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The scientific status of metaphysics
Major developments in the Latin reception of Avicenna

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Introduction

Avicenna in the history of metaphysics

«*Et ulterius aliqui erexerunt se ad considerandum ens inquantum est ens [...]*»
Thomas Aquinas, *Summa Theologiae* I 44.2

1. Thomas Aquinas' "history of philosophy"

In five places of his works¹, within discussions of causality, Thomas Aquinas outlines a "history of philosophy", highlighting the advances accomplished by philosophers in the knowledge of reality. Such progress, as Aquinas sometimes underscores in introducing his exposition, takes place gradually (*paulatim*) and according to the order of human knowledge. Just like for any human being knowledge originates from senses, so did the consideration of sensible and particular realities historically precede the knowledge of the intelligible and universal.

Aquinas locates accurately the turning-points in the history of thought, which turns out to be divided, according to most of the five expositions, in three main periods². Some of the texts also explicitly declare – or at least unambiguously imply – the names of the authors who bring about the beginning of a new period. We shall follow Aquinas' exposition as it is found in *Quaestiones de potentia* 3.5 first, moving then to a comparison with the corresponding passage in *Summa Theologiae* I 44.2.

¹ In a plausible chronological order – for which I rely on [Porro 2012] – they are: *Summa contra Gentiles* II 37; *Quaestiones de potentia* 3.5; *Summa Theologiae* I 44.2; *In VIII Physicorum* l. 2; *De substantiis separatis* 9. The identification of these five places is in [Aertsen 1996], p. 151. For an analysis of the texts see [Aertsen 1996] and [Aertsen 2004].

² In [Houser 2013], Houser argues that Aquinas' history of philosophy is divided into four periods. This is not properly correct. As Aertsen observes, only in *De substantiis separatis* one finds a division in four periods; see [Aertsen 1996], p. 152, n. 101. According to Aertsen, the division into four periods would be due to the first period being split up in two. This is certainly correct if we compare *De substantiis separatis* 9 with the corresponding passage in the *Summa Theologiae*: authors which belong to the first period in *ST* are found in the second period in *De substantiis separatis*. From an abstract point of view, however, it would be better to say that the second period – rather than the first – is split up in two phases in *De substantiis separatis*. More precisely, the three main periods of the history of philosophy in the remaining four texts are characterised by the kinds of causes which thinkers come to acknowledge: [i] causes of accidents; [ii] causes of substances; [iii] causes of being. In *De substantiis separatis*, knowledge of [ii] the causes of substances is achieved in two subsequent stages, depending on different conceptions of the intrinsic composition of substances: [ii.a] in the first stage, the intrinsic principles of substances are taken to be only corporeal; [ii.b] in the second stage, they are matter and form. A comparison with the other texts suggests that Empedocles and Anaxagoras would belong to [ii.a]. As a matter of fact, the introduction of [ii.a] seems to be a sort of compromise concerning the exact location of these two authors: they are located in the first period in *Summa Theologiae* and, plausibly, in *Summa contra Gentiles*; in the second period in *Quaestiones de potentia*.

QdP 3.5

Dicendum, quod secundum ordinem cognitionis humanae processerunt antiqui in consideratione naturae rerum. Unde cum cognitio humana a sensu incipiens in intellectum perveniat priores philosophi circa sensibilia fuerunt occupati, et ex his paulatim in intelligibilia pervenerunt.

[i] Et quia accidentales formae sunt secundum se sensibiles, non autem substantiales, ideo primi philosophi omnes formas accidentia esse dixerunt, et solam materiam esse substantiam. Et quia substantia sufficit ad hoc quod sit accidentium causa, quae ex principiis substantiae causantur, inde est quod primi philosophi, praeter materiam, nullam aliam causam posuerunt; sed ex ea causari dicebant omnia quae in rebus sensibilibus provenire videntur; unde ponere cogeantur materiae causam non esse, et negare totaliter causam efficientem.

[ii] Posteriores vero philosophi, substantiales formas aliquatenus considerare coeperunt; non tamen pervenerunt ad cognitionem universalium, sed tota eorum intentio circa formas speciales versabatur: et ideo posuerunt quidam aliquas causas agentes, non tamen quae universaliter rebus esse conferrent, sed quae ad hanc vel ad illam formam, materiam permutarent; sicut intellectum et amicitiam et litem, quorum actionem ponebant in segregando et congregando; et ideo etiam secundum ipsos non omnia entia a causa efficiente procedebant, sed materia actioni causae agentis praesupponebatur.

[iii] Posteriores vero philosophi, ut Plato, Aristoteles et eorum sequaces, pervenerunt ad considerationem ipsius esse universalis; et ideo ipsi soli posuerunt aliquam universalem causam rerum, a qua omnia alia in esse prodirent, ut patet per Augustinum.

STI 44.2

Respondeo dicendum quod antiqui philosophi paulatim, et quasi pedetentim, intraverunt in cognitionem veritatis.

[i] A principio enim, quasi grossiores existentes, non existimabant esse entia nisi corpora sensibilia. Quorum qui ponebant in eis motum, non considerabant motum nisi secundum aliqua accidentia, ut puta secundum raritatem et densitatem, congregationem et segregationem. Et supponentes ipsam substantiam corporum incretam, assignabant aliquas causas huiusmodi accidentalium transmutationum, ut puta amicitiam, litem, intellectum, aut aliquid huiusmodi.

[ii] Ulterius vero procedentes, distinxerunt per intellectum inter formam substantialem et materiam, quam ponebant incretam; et perceperunt transmutationem fieri in corporibus secundum formas essentielles. Quorum transmutationum quasdam causas universales ponebant, ut obliquum circulum, secundum Aristotelem, vel ideas, secundum Platonem. Sed considerandum est quod materia per formam contrahitur ad determinatam speciem; sicut substantia alicuius speciei per accidens ei adveniens contrahitur ad determinatum modum essendi, ut homo contrahitur per album. Utrique igitur consideraverunt ens particulari quadam consideratione, vel in quantum est hoc ens, vel in quantum est tale ens. Et sic rebus causas agentes particulares assignaverunt.

[iii] Et ulterius aliqui exerunt se ad considerandum ens in quantum est ens, et consideraverunt causam rerum, non solum secundum quod sunt haec vel talia, sed secundum quod sunt entia. Hoc igitur quod est causa rerum in quantum sunt entia, oportet esse causam rerum, non solum secundum quod sunt talia per formas accidentales, nec secundum quod sunt haec per formas substantiales, sed etiam secundum omne illud quod pertinet ad esse illorum quocumque modo. Et sic oportet ponere etiam materiam primam creatam ab universali causa entium.

