjectives «true» [*ḥaqq*] and «false» [*bāṭil*] – employed also here –, and the slightly more subtle differentiation between «sound» [*ṣaḥīḥ*] and «corrupt» [*fāsid*] (for which cf. also *supra*, *Logic*, Preface, §§3-4). However, the most interesting «distinction» (here: *tamyīz*, elsewhere rendered with «discerning») here proposed is certainly the one between the «meager» (or 'scanty', 'thin') [*ḡatt*] and the «fat» or 'fleshy' [*samīn*]. Judging from the order alone in which the two couples are presented in the text, one would be led to consider the «meager» as the positive pole, corresponding to the true, and the «fat» as the negative one, corresponding to the false. This, however, seems unlikely for conceptual reasons.

LET US BEGIN THEN, AFTER THIS [ONE], WITH THE BOOK *THE INCOHERENCE OF THE PHILOSOPHERS* | Arabic *wa-l-naftatiḥa ba‘dā hādā bi-kitāb’ tahāfut’ l-falāsifat’*. The sentence seems *prima facie* to entail necessarily that the *TF* was written after the completion of the *MF*, since it appears to announce its beginning «after» [*ba‘dā*] the present book. However, the root of the verb *naftatiḥa* (*f-t-h*, to open) allows to give it either a more precise meaning, such as ‘introduce’, ‘preface’ (as attested in WEHR 811^b) (i), or even the more generic sense of materially ‘opening’ a new book, that is the *TF* itself, after reading – rather than drafting – the *MF* (ii). (i) In the first case, al-Ġazālī would be declaring his intention to introduce (to the reader) the *TF*, or perhaps even his will to add a preface to that book, without implying the posteriority of the entire *TF* to the *MF*. Under that interpretation, as a matter of fact, al-Ġazālī would merely be saying that he will proceed to the operation of writing an introduction or preface to an already existing *TF* (which could entail, in turn, that also the Prologue and the Epilogue of the *MF* might have been added in a second time, after the completion of the work). This hypothesis seems however little likely, as it would appear to charge the verb *naftatiḥa* with an excess of meaning, leaving by the way unexplained why al-Ġazālī would have chosen to give such information on the drafting up of his *TF* precisely in this place. (ii) The second case mentioned above, *i.e.* the possibility that *wa-l-naftatiḥa* merely means «Let us open...», as an invitation to the reader to continue his or her philosophical experience by starting the study of the *TF*, is intriguing, and it also seems to create fewer difficulties of interpretation. As a matter of fact, it would simply suggest a preferred order of reading (rather than of composition) of the two interrelated works, thus leaving open the possibility of dating the drafting up of the *MF* after that of the *TF*, in keeping with further hints in this direction that can be gathered by broader consideration of both works (most notably, the *TF* never mentions the *MF*; but on the entire issue of the dating, cf. *Introduction*, §1.2). The sense of ‘beginning with’ a new book which I gave to the phrase in my translation tries to capture both possibilities – *i.e.* the beginning of a new piece of writing on the part of al-Ġazālī as an author, and the invitation to start anew with the reading of a new, yet already drafted, book on the part of the reader –, without forcing too strong an interpretation on this brief but crucial sentence.

AMONG THESE OPINIONS | Arabic *min hādhi l-ārā’*. The term *ārā’* ‘opinions’, ‘views’ preceded by the demonstrative «these» – which makes it clear that the term refers precisely to the aforementioned philosophical doctrines – is interesting for the interpretation of the title of the *MF*. The resulting identity between the *maqāṣid* (see Prologue, §1) and the *ārā’* of the philosophers speaks indeed in favour of the interpretation that reads *maqāṣid* as ‘doctrines’ or ‘theses’, *i.e.* identifiable teachings rather than ‘aims’. Cf. *Introduction*, §1.1.

TO BE MADE CLEAR | Arabic *yattaḍiḥa*.

[§455] D385-5-7

The entire work is concluded by an elaborate final eulogy, certainly Ġazālīan, which praises God and the Prophet Muḥammad.

GIVES SUCCESS | Arabic *mūfiq*.

THOSE WHO EXTOL [HIM] | Arabic *šākirīna*.

THE LORD OF THOSE WHO HAVE BEEN SENT | Arabic *sayyid al-mursalīna*. Also: ‘the Master of the messengers’.

APPENDICES

Appendices

Appendix 1

Tables of textual correspondences between *MF* and *DN*

The following three Tables [I. *Logic*, II. *Metaphysics*, III. *Physics*] present the overall structure of the *MF* in relation to that of its main source, Avicenna's *DN*. The text of the *MF* (in Arabic, Spanish, and Latin) and that of the *DN* (in Persian, French, and English) are systematically compared according to the running subdivision in 455 paragraphs provided in the following translation of the *MF*. The first column indicates, with a progressive number, the subdivision in paragraphs which I have adopted in the Translation and the running Commentary to the text [§]. The second summarises the topic treated in each paragraph [Topic]. The third, fourth, and fifth column, labelled together under the *siglum MF* [*Maqāṣid al-falāsifa*], show the texts corresponding to each paragraph, respectively in the Arabic edition of the *MF* by Sulaymān Dunyā [Dunyā], in the only other complete translation in a modern Western language, the Spanish one by Manuel Alonso Alonso [Alonso], and in the medieval Latin translation, cited in the edition by Joseph Muckle [Muckle]. The remaining columns indicate the parallels with the source of the *MF*, Avicenna's *Dānešnāmē* [*DN*]. In particular, the sixth column reports the corresponding passages in the Persian edition of the *DN* (by Moḥammad Moʿin and Moḥammad Meškāt as for the *Logic*; by Moḥammad Moʿin for the *Metaphysics*; and by Moḥammad Meškāt for the *Physics*) [I. Moʿin-Meškāt; II. Moʿin; III. Meškāt]. The seventh column indicates the parallels with the complete French translation of the *DN* by Moḥammad Achena and Henri Massé [Achena-Massé]. The eighth column, presents in Tables I and II but absent in Table III, provides the further correspondences with the English translation of respectively *Logic* [Zabeeh] and *Metaphysics* [Morewedge]. For all the bibliographical references of the texts quoted, see the *Bibliography*.

In the indication of page numbers, figures following the dot indicate the lines of text; the numbers in square brackets, preceded by a sign of §, identify the number of paragraph in the corresponding edition. They are in italics if the numbering of the paragraphs is not present in the relative edition. Letters in round brackets beside the paragraph number indicate an internal subdivision to the paragraph itself, which was sometimes useful to adopt in order to account for al-Ġazālī's elaborations on Avicenna's text. When a correspondence between the *MF* and the *DN* is absent, I have placed a line formed by three dashes [---] at the centre of the corresponding column. A sign of tilde [~] signals, in the not numerous cases in which this was inevitable, a not perfect or only partial correspondence between the text of the *MF* and that of the *DN*. Finally, I have indicated some further variations and imperfect correspondences, which I found particularly relevant, with a short description of the variation itself, printed in smaller type within the relevant columns. This is done in order to avoid the dispersion of information relative to important changes, if not explicitly signalled in the relevant place.

Prologue

I. *Logic*

§	Topic	MF			DN		ZABEEH
		DUNYĀ	ALONSO	LOHR	MO'ĪN- MEŠKĀT	ACHENA- MASSÉ	
LOGIC Preface							
2	General introduction to the discussion about logic.	33-35-15	7-9-36	239-1-241-56	5-1-9-5 ^a	23-24-28 [§1(a)]	13-17-14-19
3	Utility of logic.	35-15-37-12	9-37-11-28	241-57-242-98	9-5 ^b -10	24-29-25-26 [1(b)]	14-20-15-7
4	Parts of logic and their order.	37-12-38	11-29-12	242-99-243-122	---	---	---
LOGIC I							
5	First subdivision. Three ways of signification of the expressions.	39	13-14-2	243-1-244-19	---	---	---
6	Second subdivision. Simple and composed expressions.	40-1-17	14-3-21	244-20-35	11-1-8	25-27-26-7 [§2]	15-8-17
7	Third subdivision. Particular and universal expressions.	40-18-41-7	14-22-15-2	244-36-245-47	11-9-13-5	26-8-end of page [§3]	15-8-end of page
8	Fourth subdivision. Verbs, names, and particles.	41-8-42-6	15-3-29	245-48-71	29-5-31	34-16-35-23 [§7]	20-3-28
9	Fifth subdivision. Synonymous, polyonymous, heteronymous, ambiguous, and	42-7-43	15-30-17	245-72-246-93	---	---	---

§	Topic	MF			DN		ZABEEH
		DUNYĀ	ALONSO	LOHR	MO'ĪN- MEŠKĀT	ACHENA- MASSÉ	
	homonymous expressions.						
		LOGIC II					
10	Distinction between essential and accidental.	44.1-14	19.1-12	246.1-247.11	13.6-7	27.1-4	16.1-3 ^a
11	First feature of the essentiality of the concept: it is impossible to think of its subject without thinking to it.	44.15-45.18	19.13-21.13	247.12-33	13.8-14.3	27.5-16 [§4(b)]	16.3 ^b -11
12	Second feature of the essentiality of the concept: the essential always comes before the accidental.	45.19-46.8	21.14-22.15	247.34-248.48	14.4-end of page +cf §14	27.17-24 [§4 (c)] + 28.25-29.16 [§4 (f)] (cf. [§14])	16.12-16 +16.38 ^b -17.7 ^a
13	Third feature of the essentiality of the concept: the essential is not caused.	46.9-47.5	22.13-23.10	248.49-70	15.1-16.5	27.25-28.15 [§4 (d)]	16.17-31
14	Another division. Subdivision of the accidental in separable and inseparable concomitant.	47.6-19	23.11-24 ^a	248.71-249.80	17.1 ^b -18	28.25-29.16 [§4 (f)] (cf. [§12]) + 29.17-23 [§4 (g)]	16.38 ^b -17.14
15	Separateness of the accidental in estimation, but not in existence, and possible confusion with the essential.	47.20-48.8	23.24 ^b -24.2	249.81-93	16.6-17.1 ^a	28.16-24 [§4 (e)]	16.32-38 ^a
16	Another division. Subdivision of the	48.9-49.1 ^a	24.3-19 ^a	249.94-250.106 ^a	21.2-8 ^a	30.25-31.3 ^a [§5 (b)]	17.32-18.4

Appendices

§	Topic	MF			DN		
		DUNYĀ	ALONSO	LOHR	MO'ĪN- MEŠKĀT	ACHENA- MASSÉ	ZABEEH
	essential into genus and species.						
17	Subdivision of the substance into body and non body.	49.1 ^b -end of page	24.19 ^b -25.4	250.106 ^b -123	21.8 ^b -24.1	31.3 ^b -end of page [§5 (c)]	18.5-21 ^a
18	Another division. Subdivision of the essential into what is said in answer to «What is it?» (genus), and what is said in answer to «Which thing is it» (differentia).	50.1-17	25.5-24 ^a	250.124-139		29.28-30.24 [§5 (a)]	17.18 ^b -31
19	Definition.	50.18-51.11	25.24 ^b -26.9	251.140-159	25.5-26.7	32.19-35.8 [§6 (a)]	18.35-19.13
20	Four reasons of error concerning definition. First reason: being tautological in the process of defining.	51.11-21	26.10-22 ^a	251.160-170	26-27.7	33.9-25 [§6 (b)]	19.14-24
21	Four reasons of error concerning definition. Second reason: defining one thing by means of its contrary. Third reason: defining <i>obscurum per obscurius</i> . Fourth reason: mentioning in the definition of one thing something that is only known through that thing.	51.22-52	26.22 ^b -27	251.171-252.190	27.8-29.4 + 24.2-25.4	33.26-34.15 [§6 (c)] + 32.1-18 [§5 (d)]	19.25-20.2+18.21 ^b -34
			LOGIC III				
22	In logic only the particular kind of utterance called	53-54.9	29.1-25	252.1-18	32.1-34.2	35.24-36.14 [§8]	20.29-21.10

§	Topic	MF			DN		ZABEEH
		DUNYĀ	ALONSO	LOHR	MO'ĪN- MEŠKĀT	ACHENA- MASSÉ	
	«proposition» – which admits judgments of truth and falsity – is considered.						
23	[(1)] First division. The proposition subdivides itself into predicative, conjunctive and disjunctive hypothetical. First kind: predicative propositions.	54.10- 55.3	29.26-30.14	253.19- 36	34.3-35.1 + 35.2- 37.3	36.15-26 [§9] + 36.27 - 37.25 [§10 (a)]	21.11-19 +21.20- 22.18
24	Second kind: conjunctive hypothetical propositions.	55.4-end of page	30.15-37	253.37- 55	45.2- 48.8	41.10-42.31 [§11 (a)]	24.28-25.25
25	Difference between conjunctive and disjunctive hypothetical.	56	30.38-31.15	253.56- 254.67	48.8-49	42.32-43.16 [§11 (b)]	25.26-26.8 ^a
26	[(2)] Another division. Affirmative and negative propositions.	57.1-21	31.16-34 ^a	254.68- 83	50	43.17-33 [§11 (c)]	26.8 ^b -16
27	Seemingly negative propositions might actually be affirmative. Linguistic example from the Persian.	57.22- 58.18	31.34 ^b -32.13	254.84- 92	37.4- 38.9 ^a	37.26-38.13 [§10 (b)]	22.19-23.4
28	[(3)] Subdivision of the subject of the proposition into singular and non-singular, which in turn subdivides into indeterminate and determinate.	58.19- 59.21	32.14-33.25	255.93- 115	38.9 ^b - 43.4 ^a	38.14-40.14 [§10 (c)]	23.5-24.14

Appendices

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	LOHR	MO'IN- MEŠKĀT	ACHENA- MASSÉ	ZABEEH
29	Four kinds of determinate propositions employed in philosophy. *Subdivision of the conjunctive hypothetical.	59.22-60.18	33.26-36	255.116-123	43.4 ^b -9 ^a	40.15-24 [§10 (d)] + *43.34-44 [§11 (d)]	24.15-16 (abridged) + 26.17-27.7
30	[(4)] Another division. The relationship of the predicate to the subject in a proposition can be possible, impossible, or necessary.	60.19-61	33.37-34.22	255.124-256.147	43.9 ^b -45.1	40.25-41.9 [§10 (e)]	24.17-27
31	[(5)] Another division. Contrary and contradictory propositions. Seven conditions of contradictoriness: first three reasons.	62	34.23-35.9	256.148-257.167	53.4-55.5	45-46.2 [§12 (a)]	27.8-28.12
32	Seven conditions of contradictoriness: last four reasons.	63-64.3	35.10-34	257.168-185	55.6-56.7	46.3-end of page [§12 (b)]	28.13-31
33	[(6)] Another division. Conversion of a proposition.	64.4-65	35.35-36 end of page	257.186-258.211	56.8-59.4	47-48.2	28.32-29.22
LOGIC IV							
34	Beginning of the speech on syllogism, subdivided into two pillars: form and matter of the syllogism. Beginning of the first pillar, on form.	66	37.1-20	258.1-12	59.5-end of page	48.3-16 [§14 (a)]	29.23-32 ^a

§	Topic	<i>MF</i>			<i>DN</i>		ZABEEH
		DUNYĀ	ALONSO	LOHR	MO'IN- MEŠKĀT	ACHENA- MASSÉ	
35	Definition of syllogism and subdivision into syllogism by combination (categorical) and by exclusion.	67.1-18	37.21-38.5	259.13-26	60.1-61 end of page	48.17-49.2 [§14 (b)]	29.32 ^b -30.9
36	Categorical syllogism and ist parts: premises, major and minor terms, and conclusion.	67.19-68	38.6-39.7 ^a	259.27-51	62.1-64.5 ^a	49.3-50.3 ^a [§15 (a)]	30.10-23 ^a
37	Composition or combination of premises and subdivision in three figures.	69	39.7 ^b -21	259.52-260.70	64.5 ^b -65.7	50.3 ^b -19 [§15 (b)]	30.23 ^b -end of page
38	First figure. Differences between the first figure and the other two. Conditions of conclusiveness of this figure.	70-71.5	39.22-40.14 ^a	260.71-86	65.8-67.3	50.20-51.8 [§16 (a)]	31.1-13
39	Four moods of the first figure.	71.6-72.13	40.14b-41.6	261.87-110	67.4-69.8	51.9-52.4 [§16 (b)]	31.14-33
40	Ineffectual (non conclusive) combinations of premises.	72.14-73	41.7-29	261.111-262.130	---	---	---
41	Table of all the moods of the first figure, conclusive and ineffectual.	74	42	262.131-148	---	---	---
42	Attempt at generalization of the features of the conclusive syllogisms (conditions of	75.1-8+76.4-21	41.30-end of page + 43.1-23	~262.149-263.163	---	---	---

Appendices

§	Topic	MF			DN		
		DUNYĀ	ALONSO	LOHR	MO'IN- MEŠKĀT	ACHENA- MASSÉ	ZABEEH
	conclusiveness in the first figure).						
43	Second figure and its four moods.	76.22-79.11	43.24-45.11 ^a	263.164-264.207 ^a	69.9-73.2 ^a	52.5-53.16 ^a [§17 (a)]	31.34-32.25 ^a
44	Two ways of ascertaining the correctness of the syllogism of second figure: ekthesis and deductio per impossible.	79.12-80.12	45.11 ^b -29	264.207 ^b -221	73.2 ^b -74.4	53.16 ^b -end of page [§17 (b)]	32.25 ^b -33.9
45	Third figure and its six moods.	80.13-83	45.30-47.8	265.22-266.262	74.5-80.2	54-55 [§18]	33.20-34.23
46	Syllogisms by exclusion. First species: conjoined hypothetical.	84-86.8	47.9-48.22	266.263-267.269	80.3-81.7	56.1-28 [§19]	34.24-35.6
47	Syllogisms by exclusion. Second species: disjoined hypothetical.	86.9-87	48.23-49.12	267.297-317	81.8-83.2	56.29-57.26 [§20]	35.7-end of page
48	Syllogism of the antithesis.	88	49.13-29	267.318-332	88.7-92.2	59.27-61.9 [§22]	37.3-end of page
49	Induction.	89-90.4	49.30-50.16	268.333-349	92.3-93.6	61.10-end of page [§23]	38.1-11
50	Exemplification.	90.5-91.13	50.17-51.12	268.350-269.371	95.5-97.4	62.27-63.20. [§25 (a)]*	38.24-39.9 ^a (abridged)
51	Two ways of strengthening the exemplification brought forth by the more sensible among the dialecticians. First way: evaluation from all sides.	91.14-92.3	51.13-32	269.372-386	97.5-98.4	63.21-34 [§25 (b)]	39.9 ^b -12 (abridged)
52	Second way: probing and subdivision.	92.4-93.16	51.33-52.27	269.387-270.412	98.5-101	63.35-65.12 [§25 (c)]	39.13-33

§	Topic	MF			DN		ZABEEH
		DUNYĀ	ALONSO	LOHR	MO'IN- MEŠKĀT	ACHENA- MASSÉ	
	Example of probing applied to the characteristics of the house. First and second aspects according to which the exemplified reasoning is corrupt.						
53	Third aspect according to which the reasoning is corrupt.	93.17- 94.24	52.28-53.14	270.413- 424	101.2- 103.3	65.13-29 [§25 (d)]	39.34-end of page
54	Fourth aspect according to which the reasoning is corrupt.	94.25-95	53.15-end of page	270.425- 271.445	103.4- 106.2	65.30-66.28 [§25 (e)]	40.1-6 (sintesi)
55	Composed syllogisms.	96.1-11	54.1-12	271.446- 454	~83.3- 84.4 ^a	~57.27-58.8 [§21 (a)]	~36.1-9 ^a
56	Example of ordering: first figure by Euclides (geometrical construction of an equilateral triangle).	96.12- 98.3	54.13-36	271.455- 272.472	84.46- 86.5 ^a	58.9-59.4 [§21 (b)]	36.9 ^b -22
57	Reconstruction of Euclides' construction by means of a syllogistical reasoning.	98.4-99	54.37-55.16	272.473- 493 (=end of page)	86.5 ^b - 88.6	59.5-26 [§21 (c)]	36.23-37.2
58	Beginning of the second pillar on the matter of the syllogism, i.e. the premises.	100.1-19	55.17-56.5	273.494- 505	~106.3- 108.8	~66.29- 67.25 ^a [§26 (b)]	~40.7-19
59	Simile between five degrees of purity of gold and five degrees of truth and	100.20- 101	56.6-34 ^a	273.506- 274.529	108.9- 109.1	~67.25 ^b -end of page [§26 (b)]	---

Appendices

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	LOHR	MO'ĪN- MEŠKĀT	ACHENA- MASSÉ	ZABEEH
	trustworthiness of the premises.						
60	List of thirteen kinds of premises analysed in what follows.	102.1-10	56.34 ^b -57.3	274.531-538	109.2-110.11	68.1-13 [§27 (a)]	40.20-21
61	[(1)] Primary propositions.	102.11- end of page	57.4-22	274.539-550	110.12-112.4	68.14-31 [§27 (b)]	40.22-30
62	[(2)] Sensible propositions and [(3)] experimental propositions.	103.1-10	57.23-33	274.551-558	112.5-114.1	68.32-69.14 [§27 (c)]	40.31-41.2
63	[(4)] Transmitted propositions.	103.4-22	57.34-58.12	264.559-275.569	114.2-115	69.15-32 [§27 (d)]	41.3-7
64	[(5)] Propositions whose syllogisms are by nature together with them.	103.23-104.21	58.13-59.4	275.570-594 (end of page)	116.1-117.2	69.33-70.14 [§27 (e)]	41.8
65	[(6)] Estimative propositions.	104.22-105	59.5-33	276.595-616	117.3-119	70.15-71.14 [§27 (f)]	41.9-19
66	[(7)] Famous propositions.	106-107.12	59.34-61.2	276.617-277.645	120.1-124.4	71.15-72.32 [§27 (g)]	41.20-27
67	[(8)] Receptible/received propositions, [(9)] conceded propositions and [(10)] similar propositions.	107.13-24	61.3-22	277.646-658	124.5-125.7	72.33-73.13 [§27 (h)]	41.28-36
68	[(11)] Seemingly famous propositions, [(12)] opinable propositions and [(13)] imaginative propositions.	107.25-109	61.23-62.9	277.659-278.675	125.8-128.2	73.14-74.8 [§27 (i)]	41.37-42.11
69	[(1)-(5)] The first five kinds of	110.1-7	62.10-17	278.676-681	128.3-128.6	74.9-14 [§28 (a)]	42.12-15

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	LOHR	MO'IN- MEŠKĀT	ACHENA- MASSÉ	ZABEEH
	propositions are fitting premises for the demonstrative syllogism.						
70	[(7) Famous and [(9) conceded propositions are fitting premises for the dialectical syllogism.	110.8- 111.12	62.18-63.20	278.682	128.7- 131.5	74.15-75.19 [§28 (c)]	42.30-31
71	[(6) Estimative and [(10) similar propositions are fitting premises for the sophistical (misleading) syllogism.	111.13-21	63.21-34	279.710- 722	132.5- 133.5	75.30-76.7 [§28 (d)]	42.32-35
72	[(8) Received, [(11) seemingly famous and [(12)] opinable propositions are fitting premises for the rhetorical and juridical syllogism.	111.22- 112.2	63.35-64.2	279.723- 730	133.6- 134.4	76.8-16 [§28 (e)]	42.36
73	[(13) Imaginative propositions are fitting premises for the poetical syllogism.	112.3-end of page	64.3-10	279.731- 280.740	156.7- 160.3	85.6-86.21 [§35 (a)]	46.15-47.5
74	Epilogue of the speech on syllogism. Ten occasions of error concerning syllogisms: first four reasons.	113-114.21	64.11-65.14 ^a	280.741- 771	156.7- 160.3	85.6-86.21 [§35 (a)]	46.15-47.5
75	Ten occasions of error concerning syllogisms: three further reasons.	114.22- 116.4	65.14 ^b - 66.5 ^a	280.772- 281.793	160.4- 163.1	86.22-87.17 [§35 (b)]	47.6-14

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§	Topic	<i>MF</i>			<i>DN</i>		ZABEEH
		DUNYĀ	ALONSO	LOHR	MO'IN- MEŠKĀT	ACHENA- MASSÉ	
76	Ten occasions of error concerning syllogisms: three final reasons.	116.5-117	66.5 ^b -end of page	281.794-807 end of page	163.2-165	87.18-88.9 [§35 (c)]	47.15-27
LOGIC V							
77	First section. Four scientific questions.	118-119	67-68.13	282.1-283.36	153.6-156.6	84.3-85.5 [§34]	45.17-46.14
78	Second section. Demonstration of the why and demonstration of the that.	120-121.4	68.14-34 ^a	283.37-53 ^a	149.2-152.3	82.10-83.19 ^a [§33 (a)]	44.27-45.7
79	Demonstration of the why in terms of causality of the middle term.	121.5-end of page	68.34 ^b -69.11	233.53 ^b -65	152.4-153.5	83.19 ^b -84.2 [§33 (b)]	45.8-16
80	Third section. Parts of the demonstration: subjects, essential accidents, questions, and principles. [(i)] Subjects.	122.1-19	69.12-28	283.66-284.80	134.5-135.7	76.17-31 [§29 (a)]	43.1-7 ^a
81	[(ii)] Essential accidents.	122.20-123.9	69.29-70.12	284.81-93	135.8-137.3	76.32-77.18 [§29 (b)]	43.7 ^b -15
82	[(iii)] Questions. Every demonstrative scientific question is either [(a)] such that ist subject is the subject of that science, or [(b)] such that the essential accidents in that science pertain to its subject.	123.10-23	70.13-26 ^a	284.94-285.105 ^a	~137.4-137.6	~77.19-24 [§30 (a)] Ġ. expands	~43.16-18 ^a

§	Topic	MF			DN		ZABEEH
		DUNYĀ	ALONSO	LOHR	MO'IN- MEŠKĀT	ACHENA- MASSÉ	
83	[(a)] Subject. Either in itself, or accompanied by an essential mark, or a species of the subject, or a species with an essential accident, or an accident.	123.24- 125.9	70.26 ^b - 71.20	285.105 ^b - 136 end of page	137.7- 140.6	77.25-78.27 [§30 (b)]	43.18 ^b -31
84	[(iv)] Principles.	125.10- end of page	71.21-end of page	286.137- 153	143.7- 146.5	80.7-81.9 [§32 (a)]	44.15-26 (abridged)
85	Fourth section. The premises of the demonstration must be true, necessary, first, and essential. Analysis of «true» and «necessary».	126.1-16	72.1-12	286.154- 163	---	---	---
86	Analysis of «first».	126.17- 127.11	72.13-30	286.164- 287.177	146.6- 148.1 ^a	81.10-28 [§32 (b)]	---
87	Analysis of «essential».	127.12- 128.3	72.31-73.5	287.178- 190	142.3- 143.3	79.21-79.34 [§37 (b)]	44.6-12
88	The predicate of the question must be essential in science (but essential may have two meanings).	128.4-16	74.6-17 ^a	287.191- 201	140.7- 142.2	78.28-79.20 [§37 (a)]	43.32-44.5 (abridged)
89	The essential in the sense of the predicate entering the definition of the subject is not a predicate in the scientific questions.	128.17- 129.3	73.17 ^b -32 ^a	287.202- 288.213	143.4- 143.6	79.35-80.6 [§37 (c)]	44.13-14 (abridged)
90	The predicates of the premises must be essential. End of logic.	129.4- end of page	73.32 ^b -74	288.214- 231 end of page	148.1 ^b - 149.1	81.29-82.9 [§32 (c)]	---