[QdP i] According to the history in *De potentia* 3.5, thinkers of the first period believe that all forms are accidents and only matter is substance. Since substance is a sufficient cause of (at least some) accidents, these philosophers do not assume the existence of any cause other than matter. In particular, they deem matter uncaused and do not acknowledge efficient causation. Even though Aquinas is not explicit on this, the thinkers of this first period are plausibly to be identified with the “Milesian philosophers”.

[QdP ii] The first turning-point consists in the discovery of substantial forms, which leads to establishing the existence of efficient causation to explain substantial change. In spite of the progress, philosophy in this second period suffers from a limitation: the newly discovered substantial forms are specific – rather than universal – forms. Accordingly, the efficient causes whose existence is now acknowledged do not bestow being on things universally; they only modify matter so that it may acquire a new determined form. Just like in the first period, matter is still deemed uncaused: the possibility of efficient causation presupposes its existence. Aquinas’ examples of efficient causes allow us to identify accurately the philosophers he is referring to: they are Anaxagoras (Intellect) and Empedocles (Love and Strife).

[*QdP* iii] To the third and last period of philosophy belong the thinkers who have reached the consideration of universal being itself. They are mentioned explicitly: Plato, Aristotle, and their followers. Only these philosophers, considering the universal form of being, arrive to establishing the existence of a universal cause of being, from which the existence of all things ultimately issues.

The third period in Aquinas' history of philosophy may be called "transcendental", inasmuch as the newly introduced object of enquiry transcends specific and categorial forms³. It may be called "metaphysical", inasmuch as it seems to be characterised by the birth of the highest science, which takes into consideration universal being and provides knowledge of the "principles of being", in particular the absolutely first cause. In the continuation of *QdP* 3.5, Aquinas puts forward three demonstrations of the existence of a universal cause. The first and the second one are ascribed to Plato and Aristotle, respectively. The third one is ascribed to Avicenna, who must therefore be numbered among Plato's and Aristotle's "followers" and belongs with full right to the metaphysical period of philosophy.

The history of philosophy expounded in *Summa Theologiae* I 44.2 is likewise divided in the three periods just analysed. Yet some noteworthy differences between the two expositions must be taken into account.

[*ST* i] Just like in *QdP*, thinkers of the first period are not able to go beyond what is sensible, so that they cannot grasp substantial forms. However, in *ST* Aquinas introduces in this stage thinkers who would maintain the existence of accidental change and, as a consequence, of efficient causes – in addition to matter – to explain those changes. The examples of efficient causes given by Aquinas are Intellect and the couple Love/Strife: in other words, Anaxagoras and Empedocles, who were representative of the second period in *QdP*, are now located in the first period next to Milesian philosophers. This does not mean that [*QdP* i] and [*QdP* ii] are unified in [*ST* i], though. Rather, Anaxagoras' and Empedocles' efficient causes are no longer considered causes of substantial changes, being declassified to causes of accidental changes.

[*ST* ii] Given that Anaxagoras and Empedocles have been moved up to the first period, other philosophers will have to discover substantial forms and the corresponding efficient causes of substantial changes. The mention of these causes and of the corresponding thinkers is unexpected: they are the ecliptic, according to Aristotle, and the Ideas, according to Plato. Again, philosophers who belong to a certain period – the third – in *QdP* are moved up to an earlier period in *ST*. In the case of Plato and Aristotle, however, this relocation is all the more surprising since no other thinker – a possible initiator of the third period – is mentioned in *QdP* after them, except for an indefinite reference to their "followers".

³ See [Aertsen 1996], pp. 154-155.

Before moving to the third period in *ST*, Aquinas makes a remark about the limited scope of knowledge in the first and second periods. He observes that matter is “contracted” by forms into a given species – which makes a being “this being” (*hoc ens*) – and that the substance of a given species is “contracted” by accidents into a certain way of being – which makes a being “such being” (*tale ens*). Philosophers of the first and second periods have thus considered being only from a particular point of view, namely only inasmuch as it is *tale ens* or *hoc ens*, respectively. As a consequence, they only established the existence of particular efficient causes of beings.

[*ST* iii] Finally, the metaphysical period of philosophy is inaugurated by “some people” (*aliqui*) who “elevated themselves” to considering being inasmuch as it is being. Accordingly, they also considered the cause of things inasmuch as they are beings, rather than “these” or “such” beings.

Even though [*ST* iii] roughly corresponds to [*QdP* iii], two differences between them must be underscored. First, the questions Aquinas is trying to answer in the two texts are different. In *QdP*, the question is whether there may be something which is not created by God; in *ST*, it is whether prime matter is created by God. In accordance with this, one may notice a difference in Aquinas’ answers. His approach in *QdP* may be called “extensional”, for he intends to demonstrate the existence of a universal cause. On the other hand, his approach in *ST* may be labelled “intensional”, for he seeks a cause of beings not inasmuch as they are these or such beings, but inasmuch as they are beings⁴. As Aquinas specifies, that must be a cause of things with respect to all that belongs in any way to their being, and thus a cause even of prime matter. As a visible mark of Aquinas’ different approaches in the two texts, the reference itself to the object of metaphysical enquiry is different: *esse universale* in *QdP*, *ens inquantum est ens* in *ST*.

The second difference – which might not be independent of the first one – lies in the fact, already noticed, that Plato and Aristotle are the initiators of the third period of the history of philosophy according to [*QdP* iii], while they are not mentioned at all in [*ST* iii]. According to the latter text, the metaphysical period of philosophy would be initiated by *aliqui*, whose names are neither made explicit nor in any way implied by the passage. Scholarship has put forward several hypotheses⁵, some of which can be easily ruled out. For example, it is implausible that “*aliqui*” should be a reference to Christian theologians, for Aquinas is actually outlining a history of *philosophy*, which is supposed to culminate in the discovery of metaphysics as a “natural” science⁶. It is likewise implausible that it may be a second reference to Plato and Aristotle⁷, given the sharp division into three periods and the fact that Aquinas explicitly underscores the limited character of the knowledge

⁴ The two approaches are eventually equivalent, for God is identified both with the universal cause of being and with the cause of being *qua* being.

⁵ For a detailed account, see [Houser 2013], pp. 19-23.

⁶ Cf. [Aertsen 2004], p. 46.

⁷ Even though it would be possible in principle for Aquinas to mention some Platonic and Aristotelian doctrines in order to describe the second period, without restricting Plato’s and Aristotle’s thought in its entirety to that period. See [Aertsen 2004], pp. 43-44.

achieved by thinkers in both the first and second period (*utriusque*). Other scholars have put forward another name, namely Avicenna⁸.