II. *Metaphysics*

§	Topic	MF			DN		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
METAPHYSICS Premises							
91	General preface to Metaphysics, with a table of contents. Observation on the uncommon ordering of the <i>MF</i> .	133	77	1.1-17	---	---	---
92	First premise. Subdivision of the existing things into depending and non-depending on our actions.	134.1-11	78.1-13	1.18-26 ^a	1.1-11 ^a	89.1-9 ^a	11.1-11-8 ^a
93	Wisdom is also subdivided into knowledge of the states of our actions (practical science), and knowledge of the state of the existents independent from our actions (speculative science).	134.12-21	78.14-29	1.26 ^b -2-12 ^a	1.11 ^b -2.5 ^a	89.9 ^b -20	11.8 ^b -18
94	Practical science has three parts: politics, economics, ethics. The subdivision is according to the degrees of sociality of man.	134.22-136.3	78.30-19.18	2.12 ^b -30	2.5 ^b -3.4	89.21-90.16	11.19-12.3
95	Speculative science has three	136.4-9	79.19-23 ^a	2.31-35 ^a	3.5-8 ^a	90.17-25	12.4-10 ^a

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	parts: metaphysics, physics, and mathematics. The subdivision is according to the degrees of materiality of things.						
96	Relation of the three speculative sciences with the three kinds of beings.	136.10- 137	79.23 ^b -80	2.35 ^b -3.32	3.8 ^b - 5.12	90.26-92.5	12.10 ^b -13.14
97	Second premise. Subject-matters of the speculative sciences. Subject- matter of natural science and of mathematics.	138-139.5	81.1-15	3.33-4.9 ^a	5.13- 6.5 ^a	92.6-21 ^a	13.15-29 ^a
98	Branches of the natural and mathematical science.	139.6-14	81.16-23	4.9b-17 ^a	6.5b-7	92.21 ^b -25 No branches of natural science.	13.29 ^b -35 ^a
99	Subject-matter of metaphysics and difference from natural science.	139.15- 140.7	81.24- 82.4 ^a	4.17b-33 ^a	6.8- 8.2 ^a	92.26-93.23	13.35b-14.29
100	Classification of the three sciences according to trustworthiness.	140.8-16					
		METAPHYSICS I					
101	Short introduction to the first treatise. Divisions of existence with its essential accidents.	140.17- 141.9	83.1-21 ^a	5.9 ^b -25 ^a	8.11- 9.1 ^a	94.5-14	15.4-12 ^a

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	First division of existence. Substance and accident.						
102	Intellectual understanding of existence, with no definition nor description.	141-10.20	83.21 ^b - 84.2 ^a	5.25 ^b -6.9 ^a	9.1 ^b - 9.12	94.15-end of page	15.12 ^b -29 ^a
103	Existent which needs a receptacle in which to subsist. Subdivision into that which inheres in a receptacle which subsists without it, and that which inheres in a receptacle which subsists thanks to it.	141.21- 142.11	84.2 ^b - 86.6	6.9 ^b -30 ^a	---	---	---
104	Technical usage of different expressions to distinguish the two concepts: accident and subject, form and matter.	142.12- 143.3	86.7-27 ^a	6.30 ^b - 7.12 ^a	9.13- 10.11 ^a	95.1-26	15.29 ^b -16.11
105	Four species of the substance: matter, form, body, and separate intellect.	143.4- end of page	86.27 ^b - 87.16	7.12 ^b -end of page	10.11 ^b - 11.1	95.27-end of page + elaboration	16.12-18
106	Speech about the true nature of the body.	144.1-16	87.17- 88.2 ^a	8.1-21 ^a	~12.10- 13.8	~97.1-17 ^a + elaboration	17.11-25 ^a
107	Necessary three-dimensionality of the body,	144.17- 145.15	88.2 ^b -18	8.21 ^b -9.8 ^a	11.2- 12.9	96	16.19-17.10

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	according to right angles.						
108	Inaccuracies in the definition of body according to the three dimensions.	145.16-146.11	88.19-38 ^a	9.8 ^b -26 ^a	13.9-14.7	97.17 ^b -98.7	17.25 ^b -18.6 ^a
109	Body as that which potentially receives the dimensions.	146.12-end of page	88.38 ^b -89.12	9.26 ^b -10.5	---	--- Cf. [§108]	---
110	Presentation of three different opinions concerning the composition of the body.	147.1-12	89.13-26	10.6-18 ^a	14.8-end of page	98.8-18	18.6 ^b -13
111	Inductive proof of the falsity of the first opinion, namely, invalidation of the atomic theory by means of six facts. First proof against the atoms.	147.13-148.3	89.27-90.17	10.18b-11.9	16.6-17.11	93.13-100.12 [§6]	19.4-32
112	Second proof against the atoms.	148.4-14	90.18-91.3	11.10-23 ^a	17.12-18.6	100.13-101.3 [§7]	19.33-20.14
113	Third proof against the atoms.	148.15-150	91.4-end of page	11.23b-12.17	18.7-19.8	101.4-end of page [§8]	20.15-21.2
114	Fourth proof against the atoms.	151-153.2	92.1-15	12.18-end of page	19.9-20.12	102.1-103.5 [§9]	21.3-26
115	Fifth proof against the atoms.	153.3-154.5	92.16-30	13.1-15	20.13-21	103.6-end of page [§10]	21.27-22.10
116	Sixth proof against the atoms.	154.6-15	92.31-93.10	.26-14.10 ^a	22	104.1-17	22.11-24

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		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
117	Inductive proof of the falsity of the second opinion, namely invalidation of the idea that the body is not composed at all.	154.16-155.11	93.11-94.1 ^a	13.26-14.10 ^a	15.1-16.5	98.19-99.12 [§5]	18.14-19.3
118	Continuous and continuity (continuation?).	155.12-156.1	94.1 ^b -21	14.10b-24 ^a	---	---	---
119	The third opinion, namely that the body is not composed of separable parts, is the right one.	156.2-13	94.22-95.4	14.24b-15.5 ^a	23.1-23.8	104.18-105.4	22.25-23.21
120	Subdivision, cut, and partition are potentially in the body, and pass into actuality only for three possible reasons.	156.13-157	95.5-96.5	15.5b-16.6	---	---	---
121	Twofold proof of the inseparability of matter and form. First demonstration: absurdity of the existence of matter without form.	158-159.10	96.6-36	16.7-17.3 ^a	24.1-8 ^a + 24.25-26.3 [§8]	105.17-end of page+106.1 2-27	23.22-36a +24.9-23
122	First objection and answer to this proof.	159.11-end of page	96.37-97.20	17.3b-22 ^a	---	---	---
123	Second objection and answer to this proof.	160.1-17	97.21-end of page	17.22b-18.7	Cf. 26.4-5 ^a	Cf. 106.28-32 ^a	Cf. 24.24-27 ^a
124	Twofold proof of the inseparability of matter and	160.18-161.7	98.1-14	18.8-19 ^a	~24.8b-14	~106.1-11 elaborated	~23.36 ^b -24.8

§	Topic	MF			DN		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	form. Second demonstration: impossibility of the existence of matter apart from form on the basis of the notion of subdivision.						
125	Objection and answer to the second demonstration.	161.8-23	98.15-36	18.19 ^b -34 ^a	26.5 ^b - 13 ^a	106.32 ^b - 107.14	24.27 ^b -25.2
126	Conclusion: the body is a substance, in turn composed of two substances, form and matter.	161.24- 162	98.37- 99.14	18.34 ^b - 19.13	26.13 ^b - 28.4	~107.15- 108.16	~25.3-end of page
127	Speech on the accidents and subdivision into those for conceiving whose essence there is no need of a third entity, and those for which there is such a need. First kind: quantity and quality.	163.1- 164.2	99.15- 100.2	19.14- 20.6a	28.5- 29.5	108.17- 109.10	26.1-22
128	Second kind of accidents: relation, where, when, position, having, acting, and being acted upon.	164.3-165	100.3- 101.5	20.6 ^b - 21.4 ^a	29.6- 31.3	109.11- 110.12	26.23-27.26
129	Divisions of each accident. Subdivision of quantity into continuous and discrete.	166- 167.19	101.6- 102.10	21.4b- 22.6a	31.4-32 end of page	110.13-111.25	27.27-28.28

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	Continuous quantity.						
130	Discrete quantity.	167.20-168.12	102.11-38	22.6 ^b -33 ^a	33.1-33.15	111.26-112.16	28.29-29.12 ^a
131	Two examples of quality: colours and shapes. Colours.	168.133-169.4	102.39-103.23	22.33 ^b -23.18 ^a	33.16-34.9	112.17-end of page	29.12 ^b -29.29
132	Shapes.	169.5-170.5	103.24-104.14 ^a	23.18b-24.9	34.10-36.1	113.1-34	29.30-30.20 ^a
133	Apparent accidentality of the remaining seven categories. Conclusion on the applicability of existence to all ten categories.	170-end of page	104.14 ^b -39	24.10-28	36.2-36.12	113.35-114.16	30.20 ^b -34
134	Problem of the predication of existence. First reason why it is not equivocal/why existence does not coincide immediately with the ten categories.	171.1-15	104.40-105.21	24.29-25.11	36.13-37.6 ^a	114.17-115.1 ^a	30.35-31.11 ^a
135	Second reason why it is not equivocal/why existence does not coincide immediately with the ten categories.	171.16-172.5	105.22-107.3	25.12-25 ^a	37.6b-14 ^a	115.1 ^b -17 ^a	31.11 ^b -28 ^a
136	Objection (isn't the name of existence then univocal?) and answer.	172.6-21	107.4-21	25.25b-26.6a	37.14b-38.8	115.17b-34 ^a	31.29-32.3 ^a

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
137	Modulation of existence.	172.22- 173.6	107.22- 108.15	26.6a-15 ^a	38.9- 39.2 ^a	115.34b- 116.16 ^a	32.3b-18
138	Application of this kind of modulation to «accident» and «one», as well.	173.7- 174.4	108.16-28	26.15 ^b - end of page	39.2 ^b - 39.7	116.16 ^b -25	32.19-27
139	Second division of existence. Universal and particular. First state/appendage: mental existence of the universals.	174.5- 176.18	108.29- 109.32 ^a	27-28. 6 ^a	39.8- 40.10 ^a	116.26- 117.23 ^a	32.28-33.16 ^a
140	Example: seal rings and wax.	176.19- 177	109.32 ^b - 110	28.6 ^b -27	40.10 ^b - 41.15	*117.23 ^b - 118.15	33.16 ^b -end of page
141	Second state: the particulars of a single universal are such by means of a differentia.	178.1-17	111.1 ^a -23 ^a	28.28- 29.11 ^a	41.16- 17 ^a	118.16-19 ^a elaborated	34.1-3 ^a
142	Demonstration of the identity of the indiscernibles (?).	178.18- 179	111.23b- 112.7	29.11 ^b -28	41.17 ^b - 42.7 ^a	118.19 ^b -34	34.3 ^b -17 ^a
143	Third state. The differentia does not belong to the quiddity of the universal, but only to its existence.	180	112.8- 113.2	29.29- 30.16	42.76- 43.10	118.35-119	34.17 ^b -35.10 ^a
144	Fourth state. All accidentals are caused.	181.1-12	113.3-17 ^a	30.17-27 ^a	44.10 ^b - 45.11	120.27- 121.12	35.34 ^b -36.14
145	The quiddity cannot be cause for the existence of itself.	181.13- 182.4	113.17 ^b - 114.3	30.27 ^b - 31.10 ^a	---	---	---

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
146	Objection and answer: specific and generic application of the universal concept.	182.5-15	114.4-19 ^a	31.10 ^b -23 ^a	43.11-44.2 ^a	120.1-9 ^a	35.10 ^b -21 ^a
147	Example of the distinction between essential and accidental as a criterion. (?)	182.16-183.8	114.19 ^b -115.3	31.23 ^b -32.8	44.2 ^b -1 ^a	120.9b-26	35.21 ^b -34 ^a
148	Third division of existence. One and manifold. One in proper sense: three degrees.	183.9-184.12	115.4-36	32.9-33.9 ^a	45.12-46.5 ^a	121.13-29 elaborated	36.15-27
149	One in figurative sense: five degrees.	184.13-23	115.37-116.12 ^a	33.9b-21 ^a	46.5b-12 ^a	121.30-122.8	36.28-37.2
150	Further subdivisions of the one in accident.	184.24-185.6	116.12 ^b -20	33.21 ^b -28 ^a	46.12 ^b -47.5 ^a	122.9-16	37.3-12 ^a
151	Appendages of the one and of the manifold.	185.7-12	116.21-28	33.28 ^b -34.1 ^a	47.5 ^b -6 ^a	122.17-19 elaborated	37.12 ^b -15
152	Further subdivisions of the opposition (one of the appendages of multiplicity). Opposition of privation and disposition; opposition of the contraries.	185.13-186.8	116.29-117.11	54.1 ^b -24	47.6 ^b -48.12	122.20-123.24	37.16-38.6 ^a
153	Opposition of the related; opposition of denial and establishing.	186.9-187.12	117.12-118.18	34.25-35	48.13-50.11	123.25-125.14	38.6 ^b -39.27

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
154	Fourth division of existence. Anterior and posterior. Five ways of anteriority. First two ways: anteriority in time and in degree.	187.13-188.9	118.19-119.8 ^a	36.1-14 ^a	50.12-51.10	125.15-126.5	39.28-40.11 ^a
155	Anteriority in dignity; anteriority by nature; anteriority by essence.	188.10-189.2	119.8 ^b -33	36.14 ^b -end of page	51.11-52 end of page	126.6-127.8	40.11 ^b -end of page
156	Fifth division of existence. Cause and caused.	189.3-18	119.34-120.12	37.1-12 ^a	53.1-8	127.9-26	41.1-15 ^a
157	Subdivision of the cause into that which is part of the essence of the caused and that which is external with respect to it. Cause which is part of the essence of the caused: material and formal cause.	189.19	120.13-27	31.12 ^b -23 ^a	53.9-54.4	127.27-128.10	41.15 ^b -32
158	Cause which is external to the essence of the caused: efficient and final cause.	190.5-21	120.28-121.13 ^a	37.23 ^b -38.16 ^a	54.5-55.6 ^a	128.11-33 ^a	41.33-42.16
159	Preponderance of existence over nonexistence. Defectiveness of all that which has a goal.	190.22-191	121.13 ^b -122.8 ^a	38.16 ^b -39.6 ^a	55.6 ^b -56.5 ^a	128.33b-129.27	42.17-43.5

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
160	Selectively determining factor for the agency of the agent.	192.1-10	122.8b-24	39.6b-21 ^a	57.3- 58.9	130.10- 131.9 [*]	43.22-44.9
161	Cause for the essence and cause for the accident.	192.11- end of page	122.25- end of page	39.21-end of page	56.5 ^b - 57.2	129.28- 130.9	43.6-21
162	Sixth division of existence. Finite and infinite. Four ways of saying the infinite.	193.1- 194.1	123.1-28	40.1-23	---	---	---
163	Possible infinities: motion of the sphere and number of human souls after death.	194.2-15	123.29- 124.12	40.24- 41.12	---	---	---
164	Impossible infinities: bodies and distances (<i>via</i> two signs).	194.16- 199.7	124.13- 125.16	41.13- 42.22 ^a	58.10- 60.1 [§16]	131.10- 132.15	44.10-end of page
165	Impossible infinities: causes.	199.8- 100.3	125.17- end of page	42.22b- 43.7	60.2- 61.10	132.16-133.3	45.1-21
166	Seventh division of existence. Potency and actuality. Potency of acting and potency of being acted upon.	200.4- 201.6	126.1-33	43.8-44.5	61.11- 62.11 ^a	133.4-29 G. adds the example of the wine	45.22-46.9a
167	The last potency, i.e. the possibility of existence, requires a material receptacle of inherence.	201.7- 202.17	126.34- 127.35	44.6- 45.10	62.11 ^b - 63.10	133.30- 134.28 elaborated	46.9b-34
168	Subdivision of the potency of acting into that which	202.18- 203.16	127.36- 128.27	45.11-46.5	63.11- 64 end	134.29- 136.3	46.35-47.31

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	only applies to actuality, and that which applies to both act and omission.				of page		
169	Eighth division of existence. Necessary and possible.	203.17- 204.8	128.28- 129.9 ^a	46.6-22 ^a	---	---	---
170	Three ways of considering the possible in its relationship with the other by virtue of which it has existence.	204.9- 205.11	129.9 ^b - 130.19	46.22 ^b - 47.22 ^a	---	---	---
171	Compossibility of eternity of the world and creation.	205.12- 206.11	130.20- 41 ^a	47.22 ^b - 48.2	68.11- 69.3 [§20]	139.1-15 Ġ. adds example of the world	50.3-19 ^a
172	Example: builder and house.	206.12- 207.6	130.41 ^b - 131.32	48.3-30 ^a	69.4- 70.11	139.16- 140.23	50.19 ^b -57.20
173	Proof: the existent does not need a giver of existence (but it needs a pre-existent).	207.7-25	131.33- 132.19	48.30b- 49.14 ^a	70.12- 71.4	140.24- 141.8	51.21-37
174	Objection and answer.	207.26- 208.14	132.20- 133.3	49.14b- 35 ^a	71.5-14	141.9-31	51.38-52.10
175	Existence and process of becoming existent. Agent and process of becoming agent.	208.15- 209	133.4-136	49.35b-51	71.15- 73.11	141.22-143.9	52.11-53.26
METAPHYSICS II							
176	Twelve things about the essence of the Necessary	210.1-12	137.1-17	52.1-13	78.6 ^a	147.19-20 + addition by Ġ.	56.37-57.1 ^a

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§	Topic	MF			DN		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	Existent. [(1)] He is not an accident.						
177	[(2)] He is not a body.	210.13- 211.6	137.18- 138.8	52.14- 53.4	~73.12- 74.3	added by Ġ., but cf. 143.13-23	~53.27-54.2 ^a
178	[(3)] He is neither like form, nor like matter.	211.7-12	138.9-18	53.5-10 ^a	---	---	---
179	[(4)] His existence is His essence.	211.13- 212.8	138.19- 139.15	53.10b-34	76.10- 77.12 [§24	146	55.32-56.21
180	[(5)] He is not dependent on something else in the way in which that something depends on Him, in the sense of causality.	212.9-19	139.16-25	53.35- 54.9	67.1-11	137.17-138.5	48.34-49.12
181	[(6)] He is not dependent on something else in the way in which that something depends on Him, in the sense of mutual relationship.	212.20- 213.7	139.26- 140.2	54.10-23	67.12- 68.10	136.8-end of page	49.13-50.2
182	[(7)] He is only one.	213.8- 214.8	140.3-33	54.24- 55.13	75.1- 76.3	144.22- 145.22	54.25-55.20
183	[(8)] He cannot have an attribute additional with respect to His essence.	214.9-24	140.34- 141.19	55.14-32 ^a	74.4-74 end of page	143.24- 144.21	54.26
184	Contrastive comparison with the <i>Physics</i> and the condition of the body.	214.25- 215.6	141.20-32	55.32b- 56.8 ^a	---	---	---

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
185	Conclusion of the argument for the impossibility of an attribute in His essence.	215.7-17	141.33-142.5	56.8b-21	---	---	---
186	[(9)] He does not change.	215.18-end of page	142.6-15	56.22-30	76.4-76.9	145.23-end of page	55.21-31
187	[(10)] From His essence only one immediately proceeds.	216.1-22	142.16-143.10	56.31-57.21	---	---	---
188	[(11)] He is not a substance.	216.23-218.7	143.11-end of page	57.22-58.3 ^a	77.13-78.5	147.1-18	56.22-36
189	Objection and answer to the denial of His substantiality.	218.8-219.13	144.1-38	58.3b-29	78.6b-79.7	147.20-148.12	57.1 ^b -25
190	[(12)] All but Him proceeds from Him.	219.14-220.5	144.39-145.17 ^a	58.30-59.12 ^a	---	---	---
191	Infinite concatenation, ending of the causal chain in an extreme which is not the Necessary Existent, and mutual causation are rejected. The causal chain ends in the Necessary Existent.	220.6-19	145.17b-34	59.12b-28 ^a	81.10-82.8	150.5-end of page	59.5-25 [§27]
192	Objection and answer.	220.20-221.13	145.35-146.19	58.28b-60.17 ^a	82.9-83.2 ^a	151.1-12a	59.26-60.1 ^a
193	The world is possible and originated (albeit eternal).	221.14-end of page	146.20-35 ^a	60.17b-28 ^a	83.2 ^b -6	151.12 ^b -18	60.1 ^b -6 ^a
194	The eternal agency of the	222.1-17	146.35 ^b -147.15 ^a	60.28b-61.9 ^a	83.7-11 ^a	151.19-27 ^a	60.6 ^b -13

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	Necessary Existent is worthier than a temporal one. Simile of the sun (God) and the sunbeams (world).						
195	Criticism of the simile of the sun and sunbeams.	222.18- end of page	147.15b- end of page	61.9b- end of page	83.11 ^b - 83.13	151.27b- end of page	60.14-18
		METAPHYSICS III					
196	On the attributes of the First. Premise: impossibility of any multiplicity in the First. Five kinds of description. First two possible descriptions: essential attributes; accidental attributes.	223.1-18	149.1-20 ^a	62.1-18 ^a	79.8- 80.11 ^a	148.13- 149.12	57.26-58.18 ^a
197	Third kind of description: accidental attribute with a dependence on something else. Fourth kind: accident which refers to the relation of the essence with something proceeding from it. Fifth kind: negative attribute.	223.19- 224.14	149.20b- 150.11 ^a	62.18b- 63.13 ^a	80.11 ^b - 81.9	149.13-150.4	58.18b-59.4

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
198	Attributes originating from relative and negative descriptions (kinds 4 and 5).	224.15-22	150.11 ^b -21	63.13b-21	---	---	---
199	First allegation. Life of the First.	224.23- 225.14	150.22- 151.2 ^a	63.22- 64.5 ^a	83.14- 84.9	152.1-22 Ġ. adds the notion of life	60.19-61.1 ^a
200	«Free» and «abstract».	225.15- 226.1	151.2 ^b -21	64.5 ^b -20	84.10- 12 ^a	152.23-27	60.1 ^b -5
201	Second allegation. Self-knowledge of the First.	226.2-16	151.22- 152.15 ^a	64.21-35 ^a	---	---	---
202	Knowledge, known and knower are identical.	226.17- 227.23	152.15 ^b - 153.20	64.35 ^b -65	84.126- 85.4 ^a	152.28- 153.11	60.6-17 ^a
203	Third allegation. Knowledge of the First (omniscience).	227.24- 228.12	153.21- 154.3	66.1-20	85.4b- 86.5 ^a	153.12-20 ^a	60.17b-23
204	Fourth allegation. Oneness of the knowledge of the First.	228.13-23	154.4-24	66.21- 67.3 ^a	---	---	---
205	Three possible states of man with respect to knowledge.	228.24- 229.16	154.25- 155.11 ^a	67.3 ^b -20 ^a	86.11- 88.3 ^a	154.1-155.10	61.34-62.31
206	Further description of the third state, to which the First's knowledge of the universe is assimilated.	229.17- end of page	155.11 ^b - 27 ^a	67.29b- 68.12 ^a	---	---	---

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
207	Impossibility of the first condition for the First.	230.1-18	155.27b- 156.22	68.12b- 69.6	88.3b- 88.7	~155.11-20 with additions by Ġ.	62.32-end of page
208	Example of the way of knowledge of the First: wealth of a king.	230.19- 231.12	156.23- 157.6	69.7-30 ^a	---	---	---
209	Objection and answer, with contextual denial of the possibility of the second condition in the First.	231.13- 232.1	157.7-27	69.30 ^b - 70.17	---	---	---
210	Fifth allegation. Knowledge of particulars.	232.2-21	157.28- 158.20 ^a	70.18- 71.10 ^a	88.8- 89.10 ^a	155.21- 156.27	63.1-31 ^a
211	Knowledge of the possible events by means of their causes.	232.22- 233.8	158.20 ^b - 159.15	71.10 ^b -31	89.10b- 90.2	156.28- 157.9	63.31 ^b -64.7
212	Sixth allegation. Atemporal knowledge of the particulars.	233.9- 234.9	159.16- 160.9 ^a	71.32- 72.24 ^a	90.3- 93.2 ^a	157.10- 159.34	64.8-66.15 ^a
213	Eternal and unchanging knowledge of the First.	234.10- end of page	160.9 ^b - 161.3	72.24b- 73.8	93.2 ^b - 93.3	159.35	66.15 ^b -18
214	Seventh allegation. Will of the First.	235.1-15	161.4-20	78.9-24 ^a	93.4-9 ^a	160.4-12	66.19-28 ^a
215	Four possible origins of every voluntary act.	235.16- end of page	161.21-34	73.24 ^b - 34 ^a	93.9 ^b - 94.3 ^a	160.13-30 ^a	66.28 ^b -67.6 ^a
216	How the knowledge can be cause for the existence: examples.	236.1-23	161.35- 162.27 ^a	73.34 ^b - 74.28 ^a	~94.3 ^b - 95.15 ^a	160.30 ^b - 162.12 ^a	~67.6 ^b -68.9 ^a

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
217	In the First there is nothing in potency.	236.24- 237.11	162.27 ^b - 163.10 ^a	74.28 ^b - 75.11 ^a	Material listed for §216 is here mixed with that of §217 and §218, in reverse order		
218	The First's conceiving of anything is sufficient for the realization of the conceived thing, without any goal in Him.	237.12-24	163.10 ^b - 29	75.11 ^b -29	Material listed for §216 is here mixed with that of §217 and §218, in reverse order		
219	Providence of the First.	237.25- 238.19	163.30- 164.18	75.30- 76.22 ^a	95.15b- 96.1	162.12 ^b -20	68.9b-15 ^a
220	Creation and guidance of the First.	238.20- 239.2	164.19- 36 ^a	76.22b- 32 ^a	Cf. 100.3 ^b - 11	Cf. 165.24 ^b - 166.6	Cf. 70.32b-71.8
221	The actions of the First are knowledgeable even without any goal.	239.3-14	164.36 ^b - 165.15	76.32 ^b - 77.15	96.2- 97.5	162.21- 163.17	68.15 ^a -end of page
222	Eighth allegation. Omnipotency of the First.	239.15- 240.7	165.16- 36 ^a	77.16-35 ^a	97.6- 98.5	163.18- 164.12	69.1-26
223	Analysis of the proposition: «If He wanted, He would act».	240.8-22	165.36b- 166.15	77.35b- 78.20	98.6- 99.6	164.13-165.2	69.27-70.11
224	Ninth allegation. Wisdom of the First.	240.23- 241.11	166.16- 167.2 ^a	78.21- 79.8 ^a	99.7- 100.3 ^a	165.3-24 ^a	70.12-32 ^a
225	The First's knowledge of the order of the universe is the principle of that order.	241.12-21	167.2 ^b -14	79.8 ^b -18	Cf. §220	Cf. §220	Cf. §220