As a matter of fact, if Aquinas' mention of "*aliqui*" must have a definite reference, the identification with Avicenna is plausible for several reasons. First, in [*QdP* iii] only Plato, Aristotle, and their "followers" are included in the third period. Since in *ST* Plato and Aristotle are moved up to the second period, their followers remain as the only thinkers not yet mentioned in the history – the only thinkers who could thus initiate the third period. As we have seen, Avicenna must be numbered among these followers; in fact, he is the only one Aquinas has certainly in mind, for a demonstration of the existence of a universal cause is explicitly ascribed to him later in the text.

This leads us to the second reason why the identification of "*aliqui*" with Avicenna is plausible. As said, in *QdP* 3.5 and *ST* 44.2 Aquinas is answering two different questions. Yet the question of *QdP* 3.5 has a parallel in *ST* 44.1, namely the article which precedes the one considered so far. In the *solutio* of *ST* 44.1, Aquinas proves that every existing thing originates from God with one main argument. At the end of the *solutio*, he briefly mentions Plato's and Aristotle's arguments in order to corroborate his position. However, the main argument employed in the *solutio* is the one ascribed to Avicenna explicitly in *QdP* 3.5⁹. In other words, in *ST* 44.1 Aquinas' main source for a demonstration of the existence of a universal cause is Avicenna, Plato and Aristotle playing only a marginal role.. Since the existence of a universal cause is supposed to be an achievement of the metaphysical period of the history of philosophy, Aquinas' *solutio* in *ST* 44.1 suggests that he would locate Avicenna in the the third phase in *ST* 44.2.

Third, there is little doubt that Aquinas ascribed to Avicenna the admission of the existence of creative causality. In this respect, it has been noticed that in the *Commentary on the Sentences* Avicenna is mentioned explicitly as an example of thinkers who acknowledged creation¹⁰. From the point of view of philosophy, creation is properly a form of metaphysical causality, which concerns all that belongs to the being of things. Again, the connection of Avicenna with the metaphysical period of philosophy seems to be beyond doubt.

Finally, one may underscore the significance of Aquinas' description of the third period for his conception of the system of philosophical knowledge. It has been said that the third period is characterised by the birth of metaphysics as a new science. One can say something more about the structure of this new science, as it is implied by [*ST* iii]. Apparently, metaphysics would consist in an examination of being *qua* being; this examination would eventually result in the knowledge of God

⁸ According to Houser's survey of the scholarship in [Houser 2013], the first to put forward Avicenna's name would be Gilson. Aertsen believes the identification with Avicenna to be plausible; see [Aertsen 1996], p. 155. [Houser 2013] argues in favour of the identification with Avicenna.

⁹ Cf. [Houser 2013], p. 46.

¹⁰ [Aertsen 1996], p. 155. Aquinas' passage in question is *In III Sententiarum*, d. 25 q. 1 a. 2 arg 2. See also [López-Farjeat 2012] for Avicenna's influence on Aquinas' doctrine of creation.

as the first cause of being. In its essentials, this scheme agrees with Avicenna's reflection on the scientific status of metaphysics, which Aquinas could read in the opening chapters of the *Philosophia prima* – the Latin translation of Avicenna's *Ilāhiyyāt* (*The Divine Things*), namely the metaphysical section of his *Kitāb al-Šifā'* (*Book of the Cure*). This agreement is no coincidence; it is rather a consequence of a profound influence of Avicenna on the fundamental issues of Aquinas' conception of metaphysics as a science.

To conclude, the hypothesis that identifies “*aliqui*” with Avicenna is substantiated by several clues. Should it be correct, Avicenna would emerge as a prominent author of the philosophical tradition in Aquinas' view. In particular, Avicenna would be the initiator of the third and final period of philosophy, in which alone a non-restricted knowledge of reality – and the resulting demonstration of a universal cause of being – becomes possible. It is in any case beyond doubt that Aquinas deems Avicenna as a distinguished representative – or even the founder – of metaphysics as a scientific discipline. As we are going to see, modern scholarship has come to acknowledge in Avicenna, if not the founder, the re-founder of metaphysics.

2. The second beginning of metaphysics

It is undeniable that metaphysics underwent considerable transformation during the Middle Ages. Partly the transformation in question was led by a reflection on the nature itself of metaphysics as a scientific discipline, whose main starting-points are definitely the Latin translations of Aristotle's works and of Arabic authors, especially Avicenna and Averroes.

Latin translations posed the problem of understanding correctly the nature of the science which was supposed to be conveyed in Aristotle's *Metaphysics*. Famously, this problem lies, first of all, in the different Aristotelian descriptions of wisdom/theology/first philosophy/science of being, which was assumed to be the science conveyed in the *Metaphysics* as a unified work. Secondly, the problem is compounded if one tries to read the different descriptions of “metaphysics” against the background of the doctrine of science outlined in the *Posterior Analytics*, in particular the requirement that one science must concern one genus (*Posterior Analytics* A 28). Besides the interpretation of Aristotle, the question of the nature of metaphysics had obviously an intrinsic interest: which are the structure, the capabilities, and limits of scientific philosophical knowledge? Answering this question was all the more important, inasmuch as Aristotle's “wisdom” ought to be distinguished from a new wisdom, namely Christian theology. Concretely, the reflection on the nature of metaphysics was instantiated by a large number of discussions in heterogenous works by different authors, resulting in altogether new conceptions of metaphysics to be passed to subsequent ages. On

this basis, the transformation of metaphysics occurred in the 13th- and 14th-centuries has been described as a real “second beginning of metaphysics”¹¹.

The role of Avicenna as one of the main sources of Latin medieval discussions on the nature of metaphysics has generally been acknowledged by scholarship. More recent research, however, has revealed that Avicenna is much more than a source for the topic in question. As a matter of fact, A. Bertolacci’s analysis of Avicenna’s reformulation of Aristotle’s *Metaphysics* has basically shown that the *Ilāhiyyāt* is the actual turning-point in the history of metaphysics as a scientific discipline¹². Most importantly, Avicenna proposes a clear interpretation of the way in which Aristotle’s various descriptions of metaphysics fit together with each other and with the doctrine of science of the *Posterior Analytics*. The crucial point of this interpretation is to be found in his determination of the “subject” of metaphysics in the first two chapters of the work (chapters 1-2 of the first treatise of the *Ilāhiyyāt*). The term “subject” (together with the corresponding notion) in Avicenna’s discussion derives from the expression “γένος ὑποκείμενον” of Aristotle’s *Posterior Analytics*; as already mentioned, according to *Posterior Analytics* A 28 the unity itself of a science would depend on the unity of the genus it is about. According to *Ilāhiyyāt* I 1-2, metaphysics would therefore be a single science inasmuch as it deals with a single subject, which – so does Avicenna’s lengthy discussion concludes – is being inasmuch as it is being. On this basis, Avicenna does not only outline in abstract terms the structure of metaphysics as the science of being in *Ilāhiyyāt* I 1-2, but also concretely provides the exposition of the entire scientific enquiry – which is not directly intended, it must be underscored, as an exposition of Aristotle’s *Metaphysics* – in the *Ilāhiyyāt*. Avicenna’s reformulation of the *Metaphysics* is unprecedented in what may be called the “Aristotelian tradition” and makes a landmark innovation in the history of metaphysics¹³. Subsequent scholarship has acknowledged that the label “second beginning of metaphysics” would in fact best characterise Avicenna’s revolution rather than 13th- and 14th-century Latin philosophy. Whether Aquinas’ history of philosophy in *Summa Theologiae* 44.2 implies that Avicenna is the founder of metaphysics or not, he can definitely be considered its refounder.