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
226	Tenth allegation. Generosity of the First.	241.22- 242.11	167.15-37	79.19- 80.5	100.12- 101 [§36]	166.7-end of page	71.9-27
227	Eleventh allegation. Joy of the First. Various principles which explain it.	242.12-18	167.38- 168.9	80.6-14	---	---	---
228	First principle: meaning of pleasure and pain.	242.19- 243.21	168.10- end of page	80.15- 81.10	102.1-9 ^a	167.1-17	71.28-72.9 ^a
229	Second principle: the suitable to every faculty is its act.	243.22- 244.21	169.1-12	81.11-18	102.9 ^b - 103.1 ^a	167.18-26	72.9b-17
230	Third principle: in the perfect intelligent the interior faculties are stronger than the exterior ones.	244.5-16	169.13-30	81.19-34	103.1 ^b - 10	167.27- 168.7 ^a	72.18-30
231	Fourth principle: every faculty has the pleasure of the perception of that of which it is faculty.	244.17- 245.15	169.31- 170.19	81.35- 82.27	103.11- 105.1	168.7 ^b -169.2	72.31-73.18
232	Fifth principle: the intellectual pleasure is stronger than the sensible pleasures.	245.16- 246.19	170.20- 171.17	82.28- 83.31	105.2-11	169.3-22	73.19-37 ^a
233	Sixth principle: sometimes the perception of the pleasure is weakened by something external to the perceiver.	246.20- 247.21	171.18- 172.19 ^a	83.32- 84.34 ^a	105.12- 108.9	169.23-71	73.37 ^b -75.21

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
234	The perfect self-perception of the First as perfect produces the most perfect pleasure.	247.22- 248.15	172.19b- 173.1 ^a	84.34 ^b - 85.20	108.10- 109.1 ^a	172.1-10 (with omissions by Ġ.)	75.22-28
235	Incommensurable pleasure of the First with respect to us (quotation of Aristotle).	248.16-24	173.1b-16	85.21- 86.3 ^a	110.2- 111.11	173.10 ^b -27	76.15-31
236	Pleasure of the angels.	248.25- 249.4	173.17.24 ^a	86.3b-11 ^a	109.1 ^b - 110.1	172.11-28	75.29-76.3 ^a
237	Example: man who loves a king.	249.5-11	173.24 ^b - 37 ^a	86.11 ^b -23 ^a	---	---	---
238	Man can attain eternal happiness.	249.12- end of page	173.37 ^b - 174.9	86.23 ^b - end of page	---	---	---
239	Epilogue of the speech on the attributes. Knowledge of the unknown (the First) through the known (man).	250	174.10- end of page	87.1-25 ^a	---	---	---
240	Only what of the First has an image in us can be known; what has no matching at all is impossible to know (e.g. God as an existence without quiddity).	251.1-17	175.1-24	87.25b- 88.18 ^a	---	---	---
241	The angels do have a quiddity different from their existence.	251.18- end of page	175.25- 34 ^a	88.18 ^b - 26 ^a	---	---	---
242	The truth of the essence of the	252.1-7	175.34 ^b - 176.2	88.26 ^b - 89.3 ^a	---	---	---

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	First is that He is existence without quiddity.						
243	You can know by demonstration that the knowledge of the First is impossible.	252.8-16	176.3-13	89.3 ^b -12	---	---	---
244	Even knowing that full knowledge is impossible is a kind of knowledge.	252.17-end of page	176.14-end of page	89.13-end of page	---	---	---
METAPHYSICS IV							
245	General introduction to the fourth treatise. One premise and three pillars.	253.1-253.14	177.1-17	90.1-18	---	---	---
246	Premise. First <i>divisio entis</i> . Substances divide into intellects, souls, and bodies.	253.15-254.15	177.18-178.19	90.19-91.13	114.12-116.8 [§39]	176.10-177.27 [§45]	78.33-79.34 [§39]
247	Second <i>divisio entis</i> . Various degrees of perfection.	254.16-255.4	178.20-34	91.14-28	116.9-117.5 [§40]	177.28-178.16 [§46]	79.35-80.12 [§40]
248	Third <i>divisio</i> , concerning only bodies, which divide into simple and composed.	255.5-23	178.35-179.13	91.29-92.11	119.7-120.7 [§42]	180.1-22 [§48]	81.18-end of page [§42]
249	Pillars. Premise to the first pillar. Table of contents about movement.	255.24-256.12	179.14-33	92.12-27	120.8-121.1 [§43 (a)] +	180.23-29 [§49 (a)] + 185.10-33 [§57 (a)]	82.1-6 [§43 (a)] + 85.13-34 [§45 (a)]

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
					125.13- 126.9 [§45 (a)]		
250	First allegation. Rectilinear movement, natural movement of the elements.	256.13- 257.17	179.34- 180.36	92.28- 93.27	---	---	---
251	Requisites of the rectilinear movement: (i) sensible ostensibility, (ii) finite determinateness, (iii) graduality of high and low.	257.18- 258.21	180.37- 181.37	93.28- 94.24	121.2- 122.4 [§43 (b)]	180.23-181 [§49 (b)]	82.7-end of page [§43 (b)]
252	Second allegation. Surrounding body. The difference of direction is either in the void or in the plenum, but it is absurd that it is in the void.	258.22- 259.6	181.38- 182.14 ^a	94.25- 95.5 ^a	122.5- 125.12 [§44]	182-185.9 [§50]	83-85.12 [§44]
253	If rather it is in the plenum, namely in the body, it is either internal or external with respect to the body. It is internal to it, and based on the difference between centre and circumference.	259.7-22	182.14 ^b - 39 ^a	95.5b-26	Material listed for §252 is common to §§253- 255, with Ġazālian variations		
254	It is impossible that the	259.23- 260.18	182.39 ^b -	95.97-	Material listed for §252 is common to §§253- 255, with Ġazālian variations		

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	difference of the direction is external with respect to the body.						
255	The difference of two bodies is not in its own cause of the difference of the direction.	260.19- 261.10	-184.19	-97.9	Material listed for §252 is common to §§253-255, with Gazālian variations		
256	Third allegation. Time follows from the movement: examples.	261.11-19	184.20- 34 ^a	97.10-22 ^a	---	---	---
257	Verification of the concept of time.	261.20- 262.14	184.34 ^b - 185.24 ^a	97.22 ^b - 98.11 ^a	125.13- 127.12	185.10-186	85.13-86.26
258	Definition of time, and independence of time from concepts like quickness and slowness.	262.15- 263.6	185.24 ^b - 186.12	98.11 ^b - 99.3	127.13- 128.9 ^a	187.1-25	86.27-87.7
259	Movement of the sphere as ultimate criterion of time.	263.7-17	186.13-28	99.4-17	---	---	---
260	Fourth allegation. The movement of the sublunary bodies only happens by virtue of an inclination.	263.18- 264.2	186.29- 187.3	99.18-31 ^a	---	---	---
261	Every composed body has necessarily got an inclination	264.3-15	187.4-20	99.31 ^b - 100.11 ^a	---	---	---
262	First objection.	264.16- 265.13	187.21- 188.11	100.11b- 101.3 ^a	128.15- 130.3	188-188.31 [§57 (d)]	87.16-88.1 [§45 (d)]

§	Topic	MF			DN		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
					[§45 (d)]		
263	Second objection.	265.14- 266.10	188.12- 188-36	101.3 ^b - 101.28	128.9- 15 [§45 (c)]	187.25-end of page [§57 (c)]	87.8-16 [§45 (c)]
264	Fifth allegation. The movement of the sublunary bodies is always rectilinear (centre → circumference or viceversa).	266.11- 267.2	188.37- 189.17	101.29- 102.13	130.4- end of page [§45 (e)]	188.32- 189.17 [§57 (e)]	88.1-18 [§45 (e)]
265	Sixth allegation. The movement of the sublunary compounds is a sign of the perpetual movement of the heavens.	267.3- 268.3	189.18- 190.16	102.14- 103.9	136.11- 137.13 [§49]	194.16- 195.17 [§55]	92.15-93.6 [§49]
266	Example. Causal chain, traced back to the celestial movement, which leads to the reception of the vegetative soul in the seed in a certain moment.	268.4-26	190.17- 37 ^a	103.9-28	137.14- 138.14 ^a [§50]	195.18- 196.17 [§56]	93.7-29 ^a [§50]
267	Two ways in which the celestial movement is a cause for the origin of things: (i) the actual cause is together with it; (ii) it is a cause for the attainment of the predisposition of the nearer causes.	268.26- 269.19	190.37 ^b - 191.20	103.29- 104.12 ^a	138.14b -139.4	198.16-24	93.29 ^b -end of page

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
268	Summary of the previous topics and introduction to the following section.	269.20-270	191.20-end of page	104.12 ^b -28	---	---	---
269	Second pillar. Speech on the celestial bodies. Table of contents.	271.1-11	192.1-14	104.29-105.7	---	---	---
270	First allegation. The moving of the heavens is circular and voluntary.	271.12-272.10	192.15-193.6 ^a	105.8-31 ^a	131.1-132.7 [§46]	189.18-190 [§52]	88.19-89.22 [§46]
271	It is impossible that the heavenly movement is by virtue of a pure nature, devoid of a will.	272.11-20	193.6 ^b -25	105.31 ^b -106.11	---	---	---
272	Second allegation. The heavenly motion cannot be produced by a pure intellect.	272.21-273.12	193.26-194.7 ^a	106.12-33 ^a	132.8-133.7 ^a [§47]	191.1-27 ^a -192.16 [§53]	89.23-90.11 [§47]
273	The renewal of the particular wills is necessary to account for the movement: example of the pilgrimage.	73.13-22 ^a	194.7 ^b -21 ^a	106.33 ^b -107.12 ^a	133.7 ^b -134.5	191.27 ^b -192.16	90.12-90.30
274	Movement, imagination and will, which changes in a soul, not in an intellect. Example: man walking with a lamp in the darkness.	273.22 ^b -274.14	194.21 ^b -195.3	107.12 ^b -29	---	---	---

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
275	Third allegation. The heavenly movers do not move for the sake of the inferior world, but for the sake of what is superior to them.	274.15- 275.4	195.4-25	107.30- 108.10	139.5- 140.1 [§51 (a)]	196.25- 197.12 [§57 (a)]	94.1-18 [§51 (a)]
276	Demonstration of the incorruptibility of the celestial bodies.	275.5- 276.8	195.25- 196.30	108.10- 109.12 ^a	134.6- 136.10 [§48]	192.17- 194.15 [§54]	90.31-92.14 [§48]
277	The movement of the celestial bodies cannot be caused by their providence for the sublunary beings.	276.9- 277.5	196.30- 197.18	109.12 ^b - 110.3 ^a	140.2-5 [§51 (b)] + 143.3- end of page [§51 (e)]	197.12-20 [§57 (b)] + 199.11-end of page [§57 (d)]	94.18-25 [§51 (b)] + 96.4-26 [§51 (e)]
278	First objection and answer: if that for the sake of which the thing is nobler than that thing, the shepherd, teacher, and prophet should be inferior to the sheep, the disciples, and the community.	277.6-23	197.19- end of page	110.3 ^b -25 ^a	142.5- 143.2 [§51 (d)]	198.33- 199.10 [§57 (c)]	95.31-96.4 [§51 (d)]
279	Second objection and answer: «doing the good is good».	277.24- 278.2	198.1-10 ^a	110.25 ^b - 34 ^a	140.6-9 [§51 (c)]	197.21-26 [§57 (b)]	94.26-30 ^a [§51 (c)]
280	Analysis of the subject of the proposition: «doing the good».	278.3-14	198.10 ^b - 23	110.34 ^b - 111.11 ^a	140.10- end of page	197.27-34	94.30 ^b -36

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
281	Analysis of the predicate of the proposition: «is good».	278.15- 279.8	198.24- 199.12	111.11b- end of page	141.1- 142.4	197.35- 198.32	94.37-95.30
282	Third pillar. Fourth allegation. Establishment of the existence of the separate intellects.	279.9-23	199.13- end of page	112.1-17 ^a	144.1- 145.5 [§52]	200.1-29 [§58]	96.27-97.11 ^a [§52]
283	Two kinds of motion: (a) like the beloved moves the lover, (b) like the spirit moves the body.	279.24- 280.16	200.1-21	112.17 ^b - 35 ^a	145.6- 146.4	200.30- 201.20	97.11 ^a -97.31
284	Objection and answer. What moves for love can be researched in its own essence, or else the resemblance to it can be researched. This movement is not of the first kind.	280.17- 281.1	200.22- 201.5 ^a	112.33 ^b - 113.13 ^a	146.5- 146.8 ^a + 146.12b -147.8 [§53 (a)]	201.21- 201.29 [§59 (a)] + 202.7-28	97.32-99.12 [§53 (a)]
285	It is neither a movement by the way of command and obedience.	281.2-5	201.5b-11	113.13 ^b -19 ^a	146.8 ^b - 12 ^a	201.30- 202.6	97.37 ^b -98.4
286	It is only possible by the way of the imitation of the beloved, and it has three conditions.	281.6-24	201.12-36	113.19 ^b - 114.6 ^a	147.9- 148.12	202.29- 203.30	93.19 ^b -99.12 ^a
287	Objection and answer. The celestial bodies are in actuality as for their	281.25- 282.20	201.37- 202.24 ^a	114.6 ^b -29 ^a	148.13- 149.7[§ 53 (b)]	203.31- 204.12 ^a [§59 (b)]	99.12 ^b -28 ^a [§53 (b)]

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	substance, their essential accidents and their shape.						
288	The only thing as for which they are not in actuality is the position; the circular movement is the way that the celestial body has to imitate the actuality of the position.	282.21- 283.17	202.24 ^b - 203.13	114.29 ^b - 115.21	149.8- 150	204.12 ^b - 205.12	99.28 ^b -100.15
289	Fifth allegation. The multiplicity of the skies implies their having different natures and species (higher and lower).	283.17- 284.14	203.14- 204.2	115.22- 116.12	151- 153.3 [§54 (a)]	205.13- 206.30 [§60 (a)]	100.16-101.25 [§54 (a)]
290	Sixth allegation. Mutual causation is not permitted in the case of the celestial bodies.	284.15- end of page	204.3-15	116.13-27 ^a	154.12- 155.10 [§54 (c)]	~208.4-26 [§60 (c)]	102.26-103.2 [§54 (c)]
291	First objection and answer: cases of mutual causation in the sublunary world.	285.1-9	204.16- 26	116.27 ^b - 117.3 ^a	---	---	---
292	Second objection and answer: causation of a body on another body can only happen by the mediation of matter, i.e. with the contact of the form lodged in	285.10- 286.10	204.27- 205.15	117.3 ^b -28	153.4- 154.11 [§54 (b)]	206.31- 208.3 [§60 (b)]	101.26-102.26 [§54 (b)]

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§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
293	the body with another body. Seventh allegation. The separate intellects are manifold, since they are the beloved of the souls of the skies and they cause differentiated motions.	286.11-287	205.16-206	117.29-118	155.11-156.3 [§54 (d)]	208.27-209.8 [§60 (d)]	103.3-17 [§54 (d)]
METAPHYSICS V							
294	Obscurity: from the one only one proceeds, but the existents are actually manifold.	288.6-20	207.1-27	119.1-23 ^a	111.12-112.11 [§38 (a)]	173.28-174.20 [§44 (a)]	76.32-77.17 [§38 (a)]
295	How multiplicity derives from the First, on the basis of the distinction between necessary and possible existence.	288.21-289.22	207.28-208.20 ^a	119.23 ^b -120.23 ^a	112.12-114.11 [§38 (b)]	174.21-176.9 [§44 (b)]	77.18-78.32 [§38 (b)]
296	The first separate intellect proceeds from the First. Its existence is necessary by virtue of the First, and possible by virtue of itself.	289.23-290.8	208.20 ^b -37	120.23b-121.2	---	---	---
297	Objection and answer. Derivation of the moving intellects, the heavenly souls, and the celestial spheres, from the One.	290.9-291.14	208.38-209.23	121.3-27	156.4-157.1 [§55]	209.9-end of page [§61] G. adds the names of the spheres	103.18-end of page [§55]

§	Topic	<i>MF</i>			<i>DN</i>		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
298	After the celestial bodies the existence of the inferior things is derived. Elements and common matter.	291.15- end of page	209.24- 38 ^a	121.28- 122.7 ^a	157.2- 10 ^a [§56]	210.1-17 ^a [§62]	104.1-16 ^a [§56]
299	The existence of matter is from the separate intellect, while its being in actuality needs the cooperation of the form.	292.1-13	209.38 ^b - 210.21 ^a	122.7 ^b -22 ^a	157.10 ^b - 158.10 ^a	210.17 ^b - 211.8 ^a	104.16 ^b -105.2 ^a
300	The predisposition of common matter to the reception of the elementary forms and its delimitation as for the direction is from the celestial bodies.	292.14- 293.5	210.21 ^b - 211.7 ^a	122.22 ^b - 123.10	158.10 ^b -159.10	211.8 ^b -32	105.2b-26 ^a
301	Distinction between the matter's being in potency and its being predisposed.	293.6- end of page	211.7 ^b -30	123.11-30 ^a	159.11- 160.7	211.33- 212.20	105.26b-106.4
302	List of sublunary beings generated by the various mixtures of the elements: atmospheric phenomena, minerals, plants, animals, and man.	294.1- 295.1	211.31- 212.17 ^a	123.30 ^b - 124.22	160.8- 161.6 ^a [§57 (a)]	212.21-213.11 [§63 (a)]	106.5-24 ^a [§57 (a)]
303	Celestial causation of the sublunary beings and their	295.2	212.17 ^b - 32 ^a	124.23- 35 ^a	---	---	---

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§	Topic	MF			DN		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	permanence by species.						
304	The celestial bodies are unitary for every aspect except for position: the changes in their reciprocal position generates different predispositions, and thus different forms.	295.11- end of page	212.32 ^b - 213.12	124.35 ^b - 125.19 ^a	161.13 ^b - 162.1 ^a +161.6b - 8 ^a +161. 9 ^b -11 ^a	213.23 ^b - 26 ^a +213.12- 15+213.17 ^b - 20 ^a	106.36 ^b -107.2 ^a +106.24 ^b - 28 ^a +106.30 ^b -33 ^a
305	Eventually, the causes of the sublunary and imperfect beings revert to the celestial angels: they are thus in the best and most perfect of the ways.	296.1-11	213.13-29 ^a	125.19 ^b -33	161.8 ^b - 9 ^a + 161.11 ^b - 13 ^a + 162.1 ^b - 162.5	213.16-17 ^a + 213.20 ^b -23 ^a + 213.26 ^b - 33 ^a	106.28 ^b -30 ^a + 106.33 ^b -36 ^a + 107.2 ^b -107.11
306	Example. The existence of the flies is better than the mere existence of the matter predisposed to the reception of the form of the flies. Example of the reflection of light.	296.12-19	213.29 ^b - 214.2	125.34- 126.10	162.6- 11 [§57 (b)]	213.33 ^b - 214.8 [§63 (b)] G. adds the example of light.	107.11-20 [§57 (b)]
307	Objection: problem of theodicy.	296.20- 297.7	214.3-16 ^a	126.11-23 ^a	---	---	---
308	Concept of «good»: good in itself (whose contrary is evil as	297.8-20	214.16 ^b - 30 ^a	126.23 ^b - 35 ^a	117.6-11 [§41]	178.17-27 [§47]	80.13-22 [§41]

§	Topic	MF			DN		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
	<i>privatio boni</i>) and good as God.						
309	Classification of beings according to their being good and evil: (1) pure good with no evil; (2) pure evil with no good; (3) good and evil, with the predominance of evil; (4) good and evil, with the predominance of good.	297.21- 289.5 ^a	214.30b- 215.2 ^a	126.35 ^b - 127.13 ^a	117.12- 118.4 ^a	178.28- 179.3 ^a	80.23-30 ^a
310	Example of (4): the fire.	289.5 ^b -12	215.2 ^b -14 ^a	127.13 ^b - 24 ^a	118.4 ^b - 9 ^a	179.3 ^b -12 ^a	80.30 ^b -37 ^a
311	Example of (4): the rain (and then Saturn and Mars, longing and anger).	298.13- end of page	215.14 ^b - 32	127.24 ^b - 128.5	118.9b- 16 ^a	179.12 ^b -24 ^a	80.37 ^b -81.9 ^a
312	Obection and answer: God is already an instance of pure good (1), and it was necessary that He created beings in which the good is predominant (4), since the good resides in their existence as opposed to their nonexistence.	299.1-8	215.33- 216.2	128.6-16	118.16 ^b - 119.6	179.24 ^b - end of page	81.9 ^b -81.17
313	The evil is in the smallest possible quantity, together with the greatest quantity of good.	299.9- end of page	216.3-28	128.17- 129.5	162.12- 165 [§57 (c)]	214.9-216 [§63 (c)] G. adds the example of the old woman.	107.20-108 [§57 (c)]

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§	Topic	MF			DN		
		DUNYĀ	ALONSO	MUCKLE	MO'IN	ACHENA- MASSÉ	MOREWEDGE
314	Divine decree and omnipotence. End of the <i>Metaphysics</i> .	300	216.29- 217	129.5-end of page	---	---	---

III. *Physics*

§	Topic	MF			DN	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
PHYSICS Preface						
315	Subject-matter of the <i>Physics</i> and table of contents (the fifth treatise is omitted).	303	221	130.1-131.17	1-3.2	13-14.12
PHYSICS I						
316	Four things common to all bodies: form, matter, movement, and place. Speech on the movement. True nature of movement.	304.1- 305.12	223-224.8	131.18- 132.12	3.3-4.7	14.13-15.8
317	First division of the movement. Four kinds: local movement, and transfer in quantity, position, and quality.	305.13- 306.7	224.9-26	132.13-27 ^a	4.8-5.6	15.9-24
318	Impossibility of the gradual transfer in the substance.	306.8- 308.2	224.27- 225.8	132.27b- 133.10 ^a	5.7-8.3	15.25-17.15
319	Two possible movements in the quantity: growth and wilt; rarefaction and condensation.	303.8-13	225.9-22	133.10 ^b -24 ^a	8.4-9.4	17.16-18.8

§	Topic	<i>MF</i>			<i>DN</i>	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
320	Rarefaction and condensation.	308.14- end of page	225.23- 226.7	133.24 ^b - 134.4	9.5-10.5	18.9-24
321	Second division of the movement, according to its cause: by accident, by violence, by nature.	309.1- 310.5	226.8-38	134.5-30 ^a	10.6-12.7	18.25-19.32
322	Further subdivision of the natural movement. Objection and answer.	310.6- end of page	226.39- 227.22	134.30 ^b - 135.12	---	--- Ġ. elaboration (cf. 19.35-20.1)
323	Third division of the movement. Circular and rectilinear motions.	311	227.23-end of page	135.13-23	12.8-13.9	19.33-20.15
324	Speech on the place. Four properties in a nutshell.	312.1-9	228.1-14	135.24- 136.4 ^a	13.10-14.3	20.16-28
325	Error in identifying place and matter. Examination of various opinions concerning place: (a) form; (b) measure of the distance, and then (b.1) in the plenum, and (b.2) also in the void.	312.9- 313.4	228.15- 229.6 ^a	136.4-24 ^a	14.4-15.10	20.29-21.29
326	Conditions of acceptability of the notion that the place is the extension. Objection and answer.	313.5- end of page	229.6 ^b -26 ^a	136.24 ^b - 137.6 ^a	15.11-16.10	21.30-22.15
327	Impossibility of the interpenetration of bodies and distances.	314.1-8	229.26 ^b - 40 ^a	137.6 ^b -19 ^a	16.11-17.9 ^a	22.16-34 ^a
328	Further explanation, with examples.	314.9- 315.2	229.40 ^b - 230.26	137.19 ^b - 138.10 ^a	17.9 ^b - 18.10 ^a	22.34 ^b -23.24
329	Inductive proofs against the void.	325.3- end of page	230.27- 231.19	138.10 ^b - 139.10 ^a	18.11-19.12	23.25-24.18
330	Three inductive proofs against the movement in the void. First two signs.	316.1-24	231.20- 232.16	139.10 ^b - 140.9	19.13-22	24.19-26.14

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§	Topic	<i>MF</i>			<i>DN</i>	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
331	Third sign.	316.25- 317.14	232.17- 233.2	140.10-33 ^a	23.1-24.6	26.15-27.9
332	True nature of the place (with quotation of Aristotle).	317.15- end of page	233.3-end of page	140.35b- 141.1-17	24.7-25.9	27.10-end of page
PHYSICS II						
333	Subdivision of the body into simple and composed. Further subdivision of the simple into susceptible (like the elements) and non-susceptible (like the skies) of generation and corruption. Skies.	318.1- 319.4	235.1-236.3	141.18- 142.13	27.3-6	28.23-end of page Strong Ġ. elaboration
334	Seven allegations about the elements. Table of contents.	310.5-19	236.4-16	142.14-25	---	---
335	First allegation. Subdivision of the elements according to the two pairs of qualities (hot and cold, dry and wet), and their reception of change according to these qualities.	319.20- 320.14	236.17- 237.5 ^a	142.26- 143.14 ^a	27.7-28.6	29.1-16
336	Sensory qualities, lightness and weight.	320.15- 321.10	237.5 ^b -22 ^a	143.14 ^b -34 ^a	28.7-30.4	29.17-30.3
337	Hotness of the air, coldness of the earth. Examples.	321.11- 22	237.22 ^b - end of page	143.34b- 144.16	30.5-31	30.4-end of page
338	Second allegation. Hotness, coldness, dryness and wetness are accidents in the elements, not forms.	321.23- 322.21	238.1-36	144.17- 145.12	52.4-55.2	41.24-42.34 ^a [§22 (a)]
339	Third allegation. The elements are susceptible of transformation and	322.22- 323.5	238.37- 239.10	145.13-23 ^a	25.10-27.2	28.1-22 [§12]

§	Topic	MF			DN	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
	change. Three possible origins of heat.					
340	Divergent opinion of a group about this.	323.6-21	239.11-32	145.23 ^b - 146.6	36.1-37.5	33.4-end of page [§16]
341	First possibility concerning the origin of heat: extraction of the hot parts from the interior of the thing.	323.22- 324.8	239.33- 240.11	146.7-17 ^a	37.6-39.2	34.1-29
342	Three objections and answers.	324.9- 325.1	240.12-38	146.17b- 147.3	39.3-40	34.30-35.26
343	Second possibility concerning the origin of heat: entrance of the parts of fire in the heated things.	325.2-5	240.39- 241.2	147.4-9	41	35.27-36.13
344	Third possibility concerning the origin of heat: rays as hot bodies. First three reasons why it is false.	325.6-15	241.3-16	147.10-21	---	---
345	Fourth and fifth reasons why the third possibility is false.	325.16- 326.1	241.17-35	147.22- 148.2	42.1-43	36.14-37.17 ^a
346	Sixth and seventh reasons why the third possibility is false.	326.2- end of page	241.36- 242.23	145.3-25	44.1-46.4	37.17 ^b -38.23
347	Fourth allegation. The elements get bigger and smaller without external contributions.	327.1-13	242.24- 243.3	149.30- 150.4 ^a	55.3-5	42.34b-43.3 [§22 (b)]
348	Two objections and answers.	327.14- 328.5	243.4-22	150.4 ^b - 150.22	55.6-57.3	42.4-27 [§22 (c)]
349	Fifth allegation. Mutual transformation of the four elements.	328.6- 329.3	243.23- 244.8	148.26- 149.10	49.9-57.6	40.8-41.10 ^a
350	Examples of transformations of one element into another.	329.4- 23	244.9-32	149.11-29	51.7-52.3	41.10 ^b -23

§	Topic	<i>MF</i>			<i>DN</i>	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
351	Sixth allegation. The inferior things receive the influence of the superior things.	329.24- 330.23	244.33- 245.22 ^a	150.23- 151.9 ^a	63.9-65.1 ^a	47.1-22 [§25 (a)]
352	Explanation of brightness and colour.	330.24- 331.22	245.22b- 246.5	151.9 ^b -34 ^a	46.5-49.1	38.24-39.29
353	Explanation of why heat is predominant during summer.	331.23- 352.7	246.6-20	151.34 ^b - 152.13	49.2-49.8	39.30-40.7
354	Seventh allegation. Each of the elements has one place within the celestial spheres.	332.8- 333.18	246.21- 247.23 ^a	152.14- 153.12 ^a	33.1-35	31.15-33.3
355	Natural place of the body	333.19- 334.9	247.23 ^b - 248.1 ^a	153.12 ^b -24 ^a	---	---
356	Principles on the basis of which the conclusion of the natural place has been reached. Conclusion of the treatise.	334.10- end of page	248.1 ^b -end of page	153.24b- 154.4	32	31.1-14 [§14]
PHYSICS III						
357	First speculation. The blend.	335.1-17	249.1-23 ^a	154.5-25 ^a	57.4-58.2	43.28-44.9 [§23]
358	Explanation of what Aristotle maintained about the permanence of the potencies of the elements in the blends.	335.18- 336.7	249.23 ^b - 250.7	154.25 ^b - 155.8 ^a	58.3-60.1	44.10-45.6 G. synthesis
359	Estimative subdivision of the blend in balanced and inclining.	336.8- 19	250.8-17	155.8 ^b -16	---	---
360	Second speculation. First mixing about the elements. Three (or perhaps four) layers of the earth.	336.20- 337.8	250.18-29	155.17-25	60.2-7	45.7-15

§	Topic	<i>MF</i>			<i>DN</i>	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
361	Reason why there is emerged land.	337.9-21	250.30- 251.15	155.26- 156.4	60.8-62.3	45.16-46.7
362	Four layers of the air.	337.22- 338.9	251.16-29	156.5-17	62.4-10	46.8-17
363	One layer of the fire.	338.10- end of page	251.30- 252.14	156.18-30	62.11-63.8	48.18-end of page
364	Third speculation. Meteorological phenomena originating from the vapour.	339.1-9	252.15-24	156.31- 157.5 ^a	65.1 ^b -65.6	47.23-end of page [§25 (b)]
365	Clouds.	339.10- end of page	252.25- 253.7	157.5 ^b -18 ^a	65.7-66.8 ^a	48.1-18 ^a
366	Minerals.	340.1-5	253.8-14 ^a	157.18 ^b -23 ^a	66.8 ^b -10 ^a	48.18 ^b -21 ^a
367	Rain, snow and hail.	340.6- 341.7	253.14 ^b - 254.8	157.23 ^b - 158.12 ^a	66.10 ^b - 67.7	48.21 ^b -49.5
368	Rainbow.	341.8-22	254.9- 255.2	158.12 ^b -29 ^a	67.8-68.4	49.6-16
369	Halo.	341.23- 342.13	255.3-21	158.29 ^b - 159.12	68.5-70.4	49.17-50.11
370	Fourth speculation. Meteorological phenomena originating from the smoke.	342.14- 26 ^a	255.22- 256.2	159.13-24 ^a	70.5-71.3	50.12-26
371	Thin and thick kinds of smoke, and their consequences.	342.26 ^b - 343.17	256.3-26	159.24 ^b - 160.9 ^a	71.4-72.8 ^a	50.27-51.15 ^a
372	Lightning and thunder.	343.18- 344.7	256.27- 257.25	160.9 ^b -29	72.8 ^b -73.7	51.15 ^b -29
373	Fifth speculation. Minerals.	344.8-15	257.26-38 ^a	160.30- 161.7 ^a	73.8-75.2 ^a	51.30-52.20 ^a
374	Metals.	344.16- 345.5 ^a	257.38 ^b - 258.18 ^a	161.7 ^b -27 ^a	75.2b-5 ^a	52.20 ^b -53.10 ^a

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§	Topic	<i>MF</i>			<i>DN</i>	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
375	Sulfur and arsenic.	345.5 ^b - end of page	258.18 ^b - end of page	161.27 ^b - 162.8	75.5 ^b -78.3	53.10 ^b -end of page
PHYSICS IV						
376	[I] Speech on the vegetative soul. Three operations.	346.1-12	259.1-20	162.9-22 ^a	78.4-79.3 [§29]	54.1-17 [§29]
377	Analysis of the three operations or faculties of the vegetative soul: nutrition, growth and generation.	346.13- 347.2	259.21- 260.16	162.22 ^b - 163.11 ^a	79.4-80.3	54.8-end of page
378	Duration and chronological span of the three faculties in the life of the individual.	347.3-7	260.17-26	163.11b- 163.18	80.4-80.8	55.1-9
379	[II] Speech on the animal soul. Two further faculties with respect to the vegetative soul: perception and motion.	347.8- 20	260.27- 261.3 ^a	163.19-31 ^a	80.9-81.4 ^a [§30]	55.10-22 [§30]
380	Link between desire (and repulsion) and the movement toward (or away from) the thing. Fear and hatred.	347.21- 348.9	261.3 ^b -19	163.31 ^b - 164.12 ^a	81.4 ^b -82.1	55.23-56.2
381	Subdivision of the perceptive faculties into external (five senses) and internal.	348.10- 19	261.20-34 ^a	164.12 ^b -22 ^a	82.2-10	56.3-15
382	Necessity of the internal senses for the composition of the external perceptions and the survival of the animal.	348.20- 349	261.34 ^b - 262.15	164.22 ^b - end of page	82.11-83.5	56.16-23
383	Analysis of the external senses. [1] Touch.	350.1-12	262.16-32	165.1-15	83.6-84.2 [§37 (a)]	56.24-57.3 [§37 (a)]

§	Topic	MF			DN	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
384	Analysis of the external senses. [2] Olfaction.	350.13- 351.3	262.33- 263.17	165.15- 166.2	84.3-85.9 [§37 (b)]	57.4-28 [§37 (b)]
385	Analysis of the external senses. [3] Hearing.	351.4- end of page	263.18- 264.4	166.3-24	85.10-86.7 [§37 (c)]	57.29-58.5 [§37 (c)]
386	Analysis of the external senses. [4] Taste.	352.1-3	264.5-10	166.25-30	86.8-9 [§37 (d)]	58.6-9 [§37 (d)]
387	Analysis of the external senses. [5] Sight.	352.4-11	264.11-23 ^a	166.31- 167.5 ^a	90.8-91.6 ^a [§33]	60.1-15 ^a
388	Location of the visual faculty.	352.12- 21	264.23 ^b - 265.2	167.5 ^b -15 ^a	91.6 ^b - 91.end of page	60.15 ^b -20
389	Explanation of the apparent change in size of the seen objects according to the distance.	352.22- 353.23	265.3- 265.34 ^a	167.15 ^b - 168.2 ^a	92.1-95.1	60.21-61
390	Opinion of some forerunners of Aristotle.	353.24- 354.5	265.34b- 266.2	168.2b-10 ^a	87.1-87.7 [§32]	58.10-18 [§32]
391	Criticism of the physicians of the opinion of the forerunners.	354.6-9	266.3-10	168.10b-16	87.8-88.3 ^a	58.19-24 ^a
392	Three aspects why even the solution proposed by the physicians is vitiated by errors.	354.10- 355.5	266.11- 267.9	168.17- 169.13 ^a	88.3 ^b -90.7	58.24 ^b -59
393	Synthesis about proper and common sensibles. Distinction and list.	355.6- end of page	267.10-19	169.13 ^b -20	95.2-7 [§34]	62.1-10 [§34]
394	List and analysis of the internal senses. Common sense.	356.1-12	267.20- 268	169.21- 170.1	95.8-96.4 [§35 (a)]	62.11-19 [§35 (a)]
395	Analysis of the internal senses. Faculty of the forms.	356.13- 18	269.1-8	170.1-8	96.5-7 [§35 (b)]	62.20-23 [§35 (b)]
396	Analysis of the internal senses. Estimative faculty.	356.19- 20	269.9-13	170.8-11	96.8-11 [§35 (c)]	62.24-end of page [§35 (c)]

Appendices

§	Topic	MF			DN	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
397	Analysis of the internal senses. Memorative faculty.	356.21- 357.3	269.14- 270.5	170.11-17 ^a	97.7-end of page [§35 (e)]	63.12-16 [§35 (e)]
398	Analysis of the internal senses. Phantasy.	357.4-8	270.6-15 ^a	170.17 ^b -26 ^a	97.1-6 + [§35 (d)]	63.1-11
399	Analysis of the internal senses. Phantasy in man is called cogitative faculty.	357.9-13	270.15 ^b - 271.5 ^a	170.26 ^b -34 ^a	98-99.5	63.17-64.5 [§35 (d)]
400	The nature of this faculty is the movement.	357.14- 26 ^a	271.5 ^b - 271.23	170.34 ^b - 171.15 ^a	---	---
401	Final synthesis about the external and the internal senses. They are instrumental with respect to the soul.	357.26 ^b - 358	271.24- 272.7	171.15 ^b -end of page	99.6-100 [§36]	64.6-end of page [§36]
402	[III] Speech on the human soul. Only the most perfect mixture is predisposed to ist reception. Knowing and practical faculty.	359- 360.7	272.8- 273.16	172-173.5	101-102.5 [§37]	65 [§37]
403	The knowing faculty subdivides itself into speculative faculty and faculty of the practical reasoning. Examples.	359.11- 16	272.21 ^b -29	172.11 ^b -17 ^a	101.6-11	65.7-18
404	The practical faculty is also called practical intellect.	359.17- end of page	272.30- 273.4	172.17 ^b -27 ^a	101.12- 102.1	65.19-22
405	Amphibious character of the human soul.	360.1-7 ^a	273.5-16 ^a	172.27 ^b - 173.5 ^a	102.2- 102.5	65.23-end of page
406	Human perception. First degree: physical perception. Example of the sight.	360.8- 362.5	273.16- 275.20	173.5-175.1	102.6- 108.2 [§38]	66-68 [§38]
407	Second degree: internal senses (imagination). The first two degrees are bodily.	360.15- end of page	273.31- 274.11	173.15 ^b -31 ^a	104.3- 105.5	66.29-67.22

§	Topic	MF			DN	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
408	Abstraction of the estimative faculty.	361.1-13	374.12-34 ^a	173.31 ^b - 174.13 ^a	105.6- 106.6	67.23-68.8
409	Immaterial faculty called intellect.	361.14- 22	274.34 ^b - 275.5 ^a	174.13 ^b -24 ^a	~106.9 ^b - 107.1 ^a	~68.12 ^b -16 ^a elaborated
410	Universal character of the intellectual perceptions.					
411	Classification and degrees of the intellect. Material intellect, intellect <i>in habitu</i> , intellect in actuality, acquired intellect and agent intellect.	362.6- 23 ^a	275.21- 276.14	175.1 ^b -29 ^a	108.3-109 [§39]	69-70.2 [§39]
412	Ten proofs of the immaterial character of the intellectual perception, independent from the body. First four marks.	362.23 ^b - 363.11	276.15- 277.2	175.29 ^b - 176.10 ^a	110-111.3	70.3-25
413	Fifth, sixth, and seventh mark.	363.12- 364.1	277.3-27	176.10 ^b -27 ^a	111.4-112.7	70.26-71.17
414	Objection: even the intellect is sometimes hampered in its action by a bodily obstacle. Answer: two respects why this is possible without implying the materiality of the intellect.	364.2-17	277.28- 278.11	176.27 ^b - 177.15	112.8-113.7	71.18-end of page
415	Eighth proof. Demonstration that the universal knowledge is never in a body, because it is indivisible.	364.18- 365.4	278.12-28	177.16-28 ^a	113.8-114.1 [§41]	72-72.1-10 [§41]
416	Objection and answer about the indivisibility of knowledge.	365.5- end of page	278.29- 279.22	177.28 ^b - 178.17 ^a	114.2-115.4	72.11-73.17
417	Demonstration of the impossibility of the division of knowledge.	366- 367.10	279.23-31	178.17 ^b - 179.21	115.5-118.3	73.18-75.2

Appendices

§	Topic	<i>MF</i>			<i>DN</i>	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
418	Ninth proof. Demonstration of the immateriality of intellect (the receptacle of knowledge) on the basis of the immateriality of the intelligibles.	367.11-21	279.32-281.6	179.22-34	118.4-119.6	75.3-26
419	Tenth proof. Demonstration concerning the self-perception of the intellect.	367.22-368.16	281.7-34	179.35-180.24	119.7-121.4 ^a [§42]	75.27-76.27 [§42]
420	Eleventh proof. All bodily faculties are finite.	368.17-22	281.35-282.2	180.25-32 ^a	121.4 ^b -122.2	76.28-77.4
421	Demonstration of the immortality of intellect. Premise: it is originated together with the body.	368.23-369.6	282.3-16 ^a	180.32 ^b -181.8 ^a	122.3-123.2 ^a [§43]	77.5-23 [§43]
422	Sign of the fact that there are as many intellects as men.	369.7-12	282.16 ^b -29	181.8 ^b -18 ^a	---	---
423	Objection and answer. Difference between being a condition for the origin of the soul and being a cause for it.	369.13-370.9	282.30-283.13	181.8 ^b -182.5	123.2 ^b -6	77.24-end of page elaborated
424	Demonstration of the falsity of the metempsychosis.	370.10-end of page	283.14-end of page	182.6-end of page	129.6-8 [§44 (e)]	81.8-11 [§44 (e)]
PHYSICS V						
425	Introduction. Table of contents of the treatise.	371.1-19	285.1-25	183.1-21	---	---
426	[1] How the soul is a sign for demonstrating inductively the existence of the agent intellect.	371.20-372.15	285.26-286.23	183.22-184.12	123.7-124.4 [§44 (a)]	78.1-12 [§44 (a)]
427	[2] How knowledges are acquired by the soul.	372.16-373.7	286.24-287.16	184.13-185.3	124.5-125.3 [§44 (b)]	78.13-end of page [§44 (b)]

§	Topic	MF			DN	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
428	[3] Modality and requirements of the full, intellectual happiness of the soul.	373.8- 374.2	287.17- 288.13 ^a	185.4-33 ^a	125.4 ^b - 126.7 [§44 (c)]	79.1-20 [§44 (c)]
429	Nature and examples of purely intellectual pleasures.	374.3-18	288.13 ^b - 289.5	185.33 ^b - 186.29	126.8-127	79.21-80.12
430	Misery of the soul, seen as veiling and hindrance from the happiness described before.	374.19- 375.8	289.6- 290.4	186.30- 187.24 ^a	128-129.6 [§44 (d)]	80.13-81.7 [§44 (d)]
431	State of the sinful believer, who is subject to bodily desires but has nonetheless completed the intellectual perfection of his soul.	375.9-16	290.5-20	187.24 ^b - 188.1 ^a	Material listed for §430 is common to §§431-432, which show however the signs of heavy Ġ. elaboration.	
432	State of those who have acquired the desire for the completion of the intellectual pleasure, but has then left it.	375.17- end of page	290.21-end of page	188.1 ^b - 188.16	Material listed for §430 is common to §§431-432, which show however the signs of heavy Ġ. elaboration.	
433	[5] Explanation of the cause of truthful visions occurring while asleep.	376.1-15	291.1-24 ^a	188.17- 189.1 ^a	129.9- 130.5 [§45]	81.12-25 [§45]
434	Fatigue and sleep.	376.16- 21	291.24 ^b - 292.3 ^a	189.1 ^b -9 ^a	130.6-131.5	81.26-82.7
435	Well-preserved Table.	376.22- 377.7	292.3 ^b -24	189.9 ^b -25 ^a	131.6-132.4	82.8-83.9
436	Imaginative faculty during sleep, and meaning of interpretation.	377.8- 24	292.25- 293.12	189.25 ^b - 190.16	132.5-135.1	83.10-84.6
437	[6] Physiological and psychological causes of confused dreams and deceptive visions.	377.25- 378.19	293.13- 294.13	190.17- 191.13	~ 136.7- 139.4 [§48]	~ 85-86.14 [§48] Material in part common to [§71].
438	[7] Forms of true knowledge of the unknown occurring in state of wakefulness. They	378.20- 24	294.14-23 ^a	191.14-20 ^a	136.1-6 [§47]	84.31-end of page Ġ. elaboration

Appendices

§	Topic	MF			DN	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
	are possible according to two reasons.					
439	First (psychological) reason: strength of the soul, which may do without the external senses thanks to a peculiar vividness of the internal ones.	378.25-379.9	294.23 ^b -37 ^a	191.20 ^b -192.1 ^a	135.2-end of page	84.7-21
440	Second (physiological) reason: predominance of the black bile in the temperament.	379.10-18	294.37 ^b -295.13	192.1 ^b -13	136.1-5 [§48]	84.22-31
441	[8] Forms of false divination occurring in state of wakefulness.	379.19-380.5	295.14-36 ^a	192.14-28 ^a	~136.7-138.2	~85.1-23 ^a
442	When the intellect is weak, what is in the imaginative faculty may get impressed in the common sense.	380.6-17	295.36 ^b -197.4	192.28 ^b -193.12	138.3-139.4	85.23 ^b -86.14
443	[9.1] First kind of prophetic miracles, due to the human soul <i>qua</i> human soul.	380.18-end of page	297.5-18 ^a	193.13-22 ^a	139.5-8 ^a [§49]	86.15-21 ^a [§49] Ġ. elaboration
444	The human soul is of the same substance of the celestial souls.	381.1-10	297.18 ^b -298.2 ^a	193.22 ^b -34 ^a	139.8 ^b -140.5 ^a	86.21 ^b -87.1 ^a
445	Heat, coldness, wetness and dryness provoked in the body from the pure abstract conception.	381.11-21	298.2 ^b -23 ^a	193.34 ^b -194.15 ^a	140.5 ^b -141.3	87.1 ^b -16
446	Possible extracorporeal influence of the human soul, modelled on the influence on matter of the celestial souls. Example of the camel and the cooking pot.	381.22-382.6	298.23 ^b -39	194.15 ^b -194.30	141.4-9	87.17-27

§	Topic	MF			DN	
		DUNYĀ	ALONSO	MUCKLE	MEŠKĀT	ACHENA- MASSÉ
447	[9.2] Second kind of prophetic miracles, due to the speculative faculty.	382.7-16	298.40- 299.12 ^a	194.31- 195.6 ^a	141.10- 143.5 [§50]	87.28-88.23 [§50]
448	Theoretical possibility of learning without any teaching.	382.17- 383.3	299.12 ^b -33 ^a	195.6 ^b -23 ^a	143.6- 144.2 ^a	88.24-89.2 ^a
449	Identification of the soul who learns everything without a teacher with the prophet or friend of God.	383.4-14	299.33 ^b - 300.9	195.23 ^b - 196.2	144.2 ^b - 145.3	89.2 ^b -18 Ġ. omits Avicenna's autobiographical emphasis.
450	[9.3] Third kind of prophetic miracles, due to the imaginative faculty.	383.15- 22	300.10-23	196.3-14 ^a	145.4-7 ^a [§57 (a)]	89.19-27 [§57 (a)] Ġ. omits the reference to the «holy soul».
451	Conclusion on the three classes of prophecy, and their possible combinations in actual prophets.	383.23- 384.6	300.24-32	196.14 ^b - 196.23	145.7 ^b - 146.1	89.28-90.1 ^a
452	[10] Necessary existence of the prophet.	384.7-15	300.33- 301.10 ^a	196.24-35 ^a	146.2 ^b - end of page	90.2 ^b -4 [§57 (b)] Ġ. emphasizes and expands Avicenna's very concise <i>explicit</i> .
453	Prophet as vicar of God on earth. Intermediate degrees between God and man.	384.16- end of page	301.10 ^b -24	196.35 ^b - 197.12 ^a	146.2 ^a	90.1 ^b -2 ^a
454	Conclusion and final reference to the <i>Tahāfut al-falāsifa</i> .	385.1-4	301.25-31	197.12 ^b - end of page The explicit cross-reference to the <i>TF</i> is missing.	---	---
455	Final eulogy.	385.5-7	301.32-end of page	---	---	---

Appendices

Appendix 2

Figures and diagrams in the textual tradition of the *MF* and the *DN*

TABLE List of illustrative figures in the *MF* (Arabic and Latin) and *DN* (Persian)

LEGENDA

The figures in the following table are numbered progressively (first column), their context of appearance is briefly outlined (**Topic**), and their place and paragraph of occurrence within the *MF* are indicated (**Place**). Within the section **Arabic MF**, under the subsection **editions**, letter **D** refers to *Maqāṣid al-falāsifa* = *Muqaddima Tahāfut al-falāsifa al-musammāt Maqāṣid al-falāsifa*, ed. Sulaymān Dunyā, Dār al-Maʿārif, Il Cairo, 1961; letter **K** to *Maqāṣid al-falāsifa*, ed. Muḥyī al-Dīn Ṣabrī al-Kurdī, 3 parts, al-Maṭbaʿa al-Maḥmūdiyya al-Tiḡāriyya, Cairo, 1936; letter **B** to **K**'s reprint, with corrections, by Maḥmūd Biḡū, al-Maṭbaʿa al-Saba, Damascus, 2000; under the subsection **mss. (manuscripts)**, letter **Y** refers to ms. Istanbul, Yeni Cami Kütüphanesi, 735; letter **O** to Judaeo-Arabic ms. Oxford, Bodleian Library, Huntington 592; letter **B** to ms. Berlin, Staatsbibliothek, Or. Qu. 59; under the subsection **transl. (translations)**, letter **A** refers to *Maqāṣid al-falāsifa o Intenciones de los filosofos*, traducción, prólogo y notas por M. A. Alonso, Juan Flors, Barcelona, 1963; letter **S** to the present translation (Signori). Within the section **Latin MF**, abbreviation **ed. (edition)** refers time by time to the reference edition for the relevant part of Algazel's *Summa theoricæ philosophiæ*, i.e. *Logica Algazelis*, in «*Logica Algazelis*. Introduction and Critical Text» ed. Charles Lohr, «Traditio» 21 (1965), pp. 223-290 for figure [1] (*Logic*); *Algazel's Metaphysics: A Mediaeval Translation*, ed. Joseph Muckle, St. Michael's College, Toronto, 1933 for figures [2] to [15] (*Metaphysics* and *Physics*; Muckle's edition reproduces the text and the illustrations found in ms. Vat. lat. 4481); *De anima vegetabili et animali et humana*, in «Algazel on the Soul: A Critical Edition», ed. Eva St. Clair, «Traditio» 60 (2005), pp. 60-84 for figures [14]-[15] (Muckle's and St. Clair's editions concordantly do not report these two diagrams, hence they could be considered simultaneously in the table); letter **L** indicates the Renaissance edition by Petrus Liechtenstein, as anastatically reprinted in Ghazzāli (Algazel), *Logica et philosophia Algazelis Arabis*, Venedig 1506, ed. C. Lohr, Minerva G.M.B.H., Unveränderter Nachdruck, Frankfurt, 1969; under the subsection **mss. (manuscripts)**, letter **C** refers to ms. Paris, BNF, lat. 6655; **D** to ms. Paris, BNF, lat. 16605; letter **E** to ms. Paris, BNF, lat. 6552. Within the section **DN**, **ed. (edition)** refers respectively to *Mantiq. Dānešnāme-ye ʿAlāʿī*, ed. Moḥammad Meškāt, Anjoman-e Āṭār-e Mellī, Tehran, 1331Š/[1952] for figure [1] (*Logic*); *Ilāhiyyāt. Dānešnāme-ye ʿAlāʿī*, ed. Moḥammad Moʿīn, Anjoman-e Āṭār-e Mellī, Tehran, 1331Š/[1952] for figures [2] to [11] (*Metaphysics*); *Ṭabīʿiyyāt. Dānešnāme-ye ʿAlāʿī*, ed. a cura di Moḥammad Meškāt, Anjoman-e Āṭār-e Mellī, Tehran, 1331Š/[1952] for figures [12] to [15] (*Physics*); under the subsection **transl. (translations)**, siglum **AM** refers to the complete French translation of the *DN* in Avicenne, *Le livre de science*, 2 vols., I. *Logique, Métaphysique*. II. *Physique, Mathématiques*, tr. par Moḥammad Achena et Henri Massé, Paris, Les Belles Lettres, 1955 (I), 1958 (II); **En** refers respectively to the English translations of the different sections, hence to *Avicenna's Treatise on Logic*, Part One of *Danesh-Name Alai*. A Concise Philosophical Encyclopaedia and Autobiography, edited and translated from the original Persian by Farhang Zabeeh, Martinus Nijhoff, The Hague, 1971 for figure [1] (*Logic*); to *The Metaphysics of Avicenna (ibn Sīnā)*, transl. Parviz Morewedge, «Persian Heritage Series» 13, Routledge, London, 1973 for figures [2] to [11] (*Metaphysics*); to *The Physics of Avicenna*. A translation and commentary upon the physics proper of the *Ṭabīʿiyāt* of Avicenna's *Danish Nana-i Alai*, by Jamila Jauhari, PhD diss., Fordham University, New York, 1988 for figures [12]-[13] (Jauhari does not translate the psychological

section where figures [14] and [15] might occur). Within the table, the following symbols are employed: **X** indicates the presence of the figure (in some sort of variant, further detailed in what follows) in the edition or manuscript corresponding to that column; **-** indicates the absence of the figure; round brackets (...) encompassing 'X' or '-' indicate some sort of variation or uncertainty – all detailed in the following tables, devoted separately to each illustration – about the presence (or respectively the absence) of the figure; [n] indicates that the figure appears in a note, footnote or apparatus rather than in the main text of the relevant edition; o indicates that the relevant portion of the text where the figure should occur is not copied or translated in the manuscript or edition corresponding to that column.