The Latin translation of the *Ilāhiyyāt* – in the second half of the 12th-century in Toledo, probably by Gundisalvi¹⁴ – had an enormous impact on Latin philosophy in general, and in particular on the discussions on the nature of metaphysics. As for the crucial question of the subject of metaphysics, Avicenna was seen as the main representative, among Aristotle’s interpreters, of what we may call the “ontological position”, namely the view that being *qua* being is the subject of metaphysics. The “ontological position” can be seen as one of the two main competing views taken

¹¹ See [Honnefelder 1987] and the introduction of [Honnefelder 1990].

¹² [Bertolacci 2006].

¹³ For Avicenna’s relation to the “Aristotelian tradition”, see [Gutas 2014].

¹⁴ See [Bertolacci 2011a], pp. 41-43 and in particular n. 8. See Van Riet’s introduction in Avicenna Latinus, *Philosophia prima*.

into account by Latin authors¹⁵. We shall call the other one “theological position”, namely the view that God and/or immaterial beings are the subject of metaphysics. This view, which has its ultimate ground in *Metaphysics* E 1, was often identified with Averroes’ position. The reason for this lies in one passage of Averroes’ *Long Commentary on the Physics*, available in Latin translation by the first half of the 13th-century. The passage in question is the commentary on the 83rd (and last) text of the first book, which happens to include an explicit criticism of Avicenna. In particular, Averroes criticises Avicenna’s argument to the effect that God cannot be the subject of metaphysics (*Ilāhiyyāt* I 1). Avicenna had argued that the subject of metaphysics cannot be God because the existence itself of God is established in metaphysics, while a science ought to presuppose the existence of its subject. Averroes’ criticism is based on the presence of a demonstration of an unmoved mover in the last book of Aristotle’s *Physics*. Since the existence of immaterial beings is demonstrated in physics, Averroes argues, metaphysics can assume their existence and thus they can be its subject.

Latin authors interpreted Averroes’ passage as an unqualified endorsement of the “theological position” in sharp opposition to Avicenna’s “ontological position”. For example, we shall see that Albert the Great and Duns Scotus explicitly oppose Avicenna’s and Averroes’ views on the subject of metaphysics, ascribing the ontological position to the former and the theological position to the latter¹⁶. Most plausibly, Averroes’ true position on the subject of metaphysics does not have the definite traits through which it was depicted, for example, by Albert and Scotus, and its opposition to Avicenna’s view is somehow vaguer. An analysis of Averroes’ view on the subject of metaphysics falls outside the scope of the present work, though. For present purposes, we shall only take into account Averroes’ criticism of Avicenna and the resulting Latin interpretation of Averroes as representative of the theological position.

It has been observed that “virtually all medieval commentators do not follow ‘the Commentator’ but accept Avicenna’s position and maintain an ontological conception of metaphysics”¹⁷. In this light, Avicenna appears to be much more than a source for medieval discussions on the nature of metaphysics. He must be rather considered as the one who determined the general orientation of Latin medieval conceptions of metaphysics as a scientific discipline. Of course, this does not mean that Avicenna’s influence resulted in a unique view on the nature of metaphysics. Quite the contrary, Latin medieval discussions are characterised by a variety of positions on several issues, which develop Avicenna’s views, introduce new ideas, or sometimes distance themselves from some aspects of Avicenna’s account. The “general orientation” mentioned above rather lies in the fundamentally Avicennian core underlying most of the positions maintained by Latin authors.

¹⁵ Not the only two views.

¹⁶ Cf. [Zimmermann 1998], pp. 44-54; [Aertsen 2012], pp. 80-81.

¹⁷ [Aertsen 2012], p. 81.

The two most comprehensive studies on the medieval discussions on the subject of metaphysics basically confirm this picture. The first of these studies concerns those discussions specifically: it is the well-known survey of A. Zimmermann, “*Ontologie oder Metaphysik?*”¹⁸. Zimmermann classifies the positions of Latin authors according to the place they ascribe to God in relation to the subject of metaphysics: [1] God is one of several subjects of metaphysics; [2] God is cause of the subject of metaphysics; [3] God is part of the subject of metaphysics. Basically, [2] and [3] are instantiated by the view that being *qua* being is the subject of metaphysics, while God is either its cause – in [2] – or falls within its scope – in [3]. Therefore, [2] and [3] basically exemplify the “ontological position”. As for the positions in [1], one should notice, first of all, that they do not amount to an endorsement of the “theological position”, for God is only identified with one of the several subjects of metaphysics. In fact, being *qua* being is maintained to be one of those subjects too. Moreover, a closer analysis of the single positions reveals that being *qua* being often plays a special role among the several subjects of metaphysics¹⁹. This happens in different ways. For example, Giles of Rome maintains that, when one takes “subject” in its most proper meaning, then the subject of metaphysics is being *qua* being²⁰. Other authors would argue that metaphysics has as many subjects as the conclusions it demonstrates; yet Buridan adds that being may be seen as the adequate subject of the aggregation of all those conclusions²¹. In other words, most of the positions in [1] are actually expressions of the ontological position, sometimes in a weak form.

The second comprehensive study of the Latin medieval reflections on the subject of metaphysics is J. Aertsen’s survey of the so called doctrine of the transcendentals, “*Medieval philosophy as transcendental thought*”²². As Aertsen explicitly declares, the medieval discussions on the subject of metaphysics are one of the cornerstones of his study because of the close connection between the notion of transcendental and “a new understanding of metaphysics”²³. This new understanding, Aertsen argues, derives from a strict application of the notion of “subject of science” to the case of metaphysics; “the outcome of the discussion”, he concludes, “was an ontological conception of First Philosophy”²⁴. Several conceptions of the transcendentals and of metaphysics emerge throughout Aertsen’s lengthy survey, which however suggest to the author the characterisation of medieval philosophy as transcendental thought. This characterisation is intimately connected with an ontological understanding of metaphysics, and thus with the Avicennian position²⁵.

¹⁸ [Zimmermann 1998].