Each figure is then analysed separately through the various *testimonia*. For each one a **Reference formula** (how the figure is referred to in the text), a **Description formula** (how the figure is described; for these expressions and a sketch of theoretical framework see CIOCIOLA 2021) and some **Notes** are provided.

	TOPIC	PLACE	ARABIC <i>MF</i>						LATIN <i>MF</i>					DN				
			editions			mss.			transl.		ed.	mss.				ed.	transl.	
			D	K	B	Y	O	B	A	S		L	C	D	E		AM	En
1	Composition of syllogisms. Equilateral triangle	<i>Log.</i> IV, §56	X	X	X	X	X	-	X	X	X	X	X	-	o	X	X	X
2	Three-dimensionality of bodies. Generic angles	<i>Met.</i> I.1, §107	X	X	X	X	-	-	X	X	X	X	X	(-)	-	-	-	-
3	Three-dimensionality of bodies. Right angles	<i>Met.</i> I.1, §107	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X
4	Three-dimensionality of bodies. Acute/obtuse angles	<i>Met.</i> I.1, §107	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X
5	Anti-atomistic arguments. Second proof	<i>Met.</i> I.1, §112	-	-	-	X	-	-	X	X	X	X	X	X	X	X	X	X
6	Anti-atomistic arguments. Third proof	<i>Met.</i> I.1, §113	X	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X
7	Anti-atomistic arguments. Fourth proof	<i>Met.</i> I.1, §114	X	X	X	X	-	-	X	X	-	-	-	-	-	X	X	X

	TOPIC	PLACE	ARABIC <i>MF</i>						LATIN <i>MF</i>					DN				
			editions			mss.			transl.		ed.	L	mss.			ed.	transl.	
			D	K	B	Y	O	B	A	S			C	D	E		AM	En
	(square made up of separate atoms)																	
8	Anti-atomistic arguments. Fourth proof (square made up of joint atoms)	<i>Met.</i> I.1, §14	[n]	-	-	X	-	-	-	-	X	X	X	X	X	-	-	-
9	Anti-atomistic arguments. Fifth proof (stick and Sun)	<i>Met.</i> I.1, §15	-	-	-	-	-	-	-	-	-	-	-	-	X	X	X	
10	Collimation argument	<i>Met.</i> I.6, §164	[n]	X	X	-	-	-	X	-	X	X	X	X	-	-	-	
11	Another argument against spatial infinity (Mapping argument?)	<i>Met.</i> I.6, §164	X	X	(X)	-	X	X	X	X	X	-	-	X	-	X	X	-
12	Plurality of worlds	<i>Phys.</i> II.7, §354	X [n]	X	X	-	X	-	X	X	-	-	-	-	-	-	-	
13	Place of the elements (two earths in two spots)	<i>Phys.</i> II.7, §354	X	X	X	-	X	-	X	-	-	-	-	-	-	-	-	
14	Optic chiasm	<i>Phys.</i> IV, §388	X	X	X	(-)	-	-	X	X	-	-	-	-	-	-	o	
15	Cone of vision	<i>Phys.</i> IV, §389	X	X	X	X	X	-	X	X	-	-	-	-	X	X	o	

Appendices

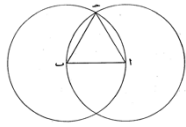
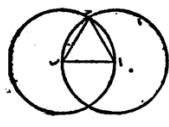
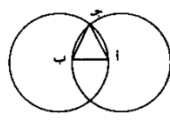


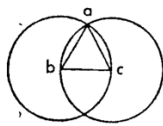
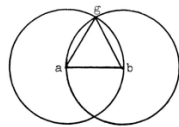
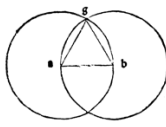

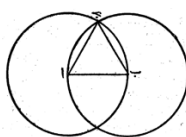
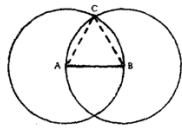
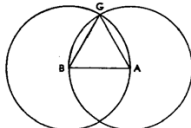
Further manuscripts

MS. Bernkastel-Kues is almost entirely devoid of figures, although a partial exception might be represented by figures [3] and [4]. Figures are entirely missing in Latin MSS. Paris, Bibliothèque Nationale de France, lat. 6443; BNF, lat. 14700; BNF, lat. 16096 (the sole *codex* with the Latin prologue of the *MF*), all of which transmit the entire *STP* (*Logic, Metaphysics, Physics*).

Arabic MS. London, British Museum, Or. 6.498 has no figures, although its copyist did leave blank spaces for them at ff. 16r (two spaces), 36r, 36v (two spaces), 38r, 38v, 39r, 55v (all folia corresponding to the section on *Metaphysics*).

For the tradition of the *MF* in both Arabic and Latin see the following *Appendix 3*.

FIGURE [1]

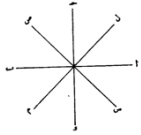

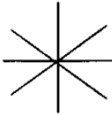
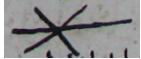




D97	K i.44	B44
		
Y 111 ^f	O 25 ^v	A54
		
Lohr 272	L 18 ^a	C 12 ^{vb} [m]
		
Meškāt 85	AM58	Zabeh 36
		

Reference formula None

Description formula The example of hierarchical ordering is the first figure by Euclid, namely the fact that when you have a line AB, and you want to build on it an equilateral triangle and establish the proof of its being equilateral, you say: «Whenever we make point A a centre, and we posit on it the spike of the compass, we open it to the point B, and we complete the circle around the centre A; and then we make point B a centre, we posit on it the spike of the compass, we open it to the point A, and we complete the circle around the centre B, the two circles are identical, since they have one [and the same] radius and they undoubtedly intersect in C. You draw therefore a straight line to the point A – which is line CA – and we [also] draw another straight line from point C to point B, which is line CB». We say, then: «This triangle, resulting from the points A, B, and C, is an equilateral triangle». Its demonstration is that lines AC and AB are equivalent, because they are both drawn from the centre of one circle to its circumference. Likewise, lines BC and AB are equivalent for a cause analogous to this, and the two lines AC and B[D98]C are [also] equivalent because they are equivalent to one and the same line, which is the line AB. The conclusion is then that the triangle is equilateral.

Notes None

FIGURE [2]

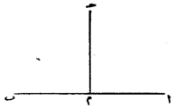
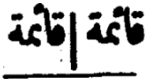
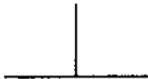

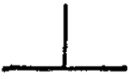


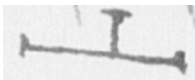
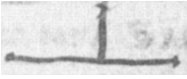
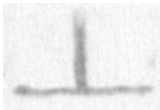
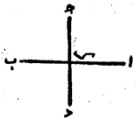
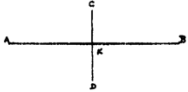
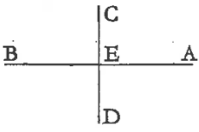
D145	K ii.11	B68
		
Y 121 ^v	A88	
		
Muckle 8	L 31 ^a	C 22 ^{ra} [m]
		

Reference formula like this | *mit^h hādā* | *ut est hoc*

Description formula many extensions not intersecting at right angles

Notes Ms. *D* leaves a blank space where the figure should have been situated. The tradition of the figure is pretty much straightforward, with the partial exception of **Muckle**, who reports in his edition a sort of Sun with undulated beams rather than a star with straight lines, and of **L**, which encircles the basic star of the Arabic and Latin manuscript tradition with a continuous circumference, thus producing a kind of wheel. While these variations are certainly unwarranted, they do not undermine the comprehension of the text.

FIGURE [3]

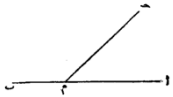
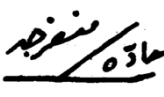
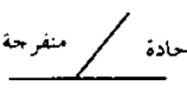
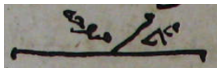
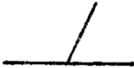

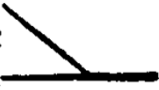
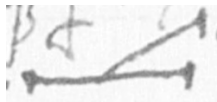


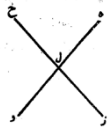
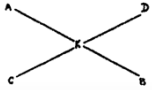
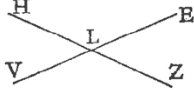
D145	K ii.11	B68
		
Y 122 ^r	A88	
		
Muckle 9	L 31 ^a	
		
C 22 ^{ra}	D 18 ^r	E 43 ^{vb} [m]
		
Mo'in 11	AM96	Morewedge 16
		

Reference formula like this | *mīt^a hādā* | *ut est h(a)ec*

Description formula The right angle is that which results from the standing of a line put in a vertical position in the middle of another [line], so that it is not inclined towards one of the two sides, in such a way that the two resulting angles on the two sides are equivalent.

Notes Alonso prints figures [2], [3] and [4] on the same line, changing without justification the order of the present and the following figure [4] (so that in his edition [4] precedes [3]). A figure identical to this one is reported by MUCKLE 1933: 152.10 also in correspondence of *Physics* II, §353. This seems however an isolated case, as I have not found that reiterated figure anywhere else in the textual tradition of the *MF* (and accordingly, I have not reported it as a separate entry in the synoptic Table reported above). The tradition of the *DN* is witness of a different version of this image, in the form of a cross (with orthogonal branches) rather than of an inverted T.

FIGURE [4]

D145	K ii.11	B68
		
Y 122 ^r	A88	
		
Muckle 9	L 31 ^a	
		
C 22 ^{ra}	D 18 ^r	E 43 ^{vb}
		
Mo'in 11	AM96	Morewedge 16
		

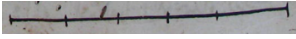




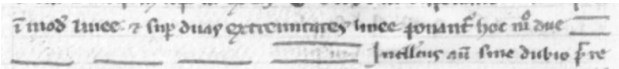
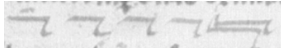
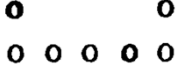


Reference formula like this | *mit^r hādā* | *sicut h(a)ec est*

Description formula When it rather has an inclination towards one side, for instance the right one [...]

Notes The image printed in the Renaissance edition L might be specular due to Renaissance printing techniques. However, Latin ms. E also transmits a figure oriented in the same direction, different from Muckle CD and not in keeping with the description formula, which prescribes an inclination toward the «right side» [Arabic *ġānib al-yamīn*, Latin *dextrorsum*].

The tradition of the DN is witness of a different version of this image, in the form of a cross (with non-orthogonal branches).

FIGURE [5]

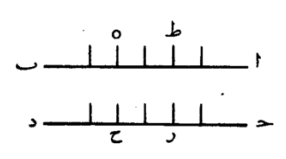
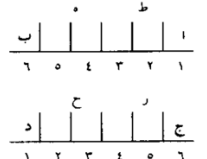
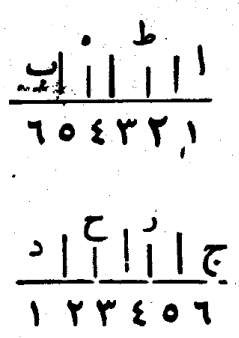
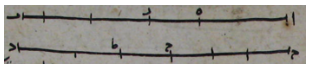
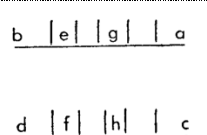
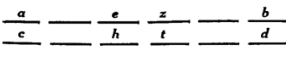
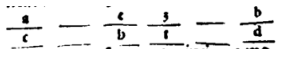
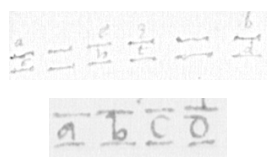
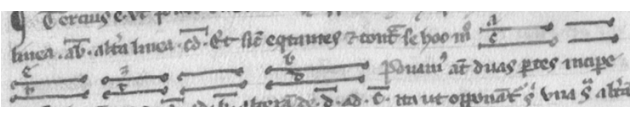

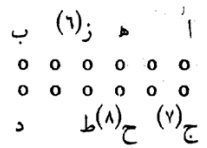
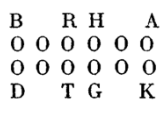

<p style="text-align: center;"><i>Y</i> 122^v</p> 	<p style="text-align: center;"><i>A</i> 90</p> 	
<p style="text-align: center;">Muckle 11</p> 	<p style="text-align: center;"><i>L</i> 32^a</p> 	<p style="text-align: center;"><i>C</i> 22^{vb}</p> 
<p style="text-align: center;"><i>D</i> 18^v</p> 		<p style="text-align: center;"><i>E</i> 44^{ra}</p> 
<p style="text-align: center;">Mo'in 17</p> 	<p style="text-align: center;">AM100</p> 	<p style="text-align: center;">Morewedge 19</p> 

Reference formula None | [*ponantur duo*] *hoc modo*

Description formula [...] we presuppose five parts, disposed in a series like if it were a line, and we fix two parts at the two extremes of the line, so that the intellect might evaluate beforehand the movement of the two parts, until they inevitably encounter [each other], and might [also] evaluate beforehand the point of their meeting, by virtue of an even movement of the two parts [...]

Notes The figure appears to be transmitted in three main variants within the textual tradition of the *MF* and *DN*, respectively depicting the two rows composed of six atoms each as: (a) a line with orthogonal short traits marking the separations between the atoms (*Y*); (b) short segments arranged in two rows, with short blank spaces marking the separations between the atoms (*Muckle*, *LCDE*); (c) small, non-contiguous circles (*Mo'in*, *AM*, *Morewedge*). Coherently with the addition of the figure with respect to the Arabic edition, the Latin tradition adds a short reference formula [*hoc modo*] absent in Dunyā's Arabic text. Curiously enough, the copyist of Latin ms. *D* drew the figure across two lines, which of course obscures at least in part the illustrative value of the diagram (which presupposes two parallel rows of atoms; cf. also *infra* figure [6] for the same graphic feature employed by the same codex). As readily seen by these indications, form (a) – despite being instantiated, in the codicological and bibliographical specimen I consulted, by just one manuscript – appears to correspond to the Arabic tradition of the *MF*; form (b) to its Latin translation; and (c) to the Persian *DN*. Building on variant form (a), and also based on the following remarks concerning figures [6]-[7]-[8], for a future critical edition of the *MF* I propose to draw the figure depicting each atom as a square, as follows:

FIGURE [6]

<p>D148</p> 	<p>B70</p> 	<p>Kii.14</p> 
<p>Y123^r</p> 	<p>A91</p> 	
<p>Muckle 11</p> 	<p>L 32^a</p> 	<p>C 23^{ra} [m]/[t]</p> 
<p>D19^r</p> 		<p>E 44^{ra}</p> 
<p>Mo'in 18</p> 	<p>AM101</p> 	<p>Morewedge 20</p> 

Reference formula according to this picture | 'alà hādā l-miṭāl' | hoc modo

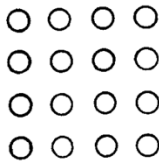
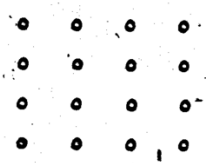

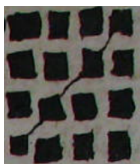
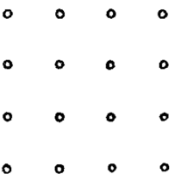
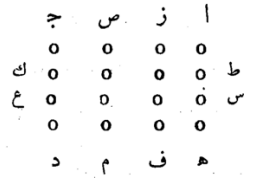
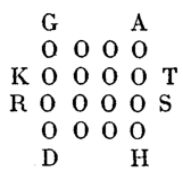
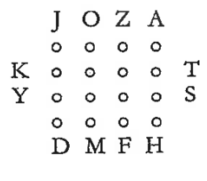
Description formula [...] we presuppose two lines, each one of the two [composed] of six parts. One of the two is the line AB, and the other one is the line CD [...]

Notes Duniyā has a long footnote at pp. 150-151 with figures progressively showing the relative motion of the two atoms, in which the atoms are depicted as contiguous rectangles. As already remarked for figure [5] above, the copyist of Latin ms. *D* drew the figure across two lines, which of course obscures at least in part the illustrative value of the diagram (which presupposes two parallel rows of atoms). Latin ms. *C* presents the figure twice, once in the main text and once in the margin.

The figure appears to be transmitted in three main variants within the textual tradition of the *MF* and *DN*, respectively depicting the two rows of six atoms each as: (a) parallel lines with orthogonal short traits marking

the separations between the atoms (**DBKAY**); (b) short segments arranged in two rows, with short blank spaces marking the separations between the atoms (**Muckle, LCDE**); (c) small, non-contiguous circles (**Mo'in, AM, Morewedge**). As already noticed *supra* as for figure [5], form (a) appears to correspond to the Arabic tradition of the *MF*; (b) to its Latin translation; and (c) to the Persian *DN*. Building on variant form (a), and also based on the following remarks concerning figures [7]-[8] (and on the preceding figure [5]), I propose to draw the figure depicting each atom as a square, as follows:

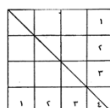
FIGURE [7]

D152	K ii.15	B71
		
Y 123 ^v	A92	
		
Moʿin 19	AM102	Morewedge 21
		

Reference formula in this way | *hakaḍā* | *hoc modo*

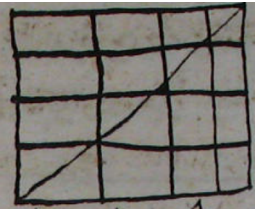
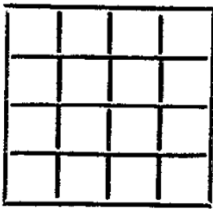
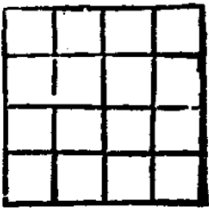
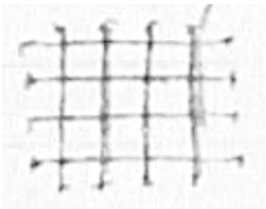
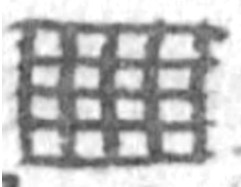
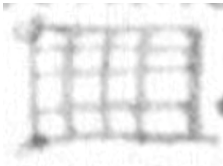
Description formula we presuppose sixteen single substances placed as to be adjacent [Arabic *mutaḡāwira*, ms. A: *mutalāṣiqa mutaḡāwira*, Latin *continu(a)e iunct(a)e*] to one another, in the form of a four-by-four square [...] We have already presupposed [the case] that they are separate [Arabic *mutafarriqa*, Latin *disiunct(a)e*]: let us [now] presuppose, then, that they stick together without any gap among them.

Notes The figure chosen by the Arabic editions, with detached atoms, seems at odds with the first, clear indication of the description formula, which mentions sixteen contiguous, adjacent atoms. In Dunyā's footnote at p. 152 the square of atoms is indeed depicted as in Figure [8] below, more precisely as follows:



However, the presence of the subsequent indication that mentions, by contrast, separate atoms might be a hint of a textual mishap that led to the loss of one of the two figures in the Arabic tradition (the one with contiguous atoms) and of the other in the Latin tradition (the one with separate atoms), while Arabic ms. Y could be a representative of a stage of the tradition in which both figures were still present.

FIGURE [8]

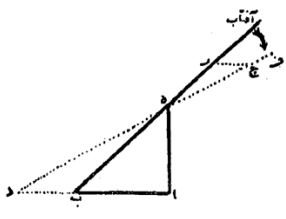
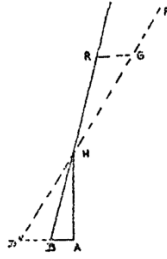
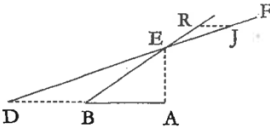
Y 123 ^v	Muckle 12	L 32 ^b
		
C 23 ^{tb}	D 19 ^r	E 44 ^{ra}
		

Reference formula None (?) (Cf. *supra*, Figure [7].)

Description formula Cf. *supra*, Figure [7].

Notes Ms. Y is the only witness, among those I was able to consult, that reports both this figure composed of contiguous squares/atoms, and the preceding one (figure [7]), composed instead of separate atoms. The Latin tradition entirely follows the model of square represented by figure [8], without known exceptions. This is strong evidence that the antigraph of the Latin tradition was at the very least of the same kind of Y – *i.e.* a manuscript reporting both [7] and [8] –, but it could also suggest, on the other hand, that it only pictured figure [8], thus being a representative of a branch of the tradition not instantiated by known Arabic manuscripts. Further and more careful inquiry on manuscripts I was not able to consult, and on the text itself, would however be needed in order to validate, or discard, this latter hypothesis.

FIGURE [9]


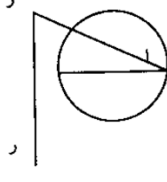
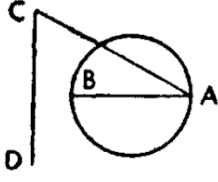
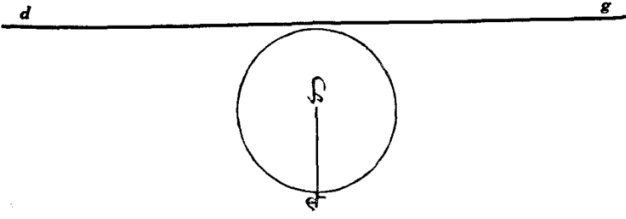

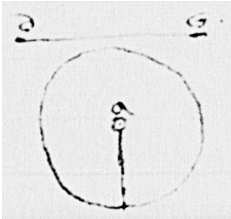
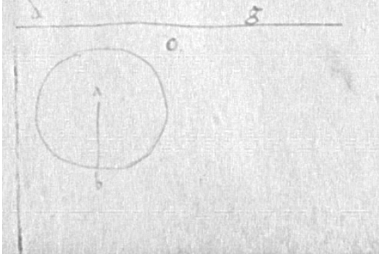
Mo'in 21	AM103	Morewedge 22
		

Reference formula /

Description formula /

Notes The figure is only present in the textual tradition of the *DN*. While the *MF* does discuss the same proof against the atoms, it seems rather clear that al-Ġazālī chose not to include the diagram illustrating that proof, either because the Persian antigraph on which he based his translation lacked it, or else because he considered it unimportant for the understanding of the argument. While the figure may appear useful to the modern reader, and could accordingly be employed in notes of commentary, it should not be included in an edition of the *MF*, since it appears to belong solely to the tradition of the Avicennan source of al-Ġazālī's work.

FIGURE [10]

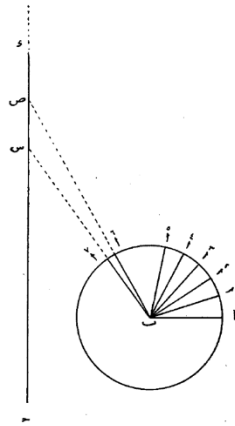
<p style="text-align: center;">K ii.48</p> 	<p style="text-align: center;">B68</p> 	<p style="text-align: center;">A124</p> 
<p style="text-align: center;">Muckle 41</p> 		<p style="text-align: center;">L 47^b</p> 
<p style="text-align: center;">C 34^{ra} [m]</p> 	<p style="text-align: center;">D 27^y [m]</p> 	

Reference formula None

Description formula if we posited a line CD, infinite in the direction of D, and we made a line AB move in its circle toward the direction of C of the line DC, until it gets in the parallelism [with] it, this is a necessarily possible setting into motion. If, then, we made it move from the parallelism to the direction of the closeness to [CD], it is inevitable that a point of it intersects [CD], [a point] that is the first of the points of the intersection. Then, after that [one], the remaining points intersect [CD], until they desist from the intersection, ending up to the parallelism from the other side

Notes Dunyā reports a detailed figure in the footnote at p. 195, as follows:

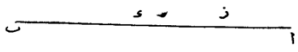
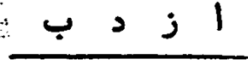
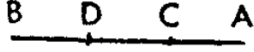

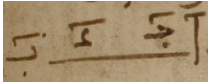
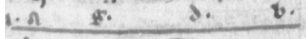

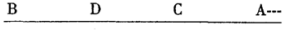

Appendices



Ms. *D* has a blank space in correspondence of where the figure should have appeared in the text, and then in the lower margin the very faint picture (perhaps drawn in pencil) which I have reported in the corresponding cell of the table. This was probably meant as some sort of preparatory sketch for the later insertion of the figure in the text, which however never happened.

The textual tradition of this illustration is clearly one of the most tormented of the entire work, as witnessed by the different forms it assumes in the various *testimonia*.

FIGURE [11]

D197	K ii.48	A125
		
O 48 ^v	B 31 ^v	D 28 ^r
		
Muckle 42	AM131	Mo'in 59
		

Reference formula None



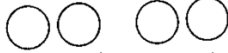
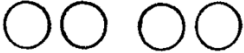
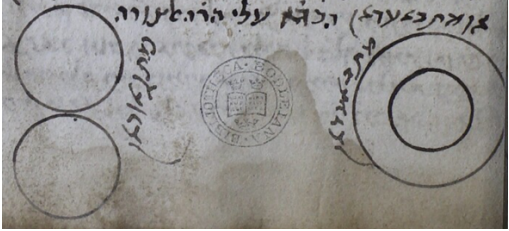
Description formula if an infinite line is possible, then let that be the line AB, [D198] infinite in the direction of B. [...] We indicate the point D.

Notes **Biḡū** 97 reduces the figure to the very bone: instead of a straight line with letters on top, the edition only prints the letters, without the base-line, as follows:

ا ز د ب

In a way, thus, the presence of some sort of 'diagram' – in the minimal sense of an alteration of the orderly style of print – is acknowledged, but the figure cannot be said to be present as such. All other witnesses coherently report, without discernible variations, the very simple diagram of a line with four letters on top.

FIGURE [12]

D332 [n]	K iii.26	B182
		
A246	O 89 ^r	
		

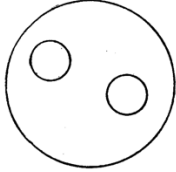
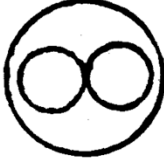


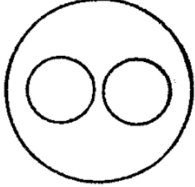
Reference formula *hakaḏā* ('like this'); it appears after the description formula only in **Bīḡū AY**

Description formula contiguous or removed from one another | *mutaḡāwirāni aw mutabā'idāni* | *sive propinqui sive remoti*

Notes The Arabic editions (and Alonso's Spanish translation) concordantly report a figure composed of four circles, coupled in twos, at greater (D) or smaller (KBA) reciprocal distance. This kind of illustration appears however inaccurate with respect to what the corresponding text seems to envisage. Judaeo-Arabic ms. O presents a different image, with two concentric circles on the right and two further contiguous circles – almost tangent to each other, in keeping with the indication *mutaḡāwirāni*, 'adjacent, contiguous' of the description formula – on the left.

Captions O |

FIGURE [13]

D333 	K iii.26 	B183 
O 89 ^v 	A247 	

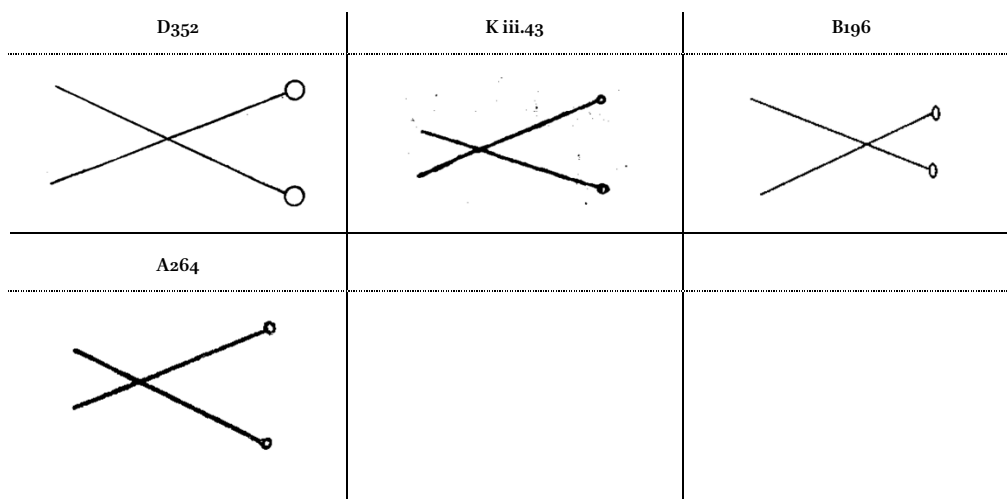
Reference formula the like of that (?) | *mit^h dālīka* (?) | *huius modi* (?)

Description formula there would be need of a third body which surrounds the [first] two and encircles them, but that as well is impossible, since it [is tantamount to] the fact that there are two earths in two spots, encircled by a surrounding [body], like the body of the Moon and the body of the elements. [These] two, indeed, are together in the sphere of the Moon, but the like of that is impossible.

Notes I have indicated the reference formula in a dubitative way, because the expression – as can be seen from the context in which it appears within the description formula – could also be interpreted as referring to a situation envisaged by the text, without the need of a proper illustration. This would seem to be confirmed by the fact that a translation of the reference formula (*huius modi*) also appears in the Latin tradition, which does not transmit, by contrast, any figure in this point. However, my translation of the last part of the description formula adds a demonstrative («[These]») in order to make sense of the syntax of the passage. If the addition is conformable to the intended meaning of the original, it might be seen as a hint for considering the entire last sentence («[These] two, indeed, are together in the sphere of the Moon, but the like of that is impossible») as some sort of reference formula for the figure. The illustration consistently appears in only one form in all witnesses reporting it, the sole variant being the presence of captions in ms. *O*, absent in the rest of the tradition.

Captions *O* | *al-muḥīṭ* («the surrounding [body]») – *ard* («earth») – *ard* («earth»)

FIGURE [14]

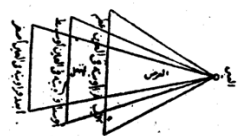

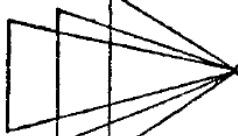
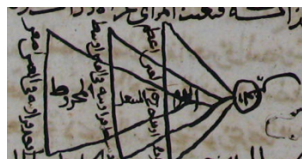

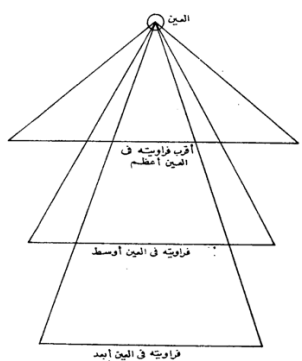
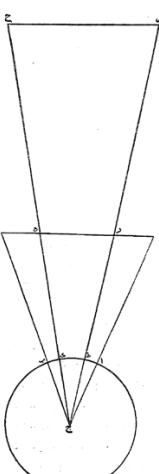
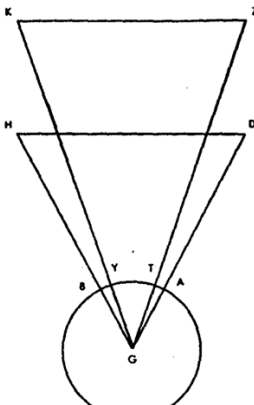


Reference formula according to this figure (lit. 'form') | '*alà hādīhi l-ṣūrat*' | [not translated into Latin]

Description formula in the intersection [Arabic *multaqan*, Latin *coniunctio*] of the two nerves hollowing out and germinating in the anterior part of the brain

Notes The Latin tradition has no figure here, and accordingly omits the reference formula. Arabic ms. *Y* also does not have a figure, but its copyist did leave some space blank in correspondence of the passage illustrated in the editions, which seems to be a confirmation of the presence of a diagram in the antigraph (although we cannot of course know exactly how the image was styled in that manuscript). However, the perfect agreement of the extant editions on the form of the figure, and the indirect witness of *Y* concerning the actual presence of an image in its antigraph, as well, lead one to grant faith to the hypothesis of the original presence, in al-Ġazālī's *MF*, of a very similar figure depicting the optic chiasm. Here, the two small circles at the right end of the crossing branches represent the eyes, while the crossing lines themselves depict the optic nerves. The sentence I quoted as a description formula can be considered as a proper description of the figure because of the word «intersection» (also 'confluence', 'convergence', 'junction'), which is indeed illustrated with the crossing of the two lines representing the nerves.

FIGURE [15]

<p style="text-align: center;">K iii.43</p> 	<p style="text-align: center;">B68</p> 	<p style="text-align: center;">A265</p> 
<p style="text-align: center;">Y186^f</p> 	<p style="text-align: center;">O 99^v</p> 	
<p style="text-align: center;">D353</p> 	<p style="text-align: center;">Meškāt 94</p> 	<p style="text-align: center;">AM61</p> 

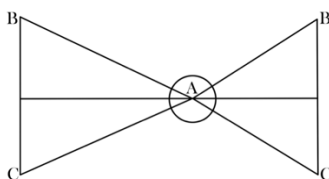
Reference formula This is its figure | *wa-hāḍihi šūrat^u-hu* | [not translated into Latin]

Description formula The stimulated [thing], and namely the air, is conic in shape, its basis being the surface of the perceived [object], while its vertex ends up in the seeing spirit. Its vertex is a three-dimensional angle, which is in truth the perceiver. When then the surface of the seen [object], which is the basis of the cone, increases in distance from the eye, the cone lengthens and its angle becomes small, I mean its vertex which ends up in the pupil. The farther away is the surface of the seen [object], I mean the basis of the cone, the more the cone lengthens, and by means of its lengthening its vertex is made thin, namely the angle perceived in truth becomes smaller, until it ends in the smallness up to a limit [such] that the visual faculty is not strong [enough] for its perception, so that the seen [object] is withdrawn from the perception.

Notes

Two main variants of this figure – which aims to illustrate the apparent relative size of seen objects in function of the distance from the observer – are discernible in the extant tradition: (a) a version enriched with captions (instantiated by editions **KBD**, as well as by mss. **YO**), which are present either (a.1) to a greater extent (**KDY**) or (a.2) to a lesser one (**BO**); (b) a version without captions, either (b.1) with letters (textual tradition of the **DN**) or (b.2) without further graphical intervention at all (**A**). To this basic distinction, a second and probably less important one, based on the spatial orientation of the illustration, can be added, thus distinguishing a horizontal model (**KBAYO**) from a vertical one (**D**, **Meškāt**, **AM**). To a closer look, the differences of the various versions of the image reveal however to be many more. In particular, the Persian tradition of the **DN** (**Meškāt**, **AM**) represents the eye with a much bigger circle than the Arabic tradition of the **MF** does. More precisely, **KBA** almost reduce that circle to a single point, thus eliminating any function it might have had in the original illustration. **D**, together with the Arabic mss. **YO**, shows on the contrary a well-distinguishable circle, although smaller than in the Persian tradition of the **DN**. Likewise, the straight lines – placed at different distances from the circle/eye – which represent in the illustration the objects of sight are sometimes reproduced in the tradition as having different lengths. More precisely, they are increasingly smaller with the increasing of the distance from the eye. This feature is most noticeable in **A** and in **O**, but also **K** and **D** might be cases in point. Such a representation seems however to be simply wrong, because it is not the absolute size of the object that decreases with the distance, but rather its apparent size as perceived in the eye of the observer. In this regard, the representation of a bigger circle of the eye in the Persian text seems to be on point, because it allows to show that the arcs of circle individuated on the circumference of the eye are indeed smaller when the object is farther removed from the observer, while they become longer when the object is closer, in keeping with the perceptual phenomenon that the figure aims to illustrate. The equal length of the bars representing the objects in themselves (outside the eye) seems likewise indispensable, if one is to make sense at all of the necessity to account for the variation in size experienced in human perception (within the eye), since there would be no need of a further explanation if the seen objects were already different in reality, and not only in the eye of the observer. The possible reason of the mistaken representation of **A** and **O** is very interesting in terms of a possible future ‘philology of illustrations’: as a matter of fact, the representation itself of the increasingly ‘thinner’ triangles produces a likeness of a well-known effect of misperception, the Ponzo illusion (Ponzo 1910), that leads the observer to see the basis of the longer triangle as shorter than the basis of the flattest one, even though they are actually equal. Without paying the due amount of attention to the accompanying text, a copyist, or even an editor and translator as careful as Alonso, could thus easily misrepresent the basis of the triangles as longer and shorter due to a mere, and insidious, error of perception.

Interestingly, a very similar illustration – albeit arranged differently, with the eye in the centre and the nearer and farther objects respectively on the left and on the right – is to be found within Albert the Great’s treatment of vision in his *De sensu et sensato* 1.1.14, ed. Colon.: 53:



Appendix 3

Tradition of the *MF*

I. ARABIC TRADITION

Manuscripts

BERLIN, Staatsbibliothek, Or. Qu. 59 (XIV *in.*)

AHLWARDT 1892: 394-396 (n. 5059). Mancano 6 foll. dopo il fol. 22 e 8 dopo il fol. 74. ALONSO 1963: xix. BEER 1888: 2 mentions the name of the copyist (or perhaps of the owner) of the ms., Ibrahīm ibn Sa'īd ibn 'Alī al-Dakkālī (from Dakkāla, or Dukkāla, a town in Mağrib).

fol. 2 ^r -83 ^v	<i>Maqāšid al-falāsifa</i> , adesp.
fol. 2 ^r	Title: <i>Safr fī-hi muqaddimāt al-mantiq</i> (sul titolo corretto, eraso)
fol. 2 ^v	incipit (Prologue)
fol. 3 ^r	M[antiq] = Logic (<i>al-qawl fī al-mantiq</i>)
fol. 21 ^v	I[lāhiyyāt] = Metaphysics (<i>al-'ilm al-mulaqqab 'inda-hum bi-l-ilāhī</i>)
fol. 63 ^r	T[abī'iyāt] = Physics (<i>al-ṭabī'iyāt</i>)
fol. 83 ^v	explicit

DUBLIN, Chester Beatty Library, Ar. 5328 (XII)

ARBERRY 1964 (vii): 101-102 (erroneously registered as a copy of Nağm al-Dīn al-Kātibī al-Qazwīnī, *Ḥikma al-'ayn*). SHIHADÉH 2011: 80-84.

fol. 1 ^v -105 ^v	<i>Maqāšid al-falāsifa</i> : from M 1, without prologue and introduction to the Logic; the conclusive sentence is also missing (all explicit references to the <i>TF</i> are systematically omitted)
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CAIRO, Dār al-Kutub al-Azhariyya, 86/27143 *Ḥikma wa-Falsafa* (XV)

DUNYĀ 1961: 25. Undated, but Dunyā refers an opinion by Abū l-Wafā al-Murāğī of the Azhar Library to the effect that the script of the codex is compatible with the 8th century H.

fol. ?	<i>Maqāšid al-falāsifa</i>
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ISTANBUL, Yeni Cami Kütüphanesi, 735 (XII)

TF, ed. BOUYGES 1927: xii [siglum Y]. Database *PhiC*. End of copy in October 1163. 182 ff., 20-22 ll. per fol. Nashī script. Copyist: Aḥmad ibn 'Alī.

fol. ?	<i>Tahāfut al-falāsifa</i>
foll. 93-198?	<i>Maqāšid al-falāsifa</i>

Appendices

LONDON, British Museum, Or. 6.498 (XVI)

ELLIS-EDWARDS 1912: 9. BOUYGES 1921: 398. ALONSO 1963: xix declares to have used it on occasions to check the text of the edition by KURDĪ 1913. Small format, elegant, small and perfectly readable handwriting; modern paging, dated at f. 143^v to April 1903. 17 lines per folium. Occasional marginal notes of the same hand. Rubricated details, as well as some titles of sections and subsections. Some internal subdivisions of the text are supralined.

fol. 143 *Maqāṣid al-falāsifa*

OXFORD, Bodleian Library, Huntington 592 (1474-1485)

ALONSO 1963: xix; NEUBAUER 1886: 477 n. 1338. Judaeo-Arabic transcription. Digitized in Polonsky Foundation Digitization Project, section «Hebrew Manuscripts». This is one of the two manuscripts employed by BEER 1888, together with the Berlin codex. Subscribed as *zakāt al-nufūs*, which conceals Saʿīd ibn Daʿūd al-ʿAdanī al-Isrāʾīlī al-Rabbānī, who – as noticed by Steinschneider – liked to disguise himself under mysterious names: cf. BEER 1888: 2. See also STEINSCHNEIDER 1893^b: 348 for the interpretation of Saʿīd ibn Daʿūd's self-ascription of the work as an authentic case of plagiarism («Plagiat») and forgery («Betrug»). (Schriften der Arabern in hebräischen Übersetzungen).

fol. 111 *Maqāṣid al-falāsifa*

PARIS, Bibliothèque Nationale, ar. 202 (?)

Database *PhiC*. «Une notice de d'Herbelot, complétée par J. Ascari. Provient de la Bibliothèque de Philippe Hurault, acquise en 1622. — Marque de lecture de Buṭrus ibn Dīb al-Ḥalabī, datée de 1677 (f. 1)» (cf. BNF online).

fol. 13^r-15^v *Maqāṣid al-falāsifa*, T 5: *Fī mā yaḥḏu ʿalā al-nufūs min al-ʿaql al-faʿāl*, acef. (Dunyā 372.9-377.17) [missing D371-372.8]

fol. 39^r-42^v *Maqāṣid al-falāsifa*, T 5: *Fī mā yaḥḏu...* (Dunyā 377.17-385.5) [missing D385.6-7]

CITTÀ DEL VATICANO, Biblioteca Apostolica Vaticana, Vat. ar. 357 (XIV m.)

BOUYGES 1927: xvi: «ce n'est pas un Tahāfot...c'est un Maqāṣid al-Falāsifat (même *incipit* que dans le ms arabe de Berlin n° 5059 d'Ahlwardt)». LEVI DELLA VIDA 1935: 36. PROVERBIO 2010: 475.

fol. 24^r-134^r *al-Maqāṣid fī ʿilm al-kalām = Maqāṣid al-falāsifa*

Editions

BEER *Makaṣid al-Falāsifat I. Teil – Die Logik, Cap. I–II, hrsg. und übersetzt G. Beer, Brill, Leiden, 1888*

Sixteen pages of Arabic text, with German translation and scanty annotation. Based on MSS Berlin and Oxford listed above

KURDĪ Muḥyī al-Dīn Ṣabrī al-Kurdī *Maqāṣid al-falāsifa*, 3 parts, al-Maṭbaʿa al-Maḥmūdiyya al-Tiḡāriyya, Cairo, 1913

ALONSO 1963: xix describes it as «un pequeño volumen de 328 págs. de 17 líneas». Second edition in 1936. Reprinted in BĪĠŪ 2000. According to BOUYGES 1921: 398, «cette édition n'est point une "édition critique". Ni les anciennes traductions, hébraïques ou latine, n'ont été utilisées, bien entendu; ni même le travail de Beer; ni les manuscrits de Berlin et Oxford dont Beer s'était servi en 1888, non plus que le manuscrit *Or.* 6498 (du XVI^e s.), acquis par le British Museum en 1903. Mais l'édition semble faite avec soin [...] l'édition égyptienne est bonne. Mais elle ne rendrait pas inutile une édition critique éventuelle».

DUNYĀ Sulaymān Dunyā, *Muqaddima Tahāfut al-falāsifa al-musammāt Maqāsid al-falāsifa*, Dār al-Ma'ārif, Cairo, 1961

Based on the preceding edition by KURDĪ and on MS Cairo, Dār al-Kutub al-Azhariyya, 86/27143 ḥikma wa-falsafa.

II. LATIN TRADITION

Catalogue of the manuscripts of the *Summa theoriae philosophiae*

ASSISI, Biblioteca comunale, 663 (XIII)

MAZZATINTI (IV) 1894: 129. *Aristoteles Latinus, Codices II*, Cambridge, 1955, n. 1267.

fol. 146-186 Incipit liber Algazel de summa theoriae philosophiae translatus a magistro Iohanne et Dominico archidiacono in Toletto de arabico in latinum.

BASEL, Öffentliche Bibliothek der Universität, D. III.7 (XIII m.)

D'ALVERNY 1966^a: 322-323 = *ALC* 1994: 185-186. LOHR 1966: 444. ST. CLAIR 2005: 48.

fol. 3^r-92^r AVICENNA, De anima (cum praef. translatoris)
 92^v «Tabula rerum notabilium, manu posteriori, saec. XIII ex.» (*ALC* 185) – ff. 93^r-94^v
vacant
 95^r-166^v Metaphysica: Incipit Methaphysica Agazelis (rubr.)
 Physica: Capitulum loquendi de naturalibus
 166^v-168^r AVICENNA, Metaphysica, III, 5: Incipit capitulum de numero secundum
 Auicennam in prima philosophia (rubr.). – fol. 168^v *vacat*
 169^r «Tabula rerum notabilium, manu posteriori»

BERLIN, Staatsbibliothek, Lat. Qu. 546 (*olim* Phillipps 10125) (XIII)

D'ALVERNY 1969: 277 = *ALC* 1994: 289. MINNEMA 2013: 83; 308.

fol. 1^r-6^v Logica¹: Incipit loyca Auicenne (rubr.)

¹ See MINNEMA 2013: 83: «[It] is the only manuscript to possess the STP as its sole text, though it contains the *Logica* alone (f.1r-6v) and ends abruptly (Lohr, "Logica Algazelis," 239 -250), suggesting that it may have been part of a larger manuscript at one time».

BERNKASTEL – KUES, St. Nikolaus Hospital, 205 (XIII/XIV)

MAZZATINTI 1894: 129. *Aristoteles Latinus, Codices II*, Cambridge, 1955, n. 1267. D'ALVERNY 1967: 315-318 = *ALC* 1994: 191-194.

- fol. 49^r-80^v AVICENNA, *Metaphysica*
 81^r-98^v AVICENNA, *Physica*
 99^r-120^r AVICENNA, *De anima* (cum praef. translatoris)
 124^r-126^r Logica: Incipit Logica Algazelis
 126^r-133^v *Metaphysica – Physica: inc. Usus fuit apud philosophos... – Explicit liber de universali philosophia Algazel*

EDINBURGH, University Library, 134 (D.b.II.7) (XIII ex./XIV)

BOLAND 1916: 211. D'ALVERNY 1969: 260-261 = *ALC*, 1994: 272-273.

- fol. 1^r-6^v Logica: Capitulum de hiis que debent proponi...
 6^v-20^v *Metaphysica: Usus fuit apud philosophos preponere naturalem scientiam...*
 20^v-30^r *Physica: Iam diximus... – ...de scientiis philosophorum, logicis, diuinis et naturalibus*

ERFURT, Universitäts- und Forschungsbibliothek, C. Amplon. F. 331 (XIV in.)

SCHUM 1887: 227 ff. D'ALVERNY 1967: 321-323 = *ALC* 1994: 197-199. LOHR 1966: 444. MUCKLE 1933. ST. CLAIR 2005: 48 ff.

- fol. 30^r-61^v AVICENNA, *Metaphysica: De cognitione intentionum sapiencialium* (rubr.)
 61^v-62^r «Index capitulorum *Metaphysicae Auicennae*»
 82^r-96^r *Metaphysica: Metaphysica Algazelis, «titulus miniatus in summa pagina»*
 96^r-103^v *Physica: Iam diximus quod ea que sunt... – Explicit Methaphysica Algazelis*

ERFURT, Universitäts- und Forschungsbibliothek, C. Amplon. Q. 291 (XIV)

SCHUM 1887: 531 ff. LOHR 1966: 444. ST. CLAIR 2005: 48.

- fol. 63^r-90^r *Metaphysica*
 91^r-94^r *Directorium (to Metaphysics)*

FIRENZE, Biblioteca Nazionale Centrale, Magliab. Cl. V 45 (XV)

MAZZATINTI 1902-1903: 128.

- fol. 1^r-15^v Logica: Incipit Algazel (rubr.) (a brief text *De motu* precedes the *Logic inc.: Capitulum de his que debent proponi...* (rubr.)
 15^v-52^v *Metaphysica: Incipit tractatus de scientia apud philosophos que vocatur diuinarum* (rubr.)
 52^v-72^r *Physica: Capitulum loquendi de naturalibus... – ...hoc igitur est quod nos volumus inducere de scientiis philosophorum*
 72^r-73^r AVICENNA, *Metaphysica*, III, 5: *De numero secundum Auicenni (sic) in phisica propria (!). Capitulum de certitudine quiditatis numeri...* (rubr.)

GÖTEBORG, Universitätsbibliothek, Lat. 8 (XIII)

Aristoteles Latinus, Codices II, n. 1699. KLEBERG 1941: 20-22. D'ALVERNY 1969: 250-253 = *ALC* 1994, pp. 262-265. ST. CLAIR 2005: 48.

- fol. 127^r-155^v AVICENNA, De anima, «cum prologo translatoris»: Incipit commentum Auicenne de anima et de eius viribus et hec est quinta (*sic*) pars tractatus de doctrina naturalis scientie, qui est secundus tractatus de libro Sufficientie (rubr.)
- 155^v-187^v AVICENNA, Physica: Commentum Auicenna (*sic*) super librum Aristotilis
- 189^r-203^v Metaphysica (acef.) + fol. 201 bis
- 203^v-207^r Physica (incompl.)
- 215^r-221^r Ps. AVICENNA, De caelo et mundo

GRAZ, Universitätsbibliothek, 482 (XIII ex.)

Die Handschriften der Universitätsbibliothek Graz I, Leipzig, 1942, pp. 281-286. *Aristoteles Latinus, Codices* I, Cambridge, 1955, pp. 263-265, n. 57. D'ALVERNY 1966^a: 310-317 = *ALC* 1994: 173-180.

- fol. 107^r-110^v AVICENNA, Logica, Isagoge
- 111^r-131^v AVICENNA, Physica
- 135^r-141^r Logica: Capitulum de hiis que debent proponi...
- 141^r-159^r Philosophia, liber primus [Metaphysica]: Usus fuit apud philosophos preponere...
- 160^r-169^v Philosophia, liber secundus [Physica]: Iam diximus quod ea que sunt diuiduntur in substantiam et accidens... – ...logicis, diuinis et naturalibus.
- 241^v-242^r AVICENNA, Meteora (last chapter)

LAON, Bibliothèque municipale, 412 (XIII ex.)

Catalogue général des manuscrits des Bibliothèques publiques, Quarto series I, Paris, 1849, pp. 213-217. *Aristoteles Latinus, Codices* I, Cambridge, 1955, pp. 471-473, n. 482. D'ALVERNY 1961: 295-301 = *ALC* 1994: 15-21; D'ALVERNY 1965: 271. SALMAN 1935-1936: 122. «Notae marginales manu septentrionali contemporanea, ff. 70-136» (*ALC* 1994: 20).

- fol. 70^r-87^v Metaphysica (adesp.): Liber primus Methaphisici (*sic*) Algazelis
- 87^v-88^v Physica (solo il trattato sul movimento, anepigr.)
- 102^r-135^r AVICENNA, De anima (cum praef. translatoris)
- 135^r-136^r Ps. AVICENNA, De caelo et mundo (incompl.)
- 137^r-144^r Logica (ascritta ad Avicenna): Logica Auis<cene>
- 144^r-178^r AVICENNA, Physica
- 180^r-228^r AVICENNA, Metaphysica, versio emendata

LONDON, British Library, Royal 15.B.iv (XII/XIII)

WARNER-GILSON 1921: 153-155, esp. 154. D'ALVERNY 1965: 271 = *ALC* 1994: 136. Cf. Liechtenstein 1506 (*infra*), ff. 1^r-13^v.

- fol. 72^r-75^r Logica (adesp., fino a V, 107)

MILANO, Biblioteca Ambrosiana, T91 Sup. (XIII m.)

D'ALVERNY 1963: 236-239 = *ALC* 1994: 69-72.

Appendices

fol. 13^r-20^r Metaphysica (fragm.): Incipit Metafisica Algazelis (rubr., the sole one in the MS)

MODENA, Biblioteca Estense - Universitaria, Estense, Lat. 401 = alfa.K.3.27 (XV)

ZACCARIA-GABARDI-LOMBARDI S.D.: c. 249r. DI PIETRO 2010 on Manus OnLine
(https://manus.iccu.sbn.it/opac_SchedaScheda.php?ID=166351).

fol. 2^r-20^v Logica (Loyca Algacelis, 2^r): Quod autem proponi debet hoc est... – ...ostendere et facere intelligi de logyca.

fol. 21^r-93^r Metaphysica (Methafisica): Usus fuit apud philosophos praeponere naturalem scientiam... – phylosophorum loyis divinis et naturalibus.