¹⁹ An exception may be Roger Bacon, who seems to ground the unity of metaphysics on God. See [Zimmermann 1998], p. 156-161.

²⁰ See [Zimmermann 1998], pp. 168-185.

²¹ See [Zimmermann 1998], pp. 398-412.

²² [Aertsen 2012].

²³ See [Aertsen 2012], pp. 5-6.

²⁴ [Aertsen 2012], p. 6.

²⁵ See [Aertsen 2012], pp. 672-674.

Besides Zimmermann's and Aertsen's studies, the medieval reflection on the nature of metaphysics has deserved a large amount of consideration by scholarship. Monographs have been devoted specifically to the status of metaphysics and its subject in the thought of single authors, such as Honnefelder's work on Duns Scotus and Pickavé's on Henry of Ghent²⁶. Parts of books with a wider scope include sections on the question of the subject of metaphysics, such as Wippel's work on Aquinas²⁷. The articles examining several aspects related to the scientific status of metaphysics are numerous: just to mention one, Noone's essay on Albert the Great analyses Albert's main statements on the very question of the subject of metaphysics²⁸. All these works have increased our understanding of a large amount of details of the medieval conceptions of metaphysics and highlighted the aspects of difficult interpretation. Many more scholarly works examining other doctrines – though closely related to the question of the status of metaphysics – are of utmost importance, and even necessary, to understand some aspects of the medieval conceptions of metaphysics. To give just one example again, we shall see that in Scotus' *Quaestiones super Metaphysicam* the development of the author's position on the subject of metaphysics is partly parallel to the development of his position on the univocity of being, as it has been clarified, for example, in Pini's works²⁹.

In all the studies mentioned so far, attention is generally paid to the decisive influence of Avicenna as a source of medieval conceptions of metaphysics. As a matter of fact, the importance of Arabic sources for Latin medieval philosophy has become more and more evident during the last century. In the case of Avicenna, attempts have been made to outline a general picture of the history of his reception in the Latin world, which are destined to be made more precise or also corrected by future research³⁰. Lists of quotations of Avicenna in Aquinas' works were written as soon as the 1950s³¹. Several critical editions of Latin translations of Avicennian works have been published in the series *Avicenna Latinus*. Scholarly works have examined the Latin reception of various Avicennian doctrines, from the question of the subject of metaphysics to the doctrine of primary notions³² and to theodicy³³, or even the reception of entire Avicennian works³⁴. A comprehensive study of the Latin reception of Avicenna's *Philosophia prima* remains a major objective for future research³⁵, all the more so inasmuch as it involves the Latin speaking world, as we have seen, in the "second beginning of metaphysics".

²⁶ [Honnefelder 1979], [Pickavé 2007].

²⁷ [Wippel 2000].

²⁸ [Noone 1992], but also [Noone 2013].

²⁹ [Pini 2002], [Pini 2005].

³⁰ The first attempts are probably [Gilson 1969] and [Goichon 1979]. For a criticism of some historiographic assumptions in scholarship, see [Bertolacci 2012b], especially pp. 199-201. See also [Bertolacci 2013b].

³¹ [Vansteenkiste 1953] and the appendix in [Forest 1956]. See also the section devoted to Avicenna in [Lohr 1980].

³² For example [Craemer-Ruegenberg 1991], [Aertsen 2008].

³³ [Steel 2002].

³⁴ For Avicenna's psychology, see [Hasse 2000].

³⁵ [Bertolacci 2012b], p. 198.

3. The present work

The present work intends to contribute to the analysis of medieval conceptions of the scientific status of metaphysics. The discussions on the subject of metaphysics will, of course, be a central topic; yet this study will not be restricted to them. For example, some positions on the system of theoretical sciences will be taken into account, as well as statements on the relation of metaphysics to the other theoretical sciences.

As the title indicates, this thesis is concerned with the Latin reception of Avicenna. This does not mean that I shall present a systematic analysis of the Latin reception of Avicennian views on the scientific status of metaphysics. I will rather examine both Avicenna and some Latin authors in their own right, trying to provide an in-depth investigation into their positions. Yet, as already indicated, the medieval conceptions of metaphysics are mostly dominated by Avicenna's influence. The ubiquitous comparisons of Latin authors with Avicenna which will be made throughout the thesis confirm – I believe – this fact, which makes this study inherently connected with an analysis of the reception of Avicenna. Furthermore, an in-depth investigation into single Latin authors is a prerequisite for a fully systematic account of the reception of Avicennian views. In the conclusion, I shall provide, by way of example, a preliminary sketch of limited pieces of that systematic account. In particular, I shall outline the reception and development of specific Avicennian doctrines in the Latin authors considered in this thesis. Some aspects of this reception are not obvious and require a previous exact understanding of both Avicenna and the Latin authors involved.

For this study I have selected three Latin authors to analyse, who are of utmost importance both for the question of the scientific status of metaphysics and for the Latin reception of Avicenna more generally. Two of them are basically contemporary: Albert the Great and Thomas Aquinas. The other one is John Duns Scotus. Of course, this selection will result in an incomplete account of the Latin reception of Avicennian doctrines and in a lacking exposition of the development of certain ideas. For example, I shall not take into consideration Henry of Ghent directly, while his views play a fundamental role in the formation of some of Scotus' positions. Fortunately, the background knowledge provided by the large amount of scholarly work already in existence makes some omissions possible, allowing us to focus on a limited number of authors.

Similarly, the following study of Albert, Aquinas, and Scotus does not presume to be exhaustive; in fact, it is not. Even though I shall provide a general picture of their views, I will also not analyse every aspect of their conceptions of metaphysics, especially when that analysis can be found elsewhere. Thus I will not, for example, examine Aquinas' views on the attributes of being, for

which one may consult other works³⁶. In other cases, I will just briefly summarise the results of other studies for the sake of completeness³⁷.

By contrast, I shall try to provide an in-depth analysis of the aspects of Albert's, Aquinas', and Scotus' conceptions of metaphysics which I deem in need of clarification. Admittedly, such a selection is quite arbitrary and may reflect personal taste or personal opinions on the greater or lesser importance of given arguments. However, I would say that it is mainly based on two criteria. First, I shall analyse aspects of the three authors' position which have not yet received much attention by scholarship. Second, I shall analyse points of particularly difficult interpretation, as it is witnessed by the disagreement in the scholarly debate.

This thesis falls into three main parts and a conclusion. The first part is devoted to Avicenna, the second part to Albert and Aquinas, the third part to Scotus. In the first part, which is a sort of basis for this work, I shall provide a translation and commentary of the chapters in which Avicenna establishes the subject of metaphysics, namely *Ilāhiyyāt* I 1-2.

Besides the first part, I will provide a literal commentary on two other occasions, in the second and in the third part of the thesis respectively (which are not meant to be commentaries in their entirety). The texts I will comment upon are Aquinas' *Super De Trinitate* 5.3 and Scotus' *Quaestiones super Metaphysicam* I 1, which have been the object of many and conflicting interpretations. I believe that both texts are indeed of difficult interpretation, and that a literal commentary is required to evaluate them on solid grounds.

³⁶ [Aertsen 1996].

³⁷ For example Aquinas' views on the structure of Aristotle's *Metaphysics*, for which I basically rely on [Galluzzo 2004].

PART ONE

AVICENNA

I – *Kitāb al-Šifāʾ, Ilāhiyyāt, Treatise I, Chapters 1-2: Translation*³⁸

1. Chapter 1

/3/ Chapter on the beginning of the research of the subject of first philosophy, in order that it becomes clear which it³⁹ is in the sciences

[1] Since God, the giver of mercy and success, has already given us success, so that we have supplied the notions of the logical, physical, and mathematical sciences which it was necessary to supply, it is [now] appropriate that we commence providing knowledge of the notions of wisdom, and we begin by asking for the help of God.

[2] Therefore, we say that the philosophical sciences, as already indicated in other places of the books, divide into theoretical and practical [sciences]. The distinction between them has already been indicated, and mention has been made of the fact that the theoretical [sciences] are those in which the perfection of the theoretical faculty of the soul is sought through the attainment of the intellect in act, and this [is sought, in turn,] /4/ through the attainment of the scientific knowledge, by conceptualisation and assent, of things which are not what they are in virtue of their being our actions and our states, so that the goal [pursued] in them is the attainment of an opinion and a belief which are not an opinion and a belief about the status of an action or about the status of the principle of an action inasmuch as it is the principle of an action.

[3] And [mention has been made of] the fact that the practical [sciences] are those in which, firstly, the perfection of the theoretical faculty is sought through the attainment of the scientific knowledge, by conceptualisation and assent, of things which are what they are in virtue of their being our actions, in order that, secondly, from them stems the perfection of the practical faculty through morality.

[4] And mention has been made of the fact that the theoretical [sciences] are reducible to three divisions, which are the physical, the mathematical and the divine [sciences].

[5] And [mention has been made of] the fact that the subject of the physical [sciences] are the bodies from the point of view of their being moving and resting; their investigation is of the accidents which occur *per se* to them from this point of view.

³⁸ The following translation is based on Avicenna, *Al-Šifāʾ, al-Ilāhiyyāt (1)*, edd. Qanawafī, Zāyid, Cairo 1960. A critical edition of Avicenna's work is currently under preparation within the context of the ERC project "Phibor" (PI Amos Bertolacci). I have consulted the provisional Phibor edition of *Ilāhiyyāt I 1-2*. Though based on the Cairo edition, this translation follows the corrections proposed in [Bertolacci 2006], Appendix A, except the one at *Ilāhiyyāt I 2 p. 12 l. 5* (which has not been adopted in the Phibor edition either).

³⁹ I. e. the subject. See the commentary below.

[6] And [mention has been made of] the fact that the subject of the mathematical [sciences] is either what is a quantum abstracted *per se* from matter or what possesses a quantum; what is investigated in them are states which occur to the quantum inasmuch as it is a quantum and in whose definitions it is not taken the species of any matter or the potency of any motion.

[7] And [mention has been made of] the fact that the divine [sciences] investigate into the things separated from matter in [their] subsistence and definition. You have already heard also that the divine [science] is that in which are investigated the first causes of the physical and mathematical existence and of what depends on them⁴⁰, and the cause of causes and the principle of principles, namely the divinity – exalted by his greatness. /5/ This is as much as you will have already come to know in the books which for you have preceded.

[8] But it did not become clear to you from this which the subject of the divine science really is, except for an indication which took place in the *Book of Demonstration of Logic*, if you remember it, namely that in all the sciences you would have a thing which is a subject, things which are the things sought, and assumed principles from which the demonstrations are composed. But now, you have not ascertained with certain truth which the subject of this science is, or whether it is the first cause itself – so that what is pursued [in this science] would be the knowledge of its attributes and of its acts – or another notion.

[9] You also heard that there is a philosophy [which is] really [such] and a first philosophy, and that it provides the confirmation of the principles of all the other sciences, and that it is the wisdom [which is] really [such]⁴¹. And you heard, at times, that the wisdom is the most noble scientific

⁴⁰ Namely, on the physical and mathematical existence, as indicated by the dual pronoun (Ar. *bi-himā*). It would be also possible to translate as follows (let the translation provided above be translation [i] and the following be translation [ii]): “in which are investigated the first causes of the physical and mathematical existence and what depends on them”, meaning that both the first causes of the physical and mathematical existence and what depends on the physical and mathematical existence are investigated in metaphysics. Translation [ii], however, does not seem to give a good meaning (it implies that metaphysics should investigate both what is prior and posterior to something which is investigated in a particular science). It is possible that the Latin translation witnesses both the interpretations of the sentence insofar as a case of double translations occurs: “scientia divina est in qua quaerunt de primis causis naturalis esse et doctrinalis esse et de eo quod pendet ex his” (quaerunt: quaeruntur P; de eo: eius P). While *eius* in ms. P makes the Latin translation correspond with translation [i], *de eo* in the so-called “ancient text” makes it correspond with translation [ii]. It is noteworthy that the Latin pronoun *his* could refer either to the mathematical and physical existence or to the first causes (there would be the same vagueness in the Arabic text if the pronoun were plural rather than dual: *bi-hā* rather than *bi-himā*).

⁴¹ The phrases “a philosophy which is really such” and “the wisdom which is really such” are translations for, respectively, “*falsafa bi-l-ḥaqīqa*” and “*al-ḥikma bi-l-ḥaqīqa*”. This is the way in which also Marmura translates the text, at least as far as the first phrase is concerned; see *The Metaphysics of the Healing*, p. 3: “[...] that there is here [at hand] philosophy in the real [sense], and a first philosophy; and that it imparts validation to the principles of the rest of the sciences; and that it is, in reality, wisdom”. Another possible translation of the expression is the one proposed by Bertolacci, where the particle *bi* is construed as introducing an object of enquiry in order to characterize philosophy/wisdom. See the translation in [Bertolacci 2006], p. 267: “You have also heard that there is a philosophy of truth”; see also *Libro della Guarigione. Le cose divine*, p. 142: “una filosofia della verità”, “la sapienza della verità”. Bertolacci groups the two expressions together with other names through which Avicenna refers to metaphysics and traces them back to Aristotle’s definition of philosophy as ἐπιστήμη τῆς ἀληθείας in *Metaph. α 1*; see [Bertolacci 2006], Appendix D, p. 603. I slightly prefer the first interpretation of the expression *bi-l-ḥaqīqa* for two reasons. i) The adverbial meaning of *bi-l-ḥaqīqa* is found in other places within *Ilāhiyyāt* I 1. ii) The beginning of paragraph [9] – “you also heard” – should correspond to the close

knowledge of the most noble knowable thing; at other times, that the wisdom is the knowledge which is the most exact and perfect knowledge; at other times, that it is the scientific knowledge of the first causes of the whole.