NEW YORK, Pierpont Morgan Library, 857 (già ADMONT, Stiftsbibliothek, 487) (XIII/XIV)

Aristoteles Latinus, Codices I, Cambridge, 1955, pp. 253 ss., n. 34. ALONSO 1963: xx. D'ALVERNY 1966^a: 305-308 = *ALC* 1994: 168-171. Detailed description available online.

fol. 16^r-16^v AVICENNA, Excerpta Metheororum

84^r-98^r Physica: Iam diximus quod ea que sunt... — ...loycis, diuinis et naturalibus

OXFORD, Bodleian Library, Lat. misc. B. 18, n. A (XIV)

D'ALVERNY 1965: 293-296 = *ALC* 1994, pp. 15-21. LOHR 1966: 445. ST. CLAIR 2005: 49.

fol. 42^r Metaphysica (fragm.): Capitula Metafisice Algazelis – «fol. 42^v vacabat; figura circuli addita est manu posteriori» (*ALC*, 161)

46^r-48^v Physica (fragm.)

OXFORD, Bodleian Library, Digby 217 (XIII)

MACRAY 1883: 230-231. D'ALVERNY 1965: 276-280 = *ALC*, 1994: 141-145: «Notae marginales sive eiusdem aetatis sive saec. XIV». LOHR 1966: 444. MINNEMA 2013: 68-69, 92 fn. 20, 308, 334-337.

fol. 2^r-45^v AVICENNA, De anima (acef., «cum praefatione translatoris in fine»)

46^r-64^v AVICENNA, Physica: Sufficientia Auic<enne>

95^r-96^v AVICENNA, De universalibus (Logica, Isagoge, I, c. 11): Incipit liber Auendauth de uniuersalibus asumptus ex quinto Methaphisice Auicenne

117^v-127^r Logica: Incipit Logica Algacelis (rubr.)

132^r-176^v AVICENNA, Metaphysica

OXFORD, Merton College, O.2.1 (*iam* 285) (XIII/XIV)

COXE 1852: 113. POWICKE 1931: 142, n. 389. THOMSON-WILSON 2009. D'ALVERNY 1965: 288-289 = *ALC* 1994: 153-154. LOHR 1966: 445.

fol. 1^r-5^v Logica: Incipit Logica Algazelis («titulus additus in summa pagina manu paulo recentiore»)

- 5^v-12^v Physica: Incipit phisica Algazelis in qua continentur 4. tractatus quorum primus est de motu et loco et de tempore et yle; secundus de corporibus simplicibus; tertius de commixtis et quartus est de anima (rubr.)

PARIS, Bibliothèque Nationale, lat. 6443 (XIII ex.)

Catalogus codicum manuscriptorum Bibliothecae Regiae III 4, Paris, 1744, p. 244. *Aristoteles Latinus, Codices I*, Cambridge, 1955, pp. 517-519, n. 583. D'ALVERNY 1961: 310-314 = *ALC* 1994: 30-34. MUCKLE 1933: viii ff. SALMAN 1935-1936: 121.

- fol. 2^r-44^r AVICENNA, Metaphysica, versio emendata
 44^r-69^r AVICENNA, Physica: Liber 1 Phisicorum Avicenne (marg.)
 70^r-90^v AVICENNA, De anima (cum praef. translatoris)
 90^v-96^r Ps. AVICENNA, De caelo et mundo
 101^r-142^v AVICENNA, De animalibus: Incipit Abreviatio Avicenne libri animalium
 142^r-157^r Metaphysica: Liber 1^{us} Metaphisice Algazelis (marg.)
 157^v-165^v Physica: Incipit Phisica Algazelis
 202^r-208^r Logica: Incipit Logica Algazelis; in alio incipit Logica Auicenne
 208^r-220^v AVICENNA, Logica: Capitulum de excitando ad scientias Auicenne (rubr.)

PARIS, Bibliothèque Nationale, lat. 6552 (XIV)

Catalogus codicum manuscriptorum Bibliothecae Regiae III 4, Paris, 1744, p. 255. *Aristoteles Latinus, Codices I*, Cambridge, 1955, pp. 522 e ss., n. 589. MUCKLE 1933: ix. SALMAN 1935-1936: 121. D'ALVERNY 1969: 261-263 = *ALC* 1994: 273-275. MINNEMA 2013: 275-279. Marginal notes.

- fol. 43^r-55^r Metaphysica: Incipit liber philosophie Algazer (*sic*) translatus a magistro Dominico archidiacono Sedobiensi (*sic*) apud Toletum ex arabico in latinum (rubr.)
 55^r-62^r Physica: Incipit primus tractatus de philosophia naturali (rubr.)

PARIS, Bibliothèque Nationale, lat. 6655 (XV ex.)

Catalogus codicum manuscriptorum Bibliothecae Regiae III 4, Paris, 1744, p. 265. D'ALVERNY 1969: 265-266 = *ALC* 1994: 277-278. Watermarks as in Briquet 3391.

- fol. 1^r-19^r Logica: Incipit liber Agazelis super logicam
 19^r-65^r Metaphysica: Incipit tractatus de scientia que apud philosophos dicitur diuina secundum Agazelis (rubr.)
 65^r-66^v *in margine*: Tractatus quintus de hoc quomodo omnia habent rem a primo...
 65^r-92^r Physica: Scientia naturalis (rubr.) — ...de scientiis philosophorum logicis, diuinis et naturalibus. Finit Argazellis opus
 92^r-94^r AVICENNA, Metaphysica, III, 5: Capitulum de certitudine quiditatis numeri et diffinitione suorum (!) specierum et manifestatione principiorum eius

PARIS, Bibliothèque Nationale, lat. 14700 (XIII ex.)

Aristoteles Latinus, Codices I, Cambridge, 1955, pp. 544 e ss., n. 640. MUCKLE 1933: ix. SALMAN 1935-1936: 121. D'ALVERNY 1969: 266-270 = *ALC* 1994: 278-282. According to Muckle, it presents corrections written by a second, later hand.

- fol. 2^r-39^v Metaphysica: Incipit Methaphisice liber Argazelis cum naturalibus eiusdem (rubr.)
 39^v-61^r Physica: Explicit Methaphisica Argazelis. Incipit eius Phisica. Capitulum loquendi de naturalibus (rubr.) – fol. 61^v *vacat*
 62^r-76^r Logica: Logica physica Algazelis (in the upper margin of the page, hand XV sec.)

PARIS, Bibliothèque Nationale, lat. 16096 (ca. 1280²)

DUIN 1954: 167-170. DUIN 1959: 151-160. D'ALVERNY 1962: 220-222 = *ALC* 1994, pp. 40-42. MUCKLE 1933: vii. SALMAN 1935-1936: 118-120. Marginal glosses by Godfrey of Fontaines. It is the sole known manuscript to transmit the Prologue of the *MF* in its Latin version.

- fol. 1^r-71^r AVICENNA, Metaphysica: Liber Auicenne de philosophia prima siue scientia diuina
 71^v-72^v AVICENNA, De universalibus (Logica, Isagoge, I, c. 11)
 74^r Prologus: Incipit liber Algazelis quem intitulauit De philosophorum intentionibus et primo de Logica. Inquit Abuhamidin Algazelin: Grates sint Deo... Petisti a me... — ...et ipsius inductione.
 74^r-83^v Logica: De premittendis in Logica
 83^v-107^v Metaphysica: Incipit liber Philosophie Algazelis
 108^r-120^v Physica: Incipit tractatus Algazelis de scientia naturali...

PARIS, Bibliothèque Nationale, lat. 16605 (*olim* Sorb. 842; 1211) (ca. 1240)

D'ALVERNY 1962: 230-231 = *ALC*, 1994, pp. 50-51. MUCKLE 1933: viii. SALMAN 1935-1936: 119-120.

- fol. 1^v Titulus (XIII ex.): *inc.* Logica Algazelis. Item eiusdem Meth. continens libros 5 [...]
 2^r-15^v Logica
 16^r-52^v Metaphysica
 52^v-70^v Physica

PRAGA, Knihovna Metropolitní Kapituli [Bibliotheca Capituli Metropolitani], L. LXXVII (L.77) (1323) (XIII)

D'ALVERNY 1972: 324-328 = *ALC* 1994: 331-335. ST. CLAIR 2005: 49. MINNEMA 2013: 210 fn. 83: «Prague 1323, f. 115r-117v possesses only the chapters on eternal happiness (Algazel, Metaphysics, 185-186), eternal suffering (186-188), the ability of perform miracles (193-196), and the facility to prophesy (196-197)».

- fol. 115^r-117^r Physica (estratti): Incipit capitulum Agazel de felicitate et cruciatu anime (rubr.)

² Per ragioni paleografiche (tipologia dei compendi, scrittura di alcune lettere) MUCKLE 1933, p. vii, lo considera più tardo (XIV/XV secolo), senza peraltro precisare ulteriormente la datazione.

PRAGA, Knihovna Metropolitní Kapituli (Bibliotheca Capituli Metropolitani), O. 1 (1585) (XV)

PODLAHA 1910: 452-453. D'ALVERNY 1972: 329 = *ALC* 1994: 336. ST. CLAIR 2005: 49. Cf. MUCKLE 1933: 183-197.

fol. 1^r-5^r Physica: Tractatus quintus de eo quod fluit in animam ab intelligentia agente

ROMA, Biblioteca Angelica, 242 (C.4.10) (XIII/XIV)

NARDUCCI 1892: 138-140. *Aristoteles Latinus, Codices* II, Cambridge, 1955, n. 1450. D'ALVERNY 1963: 244-247 = *ALC*, 1994, pp. 77-80. SALMAN 1935-1936: 122. Some marginal notes by an expert of natural philosophy (*ALC* 1994: 79).

fol. 1^r-7^v Summa philosophiae [Metaphysica + Physica]: Incipit liber Agaçel summi philosophi in diuina et naturali scientia (rubr.) — Explicit liber Agaçel summi philosophy (rubr.).

24^r-24^v AVICENNA, De universalibus (Logica, Isagoge): Incipit Euendut (rubr.).

TODI, Biblioteca Comunale, 90 (XIV *in.*)

D'ALVERNY 1964: 272-274 = *ALC*, 1994: 107-109. MUCKLE 1933: 1-4. ST. CLAIR 2005: 49.

fol. 1^r-44^r AVICENNA, Metaphysica: [P]ostquam autem, auxilio Dei, expleuimus tractatum de intentionibus scientiarum logicarum et naturalium et doctrinalium...

47^r-74^r AVICENNA, Physica

75^v-108^v AVICENNA, De anima (cum praef. translatoris)

112^v-113^r Metaphysica (only the beginning)

TOLEDO, Biblioteca del Cabildo, 47-15 (XIII)

Aristoteles Latinus, Codices II, n. 1234. MILLÁS VALLICROSA 1942: 55-64, in part. 58-59. D'ALVERNY 1968: 314-326 = *ALC*, 1994, pp. 233-245. Change of hand after fol. 111. MUCKLE 1933.

fol. 88^v-90^r Metaphysica (fragm.): Incipit Metafisica Agazelis (rubr.)

90^r-90^v Compendium Metaphysicae Algazelis (ascribed to Avicenna): Metaphisica Auicenne (rubr.)

90^v-91^v AVICENNA, Metaphysica (estratti: I, 1; VII, 1)

91^v-92^r Ps. AVICENNA, De caelo et mundo: De celo et mundo ab Auicenna (rubr.) (compendium)

92^r-94^v AVICENNA, Physica (Abbreviatio)

UPPSALA, Universitetsbiblioteket [Bibliotheca Regalis Universitatis], C. 647 (XIII/XIV)

Aristoteles Latinus, Codices II, n. 1710. D'ALVERNY 1969: 254-259 = *ALC*, 1994, pp. 266-271. ST. CLAIR 2005: 49.

fol. 1^r-4^v Metaphysica (excerpts; «initio mutilus»)

4^v-5^r Physica (excerpts)

5^v-6^r AVICENNA, Metaphysica (excerpts)

CITTÀ DEL VATICANO, Biblioteca Apostolica Vaticana, lat. 2186 (XIII/XIV)

BIGNAMI-ODIER 1937-1938: 133-139; 154-166. MAIER 1961: 201-209. D'ALVERNY 1963: 258-261 = *ALC*, 1994, pp. 91-94.

- fol. 9^r-16^v Logica (XIII/XIV) Loica Algazelis (tit. add. sec. XV)
 50^v-57^v Ps. AVICENNA, De caelo et mundo
 64^v-70^v AVICENNA, Metaphysica, V (tit. add. sec. XVII: Tractatus Logicae)
 78^v-86^v Logica (XIII *m.*)
 78^v-86^r AVICENNA, Logica, Isagoge («cum capit. 12 'De uniuersalibus' loco idoneo in serie textus»)

CITTÀ DEL VATICANO, Biblioteca Apostolica Vaticana, lat. 3010 (XIII *m.*)

MINNEMA 2013: 54 fn. 26, 65 fn. 42, 71, 97, 108, 115-116, 308, 333-336.

- fol. 120^r-124^v Metaphysica (excerpts) *inc.*: 'excerpta de metaphysica algazelis'

CITTÀ DEL VATICANO, Biblioteca Apostolica Vaticana, lat. 4481 (XIII *m.*)

D'ALVERNY 1963: 268-269 = *ALC*, 1994, pp. 101-102. MUCKLE 1933: x-xiii³. SALMAN 1935-1936: 121-122. MINNEMA 2013: 264-275. Marginal notes.

- fol. 1^r-48^v Metaphysica: Incipit tractatus de scientia que apud philosophos vocatur diuina (rubr.)
 48^v-73^v Physica: Capitulum loquendi de naturalibus
 75^r-150^v AVICENNA, Physica: Titulus. Collectio secunda libri Sufficientie Auicenni principis philosophi (rubr.)

CITTÀ DEL VATICANO, Biblioteca Apostolica Vaticana, Borgh. lat. 37 (?)

ALONSO 1963: xx. MINNEMA 2013: 54 fn. 26, 308.

- fol. 317^r-324^v Physica (excerpts) *expl.*: 'Abreuiatio algazelis de naturalibus aristotelis'

CITTÀ DEL VATICANO, Biblioteca Apostolica Vaticana, Ottob. lat. 2186 (XIII *in.*)

D'ALVERNY 1963: 249-250 = *ALC*, 1994, pp. 82-83. Cf. ed. Liechtenstein 1506 (see *infra*).

- fol. 1^r-25^v Logica: Incipit liber Algazelis de summa theorice phylosophye translatus a magistro Ihanne et D. archidiacono in Toieto de arabico in latinum. — Tractatus de Logica (rubr.)
 26^r-80^v Metaphysica: Incipit tractatus de scientia que vocatur diuina apud philosophos (rubr.)
 80^v-110^r Physica: Capitulum loquendi de naturalibus
 110^r-112^r AVICENNA, Metaphysica, III, 5: Capitulum de certitudine quiditatis numeri et deffinitione suarum specierum et manifestatione principiorum eius

³ This is the reference manuscript for Muckle's edition.

CITTÀ DEL VATICANO, Biblioteca Apostolica Vaticana, Reg. lat. 1870 (?)

ST. CLAIR 2005: 49.

fol. 26^r-47^v Metaphysica
 47^v-60^v Physica

VENEZIA, Biblioteca Nazionale Marciana, lat. 2546 (L. VI.28; cod. 173 chart.) (XV)

D'ALVERNY 1964 275-276 = *ALC*, 1994, pp. 110-111. VALENTINELLI 1871: 121. SALMAN 1935-1936: 120 fn. 4. ST. CLAIR 2005: 49. Rare marginal notes of the XVI century.

fol. 1^r-18^v Logica: Incipit liber Algazelis de summa theorice philosophye translatus a magistro Iohanne et D. archidiacono in Tolet. de arabico in latinum. Tractatus de Logica (rubr.)
 18^v-66^f Metaphysica: Incipit tractatus de scientia que vocatur diuina apud phylosophos (rubr.)
 66^r-93^f Physica: Capitulum loquendi de naturalibus (rubr.)
 93^r-94^v AVICENNA, Metaphysica, III, 5: Capitulum de certitudine quiditatis numeri...et manifestatione principiorum eius («desinit mutilus, ultimis foliis excisis»)

VENEZIA, Biblioteca Nazionale Marciana, lat. 2665 (Cl. X.171; L. VI.55) (XIII and XIV)

D'ALVERNY 1964: 276-279 = *ALC*, 1994, pp. 111-114. ST. CLAIR 2005: 49. Two manuscript books. The first (ff. 5^r-66^v) has the date of 1387. The second is formed by various parts: I (69^r-93^f): XIII ex.; II (94^v-110^f): XIII eccetto fol. 110, XIV ex. Further parts: XIII.

fol. 5^r-66^v AVICENNA, De animalibus: Incipit liber de animalibus Auicenne super librum de animalibus Ar<istotelis>, translatus ab arabico in latinum per magistrum Michaelem Scotum. – Fridrice, Domine mundi...
 69^r-93^f AVICENNA, De anima (cum praef. translatoris) – 93^v *vacat*
 94^v-104^v Metaphysica + Physica: Methaphysica Algazelis magni philosophi; *infra*: Metaphysica Algazelis abreuiantis Auicennam (rubr.) ...sed ex sola ymaginatione /
 104^v-110^f «sequitur, manu anglica sive flaminga sec. XIV continuatio textus» – Explicit Algazel abreuiator Auicenne (rubr.)
 145^v-153^f AVICENNA, Physica: Sufficientia Auicenne (rubr.)

VENEZIA, Biblioteca Nazionale Marciana, lat. 2822 (Cl. X.172; L. VI.57) (XIII/XIV in.)

D'ALVERNY 1964: 282-284 = *ALC*, 1994, pp. 117-119. VALENTINELLI 1871: 121. SALMAN 1935-1936: 122 fn. 4. ST. CLAIR 2005: 49.

fol. 2^v-38^f AVICENNA, De anima (cum praef. translatoris)
 38^v-93^f AVICENNA, Metaphysica: Incipit Metaphysica (mano più tarda)
 97^r-110^v Physica (estratti): 'Algazel' (ggiunto da una mano del sec. XV)
 111^v-112^f AVICENNA, De generatione lapidum

WORCESTER, Chapter Library, Q 81 (XIII)

Aristoteles Latinus, Codices I, Cambridge, 1955, pp. 424 e ss., n. 394. D'ALVERNY 1965: 297-302 = *ALC*, 1994: 162-167. LOHR 1966: 445. Marginal notes by various hands of the XIII and XIV centuries.

- fol. 4^r-26^r AVICENNA, *Physica*: Incipit collectio secunda libri Sufficientie a principiis (sic) phisice (rubr.)
 28^r-55^r AVICENNA, *De anima*, «cum praefatione translatoris»; ff. 41^v, 48^v-49^v *vacant*.
 26^v-27^v *vacant*
 88^r-93^v *Metaphysica* (estratti dai trattati I-II)
 94^r-96^r *Metaphysica* (estratti dal trattato III: sententia quarta; tractatus quartus, solo l'inc.)
 96^r-98^v *Physica* (estratti dai trattati I-II)
 99^r-104^r *Metaphysica* (estratti dai trattati IV-V)
 104^r-104^v *Physica* (estratti)
 105^r *Logica* (fragm.); ff. 105^v-106^v *vacant*

ZWETTL, Stiftsbibliothek, 89 (XII ex./XIII in.)

ZIEGLER 1985: 174-176. D'ALVERNY 1966^a: 320-322 = *ALC* 1994: 183-185. MINNEMA 2013: 52 fn. 21, 62 and fn. 39, 308. Marginal notes of the 13th century.

- fol. 221^r-231^v *Logica*: Incipit tractatus Abiceni de Loica (rubr.)

PRINTED EDITION: Petrus Liechtenstein, *Logica et philosophia Algazelis Arabis*, Venice, 1506, 64 foll.⁴

GILSON 1929: 75 fn. 2. MUCKLE 1933: ix ff. SALMAN 1935-1936: 122 ff.

- fol. 1^r 'Petrus Liechtenstein Coloniensis Germanus: ex oris Erweruelde oriundus. Ad laudem et honorem Dei summi tonantis: et ad commune bonum seu utilitatem summis cum vigiliis laboribusque hoc praeclarum in lucem opus prodire fecit. Anno Virginei partus mdvi Idibus Februariis sub hemispherio Veneto.'
- 1^r-13^v *Logica*
 14^r-45^r Liber philosophiae Algazelis translatus a magistro Dominico archidiacono Secobiensi apud Toletum ex arabico in latinum [Metaphysica]
 14^r-45^r Liber secundus [Physica]

⁴ A copy of this printed volume is preserved in Paris, Bibliothèque Nationale de France, Reserve 809.

Appendix 4

I. Corrections to the Arabic text of the *Maqāṣid al-falāsifa*
(ed. Duniyā)

	LOCUS	D	§	LEGITUR	LEGENDUM
1	<i>Prologue</i>	31.4	1	bi-l-qayūl ⁱ	bi-l-qabūl ⁱ
2	<i>Prologue</i>	31.5	1	fa-innī ultumistu	fa-inna-ka iltamasta
3	<i>Log.</i> , Preface	33.21	2	kayfa yankaru	kayfa <i>lā</i> yankaru
4	<i>Log.</i> , Preface	37.19	4	wa-kull ^u mawḍū ^{cin}	wa-kull ^u <i>maḥmūlⁱⁿ</i> wa-mawḍū ^{cin}
5	<i>Log.</i> I.5	43.10	9	min fann al-alfāz	min al-alfāz
6	<i>Log.</i> II.1	44.12	10	nasaba	nisbat ^u -hu
7	<i>Log.</i> II.1	46.17	13	qawl ^u -hu	qawl ^u -ka
8	<i>Log.</i> II.2	47.9	14	ilā lāzim ⁱⁿ lā yufāriqu	ilā lāzim ⁱⁿ <i>yufāriqu wa-lāzimⁱⁿ</i> lā yufāriqu
9	<i>Log.</i> II.2	47.	14	وجل	waḡs
10	<i>Log.</i> II.3	50.9-10	18	wa-ṭawr wa-insān: «mā huwa?»	<i>aw-ṭawr aw-insān</i> : «mā huwa?» / wa-ṭawr wa-insān: «mā <i>hiya</i> ?»
11	<i>Log.</i> II.4	51.12	20	<i>om.</i>	fī-hi
12	<i>Log.</i> III	54.7	22	lam yumkin	<i>fa-lam yumkin</i>
13	<i>Log.</i> III	54.8	22	fa-hāḍihi	fa-hāḍā
14	<i>Log.</i> III.1	55.10	24	al-kawākib	<i>fa-l-kawākib</i>
15	<i>Log.</i> III.1	55.18	24	anna-hu huwa	hal huwa
16	<i>Log.</i> III.2	58.16	27	kamāl	ka-mā

Appendices

	<i>LOCUS</i>	D	§	<i>LEGITUR</i>	<i>LEGENDUM</i>
17	<i>Log. III.3</i>	60.14	29	imma an yakūn ^a fī l- baḥr ⁱ wa-amma an yafruq ^a	imma an yakūn ^a fī l- <i>safīnatⁱ</i> wa-imma an <i>yāğraq^a</i>
18	<i>Log. III.4</i>	61.4	30	laysa bi-ḥağar ⁱⁿ	laysa bi-ḥayawān ⁱⁿ
19	<i>Log. III.4</i>	61.7	30	laysa bi-ḥayawān ⁱⁿ	laysa bi-ḥağar ⁱⁿ
	<i>Log. III.5</i>	62.18	31	ayy <i>mā ḥalī</i> [?] wa- šahwat ^u -hu	ayy <i>law ḥulliya</i> wa- šahwat ^u -hu
20	<i>Log. III.5</i>	62.23	31	laysat laysat	laysat
21	<i>Log. III.6</i>	64.16	33	qawl ^u -hu	qawl ^u -nā
22	<i>Log. IV.a</i>	67.11	35	ḥadiṭ	muḥdat
23	<i>Log. IV.a</i>	70.9	38	a'ni bi-hi al-šakl al- awwal	<i>om.</i>
24	<i>Log. IV.a</i>	70.19	38	aḍrab	ḍurūb (or aḍrāb)
25	<i>Log. IV.a</i>	71.7	39	كَلْبَيْن	kulliyatayni
26	<i>Log. IV.a</i>	72.12	39	mūğiba ṣuğrà ġuz'iyya	ṣuğrà mūğiba ġuz'iyya
27	<i>Log. IV.a</i>	73.1	40	mūğibatāni	<i>wa-yabqī</i> mūğibatāni
28	<i>Log. IV.a</i>	74.1	41	مَنْتَبَا	muntiğ ^u -hā
29	<i>Log. IV.a</i>	76.4-6	42	wa-qad rakkabnā 'alā kull ⁱⁿ wāḥidat ⁱⁿ min ṣuğrà mūğibat ⁱⁿ kulliyat ⁱⁿ wa- ṣuğrà mūğibat ⁱⁿ ġuz'iyyat ⁱⁿ	wa-qad rakkabnā 'alā kull ⁱⁿ ṣuğrà mūğibat ⁱⁿ
30	<i>Log. IV.a</i>	89.16- 19	49	<i>om.</i>	wa-huwa anna kull ^a ḥayawān ^a fars ^{um} wa- insān ^{um} wa-kaḍā; kull ^u fars ⁱⁿ wa-insān ⁱⁿ wa- kaḍā mutaḥar-rik ^{um} fakk ^a -hu al-asfal ^a ; fa- yalzamu anna kull ^a ḥaya-wān ^a yuḥarriku fakk ^a -hu al-asfal ^a
31	<i>Log. IV.a</i>	89.22	49	illā fī wāḥid ⁱⁿ	fī wāḥid ⁱⁿ

	LOCUS	D	§	LEGITUR	LEGENDUM
32	Log. IV.a	91.11	50	ṭuruq ^{an}	ṭarīq ^{an}
33	Log. IV.a	92.1	51	la-hu	om.
34	Log. IV.a	96.19, 96.22	56	firkār	firğār
35	Log. IV.a	98.8	57	mutasāwiyāni anna-humā	li- om.
36	Log. IV.a	99.1	57	مثلت	muṭallat
37	Log. IV.b	102.8- 10	60	al-mašhūrāt	al-mastūrāt fi l-zāhir
37	Log. IV.b	103.20- 21	63	fa-lā budd ^a wa-anna	wa-lā budd ^a min anna
38	Log. IV.b	104.10	64	arba'a 'ašara	sab'a 'ašara
39	Log. IV.b	105.5-6	65	wa-ka-ḥukm ⁱ -hi anna al-ğism ^a	bi- wa-ka-ḥukm ⁱ -hi bi- anna <i>al-kull^a yantahī ilā ḥalāⁱⁿ aw malāⁱⁿ, a'nī warā'a l-'alamⁱ wa-ka- ḥukmⁱ-hi bi-anna al- ğism^a</i>
40	Log. IV.b	111.18	71	yunāziru	nunāziru
41	Log. IV.b	115.6	75	şidq	taşdıq
42	Log. V.2	120.14	78	وحد	wuğūd
43	Log. V.3	124.9	83	amr	aṭar
44	Log. V.3	124.17	83	aḥad	uḥiḍa
45	Log. V.3	125.11	84	taṭbutu masā'il	taṭbutu <i>bi-hā</i> masā'il
46	Log. V.4	126.6-7	85	şādiqa wa-awwaliyya	şādiqa <i>wa-ḍarūriyya wa-dātiyya</i> wa- awwaliyya
47	Log. V.4	127.11	86	ḍāniyya	ḍātiyya