[10] But you did not know what this first philosophy is, or what this wisdom is, or whether the three definitions and attributes [belong] to only one discipline, or to different disciplines each one of which is called wisdom. Now we will clarify to you that this science, in whose path we are, is the first philosophy, that it is the absolute wisdom, and that the three attributes by which the wisdom has been described are attributes of only one discipline, namely this discipline.

[11] It has already been learnt that every science has a subject which is proper to it; therefore, let us investigate now which the subject of this science is. Let us examine whether the subject of this science is God's being – exalted be his greatness – or not, this being rather one of the questions of this science.

[12] Therefore, we say that it is not possible that that is the subject; that is because the subject of every science is something whose existence is assumed in that science, while only its states are investigated. This /6/ has already been learnt in other places. But it is not possible that the existence of the divinity – exalted be his greatness – is assumed in this science as the subject; rather, it is sought in it. That is because, were it not so, it is unavoidable either that it is assumed in this science and sought in another science, or that it is assumed in this science and not sought in any other science; but both the views are false.

[13] And that is because it is not possible that it is sought in another science, because the other sciences are either ethical and⁴² political, or physical, or mathematical, or logical, and there is no science, among the sciences of wisdom, outside this division. But not even in one of them the establishment [of the existence] of the divinity – exalted be his greatness – is investigated; it is not [even] possible that it is [so]: you know this through the weakest consideration of some principles which have been repeated to you.

[14] Neither is it possible that it is not sought in any other science⁴³, because then it would not be sought in any science at all. In this case, either it would be clear by itself, or its clarification through examination would be hopeless. But it is not clear by itself; nor is its clarification hopeless, since

of [10] – “now we will clarify to you”. I would claim that *al-ḥikma bi-l-ḥaqīqa* corresponds to *al-ḥikma al-muṭlaqa*, both the expressions meaning that only metaphysics is wisdom primarily, while all the other sciences can be called wisdom only in a derivative way. Cf. *Ilāhiyyāt* I 1, p. 7 l. 6, where Avicenna refers to the knowledge of God achieved in metaphysics as *ma'rifatihī bi-l-ḥaqīqa* (as opposed to the knowledge of God provided in physics).

⁴² Arabic: *aw*. The translation “and” (rather than “or”) mirrors the fact that the main alternatives listed are introduced by *immā*, while “ethical” and “political” are sub-divisions of a single alternative.

⁴³ Latin: *in alia ab eis scientia*. The Latin translator misunderstands the text, which refers to a science other than metaphysics – not to a science other than the particular sciences just mentioned.

there is a proof of it – moreover, how can it be correct to assume the existence of that whose clarification is hopeless?

[15] Therefore, it remained that the investigation of it [takes place] only in this science. [Now,] the investigation of it is in two respects: one of them is the investigation of it from the point of view of its existence; the other is [the investigation of it] from the point of view of its attributes. But if the investigation of its existence [takes place] in this science, it is not possible that it is the subject of this science, since it is up to no science to establish its own subject.

[16] We will show to you in a while again⁴⁴ that it is not possible that the investigation of its existence [takes place] but in this science: since it has already become clear to you, as to the state of this science, that it investigates the things entirely separated from matter, and it has already appeared to you in the *Physical Things* that the divinity is neither a body nor the potency of a body, /7/ but is rather one thing free from matter and from intermingling with motion from every point of view, then it is necessary that the investigation of it [belongs] to this science.

[17] What has appeared to you as to this in the *Physical Things* was foreign to the *Physical Things*, but was [something] employed in them, to which [belongs] what does not [belong] to them. Nevertheless, through that one wanted to bring quickly a comprehension of the first principle's being to the man, so that the desire took possession of him of acquiring the sciences and of being driven to this place, in order that he reached the knowledge of it [which is] really [such].

[18] Since it is unavoidable for this science to have a subject and it has become clear to you that what is believed to be its subject is not its subject, let us examine whether its subject are the ultimate causes of the existent things, all the four of them and not, alone among them, that which cannot be maintained [to be its subject]. Indeed, sometimes a group [of thinkers] believes this as well.

[19] But, again, the examination of all the causes cannot fall short of [one of the following]: they are examined either inasmuch as they are existent things, or inasmuch as they are absolute causes, or inasmuch as each one of the four of them is in the manner which is proper to it (I mean that the examination of them is from the point of view of this being efficient, that being receptive, that being [yet] another thing), or from the point of view of their being the totality which is gathered together from them.

[20] Therefore, we say that it is not possible that the examination of them is inasmuch as they are absolute causes, in which case the end of this science would be the examination of the things occurring to the causes inasmuch as they are absolute causes. This becomes evident from [several] points of view.

⁴⁴ Or “also”, depending on the overall interpretation of the argument. See the commentary below.

[21] One of them is from the point of view that this science investigates notions which are not among the accidents proper to causes inasmuch as they are causes, like the universal and the particular, potency and act, possibility and necessity and so on. /8/ Furthermore, it is clear and plain that these things are in themselves such that it is necessary to investigate them. Furthermore, they are not among the accidents proper to natural or mathematical things, nor do they fall within the accidents proper to the practical sciences. Therefore, it remains that the investigation of them [belongs] to the remaining science of the division, namely this science.

[22] And also because the science of the absolute causes takes place after the science of the establishment [of the existence] of the causes for the things which have causes. Indeed, as long as we do not establish the existence of the causes for the things which are caused, by establishing that the existence of these [latter] has a dependence on what precedes them in the existence, the existence of the cause does not follow in the intellect, [nor does it follow] that there is some cause. As for the sense, it only leads to the appearing [of something in the presence of something else]. But it is not necessary that, when two things appear together, the one is cause of the other. The conviction that befalls the soul because of the frequency of what the sense and the experience convey [to it] does not become certain, according to what you have learnt, but through the knowledge of the fact that the things which are existent for the most part are either natural or⁴⁵ voluntary. But actually, this is based on the establishment of [the existence of] the causes, and on the admission of the existence of the causes and of the reasons⁴⁶. And this is not primarily clear, but rather a common opinion: you have already learnt the distinction between them. And it is not [true that], if the fact that the things coming into being have some principle is close, in the intellect, to [what is] clear by itself, [then] it is necessary that it is clear by itself, like many geometrical things which are demonstrated in the book of Euclid [are close to be but are not clear by themselves]. Furthermore, the demonstrative clarification of that does not take place in the other sciences; consequently, it is necessary that it takes place in this science. But how can the existence of the subject of the science, whose states are sought in the questions [of the science], be sought in it?