Appendices

	<i>LOCUS</i>	D	§	<i>LEGITUR</i>	<i>LEGENDUM</i>
48	<i>Log. V.4</i>	127.15	87	يخطر	yanzuru
49	<i>Met., Premise 1</i>	136.18	96	‘illat ^{an} wāḥidat ^{an}	‘illat ^{an} wa-wāḥid ^{an}
50	<i>Met., Premise 1</i>	137.18	96	wa-l-‘ilm alladī yatawallà al-nazar fi- mā huwa barī ^{un} ‘anī l- māddatī fi l-wahmī	wa-l-‘ilm alladī yatawallà al-nazar fi- mā huwa barī ^{un} ‘anī l- māddatī <i>bi-l-kulliyatī</i> <i>huwa al-ilāhī wa-l-‘ilm</i> <i>alladī yatawallà al-</i> <i>nazar fi-mā huwa</i> <i>barī^{un} ‘anī l-māddatī fi l-</i> <i>wahmī</i>
51	<i>Met., Premise 2</i>	139.11	98	<i>om.</i>	wa-l-mūsiqā
52	<i>Met., Premise 2</i>	139.16	99	wa-amma al-‘ilm ^a al- ilāhiyy ^a a‘amm ^u l- umūr ⁱ	wa-amma al-‘ilm ^a al- ilāhiyy ^a <i>fa-mawḏū^u-hu</i> a‘amm ^u l-umūr ⁱ
53	<i>Met. I.1</i>	143.20	105	yastadallūna	yastab‘adūna
54	<i>Met. I.1</i>	146.5	108	<i>om.</i>	wa-l-‘amq
55	<i>Met. I.1</i>	152.8	114	bi-maṭalayni	bi-muṭallatayni
56	<i>Met. I.1</i>	158.5	121	ṣūra	hayūlā
57	<i>Met. I.1</i>	163	127	wa-l-‘aql	wa-l-‘adl (or <i>om.</i>)
58	<i>Met. I.1</i>	168.2	130	al-ḥaṭṭ	al-ḥaṭṭ al-mawhūm
59	<i>Met. I.1</i>	168.26	131	ḥaḳīq ^u -hu	ḥaḳīqa
60	<i>Met. I.,1</i>	170.13	133	ḥattā yanfa‘ala	
61	<i>Met. I.1</i>	170.14	133	aw makān	aw fi makān ⁱⁿ
62	<i>Met. I.1</i>	171.26	135	fi l-ḥayyiz ⁱ	fi l-ḥibr ⁱ
63	<i>Met. I.2</i>	179.4	142	<i>om.</i>	ma‘nā qawlī-nā: «huwa sawād ^{un} »
64	<i>Met. I.2</i>	179.9	142	fa-laysa ṭamma	fa-laysa ṭammata
65	<i>Met. I.2</i>	183.1	147	يل	bal

	<i>LOCUS</i>	<i>D</i>	<i>§</i>	<i>LEGITUR</i>	<i>LEGENDUM</i>
66	<i>Met. I.3</i>	184.7	148	tarkubu	ka-tarakkub
67	<i>Met. I.3</i>	185.8	151	يقال	yuqālu
68	<i>Met. I.3</i>	185.8	151	صديق	ṣadīq
69	<i>Met. I.5</i>	190.15	158	wa-imma an yakūna bi-l-irāda	wa-imma an yakūna <i>fi</i> ^l - <i>hā</i> bi-l-irāda
70	<i>Met. I.5</i>	190.17	158	awlā bi-l-fā'il	bi-l-fā'il awlā
71	<i>Met. I.5</i>	191.5	159	fa-yakmalu-hu	fa-yakmalu
72	<i>Met. I.6</i>	198.1	164	wa-nuṣīru ilā nuqṭat ⁱ DZB	wa-l-nuṣīr ilā nuqṭat ⁱ D
73	<i>Met. I.7</i>	200.15	166	al-luzūḡa	al-ludūna
74	<i>Met. I.7</i>	202.7	167	qīla	qabla
75	<i>Met. I.7</i>	202.18- 20	168	tanqasimu ilā mā huwa 'alā l-fi' ⁱ	tanqasimu ilā <i>qismayni: al-awwal</i> mā huwa 'alā l-fi' ⁱ
76	<i>Met. I.7</i>	203.5	168	kull ^u wāḥid ⁱⁿ	kull ^u wāḥidat ⁱⁿ
77	<i>Met. I.8</i>	206.19	172	al-ḡid' (al-ḡada')	al-ḡuz'
78	<i>Met. I.8</i>	206.19- 20	172	allāḏī wuḏi'a, fa-huwa	allāḏī wuḏi'a fi-hi
79	<i>Met. I.8</i>	206.23	172	ṣakl ^a -hā	ṣakl ^a -hu
80	<i>Met. II</i>	210.2	176	lawāzima	lawāzim ⁱ -hi
81	<i>Met. II.10</i>	216.22	187	fi l-nafs ⁱ	li-nafs ⁱ -hi
82	<i>Met. II.11</i>	218.9	189	šāmil,	šāmil?
83	<i>Met. II.11</i>	218.10	189	fa-yakūnu la-hu ḥadd ^{um} ?	fa-yakūnu la-hu ḥadd ^{um} .
84	<i>Met. II.11</i>	219.3	189	al-ḡinsiyyat ⁱ wa-l- ḡawhariyyat ⁱ	al-ḡinsiyyat ⁱ . Wa-l- ḡawhariyyat ^u
85	<i>Met. II.12</i>	220.25	192	تدلوا	تدلو

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	<i>LOCUS</i>	D	§	<i>LEGITUR</i>	<i>LEGENDUM</i>
86	<i>Met. II.12</i>	222.5	194	وجب	wāğib
87	<i>Met. II.12</i>	222.15	194	in law kāna	law kāna
88	<i>Met. III.a</i>	224.9	197	ilā yasār ⁱ -ka	ilā yamīn ⁱ -ka
89	<i>Met. III.b.2</i>	227.11	202	huwa	huwa huwa
90	<i>Met. III.b.4</i>	229.4	205	māris	maris
91	<i>Met. III.b.4</i>	229.21- 22	206	yastafā fi iḍāḥ ⁱ mā	yastafā iḍāḥ ^a mā
92	<i>Met. III.b.5</i>	232.17	210	an	in
93	<i>Met. III.b.7</i>	237.11	217	li-quṣūd ⁱ -nā	li-maqṣūd ⁱ -nā
94	<i>Met. III.b.7</i>	237.23	218	‘alā tarbiyat ⁱ -hi	‘alā tarqī-hi
95	<i>Met. III.b.7</i>	238.12- 13	219	ilā sā’ir ⁱ al-awḍā ^d li- anna	ilā sā’ir ⁱ al-awḍā ^d <i>wāḥidat^{un}, wa-lakin</i> <i>yu‘ayyanu hādā l-waḍ^a</i> <i>wa-yumayyazu-hu ‘anⁱ</i> <i>sā’irⁱ al-awḍā^d li-anna</i>
96	<i>Met. III.b.8</i>	240.3	222	lā budd ^a wa-an yašā’a	lā budd ^a wa-an ya’ala
97	<i>Met. III.b.10</i>	241.25	226	mabḍūl	mabḍūl
98	<i>Met. III.b.11</i>	247.1	233	yūlimūs	būlimūs
99	<i>Met. III.b.11</i>	247.7	233	saqīm	šadīd
100	<i>Met. III.b.11</i>	248.4	234	li-ḍālika	fa-huwa ka-ḍālika
101	<i>Met. III.b.11</i>	248.10	234	<i>om.</i>	wa-ğamāl al-ṣūrat ⁱ
102	<i>Met. III.b.11</i>	248.23	235	wa-kayfa?	wa-kayfa
103	<i>Met. III.b.11</i>	248.24	235	idrāk ^a -nā la-hu;	idrāk ^a -nā la-hu?
104	<i>Met. III, Epilogue</i>	250.18	239	fi l-ṣayf, al-qābil	fi l-ṣayf al-qābil ⁱ
105	<i>Met. III, Epilogue</i>	252.2		‘ilm ^{un} yanfī l- mumāṭalat ⁱ	‘ilm ^{un} bi-nafy ⁱ l- mumāṭalat ⁱ

	<i>LOCUS</i>	<i>D</i>	<i>§</i>	<i>LEGITUR</i>	<i>LEGENDUM</i>
106	<i>Met. IV.a.3</i>	255.23	248	fī tarkīb ^l -hi	bi-tarkīb ^l -hi
107	<i>Met. IV.b.1</i>	256.6	242	bi-hā	bi-himā
108	<i>Met. IV.b.1.1</i>	256.17	250	لقيا	la-baqiyā
109	<i>Met. IV.b.1.2</i>	260.11	254	mitl	mayl
110	<i>Met. IV.b.1.2</i>	260.15	254	bi-l-ḥayr	fī l-ḥayyiz
111	<i>Met. IV.b.1.4</i>	264.11	261	ilay-hi	ilay-hā
112	<i>Met. IV.b.1.5</i>	266.15	264	ilā mā waḍ ^{cu} -hu al-ṭabī‘iyy ^u	ilā mā <i>huwa</i> waḍ ^{cu} -hu al-ṭabī‘iyy ^u
113	<i>Met. IV.b.1.6</i>	268.5	266	al-nabātī	al-nabātiyya
114	<i>Met. IV.b.1.6</i>	268.5	266	يقيله	yaqbalu-hu
115	<i>Met. IV.b.2</i>	271.2	269	bi-l-idāra	bi-l-irāda
116	<i>Met. IV.b.2.1</i>	271.16	270	bi-ḥaytu	taḥta-nā
117	<i>Met. IV.b.2.1</i>	272.6	270	يقبل	yaqbalu
118	<i>Met. IV.b.2.4 = b.3.1</i>	280.19	284	ayy	an
119	<i>Met. IV.b.2.5 = b.3.2</i>	283.18	289	kuriyyat ^u -hā	kaṭrat ^u -hā
120	<i>Met. V</i>	288.7	294	min kull ⁱⁿ waḥd ⁱⁿ	min kull ⁱⁿ waḡh ⁱⁿ
121	<i>Met. V</i>	289.1	295	kaṭra <i>mutasāwiqa</i>	kaṭra <i>mutasāwiya</i>
122	<i>Met. V</i>	289.2	295	al-mutasāwiqa	al-mutasāwiya
123	<i>Met. V</i>	289.3-4	295	wa-lā yumkinu ka-dālika	wa-lā yumkinu <i>illā</i> ka-dālika
124	<i>Met. V</i>	291.18	298	تخذ	tattaḥidu
125	<i>Met. V</i>	291.18	298	<i>om.</i>	wa-l-fasād
126	<i>Met. V</i>	292.13	299	bi-l-‘aql	bi-l-fi‘l
127	<i>Met. V</i>	293.9	301	naqīḍu	tafiḍu

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	<i>LOCUS</i>	D	§	<i>LEGITUR</i>	<i>LEGENDUM</i>
128	<i>Met. V</i>	294.17	302	li-šadd	li-šadr
129	<i>Met. V</i>	295.18	304	يخَل	yabḥalu
130	<i>Met. V</i>	296.1	305	aw ḡabat	awḡabat
131	<i>Met. V</i>	299.15	313	la-kāna l-arḍ ^u kull ^u -hā qalīlat ^{an}	la-kāna qalīl ^{an} id kull ^u l- arḍ ⁱ qalīl ^{an}
132	<i>Phys. I.1</i>	305.9- 10	316	bayna al-sawād wa-l- bayāḍ	bayna al-bayāḍ wa-l- sawād
133	<i>Phys. I.2</i>	314.14	328	bu'd an	bu'dāni
134	<i>Phys. II.1</i>	320.14	335	aqsām	aḡsām
135	<i>Phys. II.2</i>	322.14- 15	338	radda-hā ilay-hi	raddat-hā ilay-hi
136	<i>Phys. II.3</i>	324.25	342	تولها	tawalluḡ ⁱ -hā
137	<i>Phys. II.3</i>	325.16	345	ruzūna	rawzana (Lane)
138	<i>Phys. II.3</i>	325.18	345	ruzūna	rawzana (Lane)
139	<i>Phys. II.3</i>	325.19	345	ruzūn	rawzan (Lane)
140	<i>Phys. II.4</i>	327.9	347	يَنْفِخ	yantafiḥu
141	<i>Phys. III.1</i>	335.18	358	Aristū	Aristūṭālīs
142	<i>Phys. III.1</i>	336.19	359	mawḍū'	mawḍi'
143	<i>Phys. III.2</i>	337.25	362	yuḡāwiru-hā	yuḡāwiru-hu
144	<i>Phys. III.2</i>	338.11	363	om.	aw ašadd luṭf ^{an} min-hu
145	<i>Phys. III.2</i>	338.14	363	ḍaw ^u -hu	wa-ḍaw ^u -hu
146	<i>Phys. III.3</i>	339.6	364	'ā	'ammā
147	<i>Phys. III.3</i>	339.12- 13	365	li-anna l-bard ^a asra ^u ta'tīr ^{an} fi qalb ⁱ l-buḥār ⁱ l-ḥārr ⁱ mā ^{an} fi l-hawā ⁱ	li-anna l-bard ^a asra ^u ta'tīr ^{an} fi taktīf ⁱ l-buḥār ⁱ l-ḥārr ⁱ min-hu fi l- hawā ⁱ

	<i>LOCUS</i>	<i>D</i>	<i>§</i>	<i>LEGITUR</i>	<i>LEGENDUM</i>
148	<i>Phys.</i> III.3	339.24	365	فمين	fī man
149	<i>Phys.</i> III.3	341.13	368	wa-rubbamā yakūnu	wa-rubbamā <i>la-</i> yakūnu
150	<i>Phys.</i> III.3	342.6	369	fa-immā	fa-innamā
151	<i>Phys.</i> III.4	343.12	371	ištağala	išta‘ala
152	<i>Phys.</i> III.4	343.12	371	zimām ^{an}	zamān ^{an}
153	<i>Phys.</i> III.5	345.7	375	ḥārašinā	ḥārašin
154	<i>Phys.</i> IV.1	346.6	376	fī-hi	fī-hā
155	<i>Phys.</i> IV.2	347.10	379	quwwatayni?	quwwatayni.
156	<i>Phys.</i> IV.2	348.6	380	faḍalāt	‘aḍalāt
157	<i>Phys.</i> IV.2	349.2	382	ḍanab	ḍi‘b
158	<i>Phys.</i> IV.2.1	353.3	389	al-rūḥ al-sabāšir	al-rūḥ al-bāšir
159	<i>Phys.</i> IV.2.1	354.5	390	kura al-samā’.	kura al-samā’?
160	<i>Phys.</i> IV.2.1	354.22	392	wa-	aw
161	<i>Phys.</i> IV.2.2	357.4	398	تحريك	taḥrīk
162	<i>Phys.</i> IV.2.2	357.8	398	متفرقاً	mutafarraq ^{an}
163	<i>Phys.</i> IV.3	359.13	403	بتصعلق	yata‘allaqu
164	<i>Phys.</i> IV.3	358.	401	musabbab-hu	musabbaba
165	<i>Phys.</i> IV.3	359. <i>ult</i>	404	الحيوانية	al-ḥayawāniyya
166	<i>Phys.</i> IV.3	360.3	405	ḥuqqa	ḥaqq ^u -hu
167	<i>Phys.</i> IV.3	361.9	408	عواض	a‘rād
168	<i>Phys.</i> IV.3	362.7-8	411	bal laysa la-hā al- isti‘dad wa-l-qabūl	bal laysa la-hā <i>illā</i> l- isti‘dad wa-l-qabūl
169	<i>Phys.</i> IV.3	362.18	411	malakat ^{an}	malak ^{an}

Appendices

	<i>LOCUS</i>	D	§	<i>LEGITUR</i>	<i>LEGENDUM</i>
170	<i>Phys. IV.3</i>	364.4	414	آلها	ālāt ^l -hā
171	<i>Phys. IV.3</i>	364.24	415	يَجْزَا	yatağazza'a
172	<i>Phys. IV.3</i>	368.14	419	fa-hiya	fa-huwa
173	<i>Phys. IV.3</i>	369.11	422	labisa	laysa
174	<i>Phys. V.2</i>	373.1	427	yaḥruḡu	taḥruḡu
175	<i>Phys. V.3</i>	373.12	428	wa-dāma	fa-dāma
176	<i>Phys. V.3</i>	374.11	429	wa-kamala ḡāl ^u -hā	fa-kamala ḡāl ^u -hā
177	<i>Phys. V.4</i>	374.20	430	ḡayl	ḡā'il
178	<i>Phys. V.5</i>	377.5	435	min al-nafs ⁱ fi al-ṡurat ⁱ	fi nafs ⁱ min al-taṡawwur ⁱ
179	<i>Phys. V.5</i>	377.6	435	bi-tamām ^l -hā	bi-tamṡil ^l -hā
180	<i>Phys. V.6</i>	377.25	437	aḡḡāt	aḡḡāt
181	<i>Phys. V.6</i>	378.16	437	tu'attiru bi-hi	yu'attiru bi-hā
182	<i>Phys. V.7</i>	378.20	438	fi ma'rifat ⁱ sabab ⁱ al-ḡayb ⁱ	fi sabab ⁱ ma'rifat ⁱ al-ḡayb ⁱ
183	<i>Phys. V.7</i>	379.10	440	sawād	sawdā'
184	<i>Phys. V.8</i>	379.23	441	sarāya	sāriya
185	<i>Phys. V.8</i>	379.26	441	hiya	huwa
186	<i>Phys. V.8</i>	380.16	442	yaṡbuhu-hu	yuṡtahī-hu
187	<i>Phys. V.9.3</i>	383.21	450	مس	ḡiss

II. Corrections to the Latin text of the *Summa theoricæ philosophiæ*
(ed. Lohr – Muckle – St. Clair)

Emended readings marked with a star * have already been suggested by SALMAN 1935-1936: 123 fn. 3.

	<i>LOCUS</i>	<i>§</i>	<i>LEGITUR</i>	<i>LEGENDUM</i>
1	L256.144- 146	§30	Possibile enim secundum intentionem primam † non debet esse possibile non esse, sed impossibile † sicut necessarium, quod est non impossibile	'Possibile' enim secundum intentionem primam non debet esse 'possibile non esse', sed 'impossibile non esse', sicut necessarium, quod est non impossibile
2	M6.30	§104	calor	color
3	M43.29	§166	secundam	secundum
4	M52.3	§176	rememoracionem	remotionem *
5	M71.12	§211	preveniunt	perveniunt
6	M83.5	§232	fuerit	fuerint
7	M84.21	§233	parvos	pravos *
8	M86.19	§237	inequalitate	in aequalitate
9	M98.8-9	§257	secundam	secundum
10	M106.8	§271	animal	anima
11	M113.12- 13	§284	discipulis	discipulus
12	M113.29	§286	secundam	secundum
13	M118.3	§293	multitudiem	multitudinem
14	M135.26	§324	causaliter	casualiter
15	M136.22	§325	<i>ultra</i> mundum	<i>intra</i> mundum
16	M138.25- 26	§329	et quod duo cubita verbi gracia huius inhanitatis	et quod duo cubita verbi gratia huius inhanitatis

	<i>LOCUS</i>	<i>§</i>	<i>LEGITUR</i>	<i>LEGENDUM</i>
			possunt subintrare loco duorum cubitorum, pleni nec plus. Si autem minus, tunc non coequabuntur; privacio [...]	possunt subintrare loco duorum cubitorum pleni, nec plus: si autem minus, tunc non coaequabuntur. Privatio [...]
17	M143.14	§336	calore	colore
18	M151.20	§352	decolorato	de colorato
19	M151.30	§352	piraminis	pyramidis
20	SC65.122	§386	humiditate <i>suavi</i>	humiditate <i>salivae</i>
21	SC65.130-131	§387	corpus <i>parvum</i> illuminatum	corpus <i>pervium</i> illuminatum
22	SC66.144	§389	superficiam	superficiem
23	SC68.204	§393	in <i>multis</i> radicibus	in <i>illis</i> radicibus
24	SC69.207	§394	cogitativa	phantasia
25	SC70.228	§398	Cogitatio	Phantasia
26	SC73.308	§407	hoc phantasia	hoc <i>phantasma</i> / <i>haec</i> phantasia
27	SC74.333-334	§409	Haec autem nudata, id est abstracta phantasia, non valet apprehendere	Haec autem nudata, id est abstracta, phantasia non valet apprehendere
28	SC75.366	§411	tunc enim <i>non</i> est quasi sapiens oblitus cogniti	tunc enim est quasi sapiens oblitus cogniti
29	M183.30	§426	<i>Scire</i> vero intelligibiles	<i>Scientiae</i> vero intelligibiles
30	M187.18	§430	removeter	removetur

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ESSENTIAL GLOSSARY

The Glossary reports some fundamental, or very common, Arabic terms occurring in the text of the *MF*, accompanying them with their English rendition(s) as adopted in the preceding Translation. The lemmata are arranged following the Arabic alphabetical order of the trilateral root from which they derive.

ا

ta'tīr | influence
 ta'attur | being influenced
 arḍ | earth
 aṣl | root
 alam | pain
 ilāhī | divine
 Allāh | God
 insān | human (n.)
 insānī | human (adj.)
 anniyya | concrete existence
 ahl | people
 āla | instrument, organ

ب

mabda' | principle
 badan | body (usually human)
 burūda | coldness
 burhān | demonstration
 basīṭ | simple
 baṣar | sight
 bāṭil | false, absurd
 bāṭin | internal, inner (senses)
 bu'd | distance

ت

turāb | dust
 tamām | completion, perfection

ث

itbāt | establishment
 tiql | weight
 mitqāl | See tiql
 muṭallat | triangle

ج

ġirm | body (usually celestial)
 ġuz' | part
 ġuz'ī | particular
 ġism | body
 ġins | genus
 ġawhar | substance

ġawharī | substantial

ح

ḥādīt | having an origin (in time)
 muḥdat | See ḥādīt
 ḥadd | definition, term (of a syllogism)
 ḥads | intuition
 ḥarāra | heat, hotness
 ḥaraka | movement
 ḥiss | sense
 maḥsūs | sensed
 ḥaqq | true, truth
 ḥaqīqa | truth, true [nature]
 ḥukm | judgment, state
 ḥikma | wisdom
 ḥikāya | account
 maḥall | receptacle
 ḥāl | state
 ḥāla | condition
 muḥīṭ | surrounding (body)
 ḥayyiz | domain
 ḥayawān | animal (n.)
 ḥayawānī | animal (adj.)

خ

ḥalā' | void, vacuum
 ḥalifa | vicar
 iḥtilāf | variation, difference
 ḥayr | good (also n.)
 ḥayāl | imagination

د

dā'ira | circle
 daḥala | to enter, to fall within
 tadāḥul | interpenetration
 daraġa | degree
 idrāk | perception
 da'wā | allegation
 dalīl | sign
 dimāġ | brain
 dunyā | this world

ذ

ḍakā' | acumen
maḍhab | school of thought
ḍāt | essence
ḍawq | taste

ر

ru'ya | vision
rabb | lord
rūḥ | spirit
rasm | description
ruṭūba | wetness
murakkab | composite, composed
markaz | centre
rukṅ | pillar
irāda | will

ز

zamān | time
mizāğ | blend, mixture, temperament
zāla | to cease

س

sabab | cause
sa'āda | happiness
sukūn | rest
sama' | hearing
samā' | sky, heaven
samāwī | celestial, heavenly

ش

šartī | hypothetical
šarr | evil
šar' | revealed law, revelation
šarī'a | See šar'
muštarak | common
šu'ā' | rays, (sun)beams
šaqāwa | misery
šakl | figure (of a syllogism), shape
šams | Sun
šamm | olfaction
šahwa | desire, longing
šawq | desire
šay' | thing

ص

tašḍīq | judgment (of assent)
ištīlāḥ | technical term
šūra | form
tašawwur | conception

ض

ḍarb | mood (of a syllogism)
ḍaw' | brightness
iḍāfa | relation

ط

ṭibb | medicine
ṭabī'a | nature
ṭabī'ī | natural
ṭabaqa | layer
muṭlaq | absolute

ظ

ẓāhir | external (senses), manifest
ẓann | opinion

ع

'ağamī | Persian, non-Arabic
'adad | number
isti'dād | predisposition
i'tidāl | balance
'adam | non-existence
ma'ādin | minerals
'araḍ | accident
'araḍī | accidental
ma'rifa | knowledge
i'tiqād | belief
'aql | intellect
'aql fa'āl | agent intellect
'aqlī | intellectual
ma'qūl | intelligible
'illa | cause, reason
'ilm | science, knowledge
'ālam | world
'ināya | providence
'awāmm | common people
'ayn | eye

غ

ğaraḍ | goal
ğayb | unknown
tağayyur | change

ف

fī'l | act
far' | branch
fasād | corruption
faṣl | differentia
falak | (celestial) sphere
fann | chapter
fa'ida | utility

faylasūf | philosopher

ق

qādir | powerful

miqdār | measure

muqaddima | premise

qadīm | eternal

istiqrā' | induction

qurb | closeness

qism | division

taqsim | subdivision

qalb | heart

qamar | Moon

maqāla | treatise

qawm | group (of the philosophers)

quwwa | potency, faculty

qiyās | syllogism, analogy

ك

katra | multiplicity

mutakallim | theologian

kull | all, whole, universe

kulli | universal

kamāl | perfection

kammiyya | quantity

makān | place

kayfiyya | quality

kura | sphere

kawkab | star

kawn | being, generation

ل

laḍḍa | pleasure

lāzim | concomitant

lams | touch

lawn | colour

م

tamṭīl | exemplification

maḥḍ | pure

mādda | matter

mumkin | possible

malak | angel

malaka | habitus

malā' | plenum

mumtani' | impossible, prevented

māhiyya | quiddity

mā' | water

mayl | inclination

ن

nabātī | vegetative

nabī | prophet

nubuwwa | prophecy

nisba | relation(ship)

naẓara | to speculate

nizām | ruling, order

nafs | soul

naqs | imperfection

nuqṣān | defectiveness

nihāya | end, finiteness

lā nihāya | [having] no end, infinite

nār | fire

naw' | species

ه

hadā | to guide

hidāya | guidance

hawā' | air

hayūlā | matter

hayūlānī | material

و

wāḥid | one

waḥy | revelation

wāğib | necessary

wuğūd | existence

mawğūd | existent

ğiha | direction

wağh | face, way, manner

şifa | attribute

waşf | descriptive feature

ittişāl | conjunction

mawḍū' | subject-matter, subject

wahm | estimation

ي

yabūsa | dryness

yūnāniyyūna | Greeks

Arabic-English