[23] But if it is so, then it is also clear that the investigation of them is not from the point of view /9/ of the existence which is proper to each one of them, because that is sought in this science.

[24] Neither [is it] from the point of view of their being a certain totality and a whole (I am not saying total and universal), because the examination of the parts of the whole is prior to the examination of the whole (although [the examination] of the particulars of the universal is not so, because of a consideration you have already learnt), so that it is necessary that the examination of the

⁴⁵ Arabic: *wa*.

⁴⁶ It has been argued that the two words *'ilal* and *asbāb* indicate efficient and final causes, respectively. See [De Haan 2020], p. 122, including indication of further bibliography. The translation above is not meant to endorse any particular understanding of the opposition between the two terms.

parts takes place either in this science – in which case they would be worthier [than the whole] of being subjects – or in another science. But no other science contains the discussion on the ultimate causes except this science.

[25] As for the hypothesis that the examination concerns the causes from the point of view of their being existent and [concerns] what attaches to them from that point of view⁴⁷, it would be necessary in that case that the first subject is the existent inasmuch as it is existent.

[26] Therefore it has already become clear also the falsity of this view, namely that the subject of this science are the ultimate causes; rather, it is necessary to learn that this is its perfection and what is sought in it.

2. Chapter 2

/10/ Chapter on the attainment of the subject of this science

[1] It is absolutely necessary that we indicate the subject which [belongs] to this science, so that the end which is [pursued] in this science becomes clear to us.

[2] Therefore, we say that the subject of the natural science was indeed the body. But it was not [the body] from the point of view of its being existent, or from the point of view of its being a substance, or from the point of view of its being composed of its two principles (I mean matter and form); but from the point of view of its being subject to motion and rest. The sciences which are under the natural science are [even] more distant from that. And so are [also] the ethical [sciences].

[3] As for the mathematical science, its subject was indeed either an extension abstracted in the mind from matter, or an extension seized in the mind with some matter, or a number abstracted from matter, or a number in some matter. But also that investigation was not aimed at establishing that it is an extension abstracted or in some matter, or a number abstracted or in some matter; rather, [that investigation] was from the point of view of the states occurring to it after it has been posited. Likewise, the sciences which are under the mathematical [sciences] are [even] more entitled not to examine but the accidents attaching to posited things more proper than these posited things.

⁴⁷ *Wa-ammā in kāna n-naẓaru fī l-asbābi min ǧihati mā hiya mawǧūdātun wa-mā yalḥaquhā min tilka l-ǧihati*. There are two possible translations of this sentence, depending on whether the second *mā* is construed as depending on *fī* or on *min ǧiha*. i) According to the translation given above, *mā* depends on *fī* and therefore the subject of the sentence is *an-naẓar*. ii) According to the other possible translation, *mā* depends on *min ǧiha* and therefore the subject of the sentence is *an-naẓar fī l-asbāb*: “As for the hypothesis that the examination concerns the causes from the point of view of their being existent and [from the point of view of] what attaches to them from that point of view”. Both translations could be supported through parallel passages showing that Avicenna states both that an examination concerns some accidents and that an examination is from the point of view of some accidents. See for example *Ilāhiyyāt* I 2 p. 10 ll.15-16 for translation (i); *Ilāhiyyāt* I 2 p. 10 ll.12-14 (with Bertolacci’s emendation: *min* instead of *fī*) for translation (ii).

[4] The subject of the logical science, as you have learnt, were indeed the second intelligible notions, which are based on the first intelligible notions, from the point of view of the mode of reaching, through them, /11/ the unknown from the known – not from the point of view of their being intelligible and having the intellectual existence, which does not depend on any matter at all or depends on a non-corporeal matter. There are no other sciences except these sciences.

[5] Then the investigation of the state of the substance inasmuch as it is existent and substance, of the body inasmuch as it is substance, of the extension and the number inasmuch as they are existent and of the mode of their existence, and of the formal things which are not in any matter or are in a matter different from the matter of bodies, and of how they are and which manner of the existence is proper to them – [this] belongs to that, to which an investigation must be devoted separately.

[6] And it is not possible that it belongs to the totality of the science of sensible things; or to the totality of the science of that whose existence is in sensible things, but which [the faculties of] imagination and definition abstract from sensible things. Therefore, it belongs to the totality of the science of that whose existence parts from [sensible things].

[7] As for substance, it is clear that, inasmuch as it is only substance, its existence does not depend on matter; if not, a substance would not be but sensible.

[8] As for number, it can befall [both] sensible and non-sensible things, so that, inasmuch as it is number, it does not depend on sensible things.

[9] As for extension, its expression is an equivocal name, to which belongs that of which extension can be predicated, meaning by it the dimension constitutive of the natural body; and to which belongs that of which extension can be predicated, meaning by it a continuous quantity which is said of the line, of the surface and of the delimited body. You have already known the distinction between them. Not even one of them is separated from matter.

[10] However, the extension in the first meaning, although it is non separated from matter, is also a principle of the existence of natural bodies; therefore, if it is a principle of their existence, it is not possible that /12/ its subsistence depends on them, meaning that it acquires the subsistence from sensible things; rather, sensible things acquire from it the subsistence. Therefore, it also precedes sensible things by essence.

[11] [On the contrary,] the figure is not such, since the figure is a necessary concomitant accident of matter after this has become a substance as a finite body and it has taken on a finite surface. Indeed, the limits are necessary for the extension from the point of view of the matter being perfected through it and they follow necessarily upon it afterwards. Therefore, if it is so, the figure is not existent but in matter and is not a primary cause of the matter coming to act.

[12] As for the extension in the other meaning, of it there is an examination from the point of view of its existence and an examination from the point of view of its accidents. As for the examination of which manner of the existence its existence is, and to which division of the existence it belongs, it is not an investigation of a notion depending on matter either.

[13] As for the subject of logic from the point of view of itself, it is evident that it is outside sensible things.

[14] Therefore it is clear that all these things fall within the science which takes upon itself that whose subsistence does not depend on sensible things. But it is not possible to posit for them a common subject, of which all of them should be states and accidents, but the existent. Indeed, some of them are substances, some are quantities, some are other categories [yet], and it is not possible that an ascertained notion is common to them but the certain notion of the existence.

[15] Similarly, there are sometimes also things which must be defined and ascertained in the soul, which are common in the sciences, but which not even one of the sciences takes care of discussing (like the one /13/ inasmuch as it is one, the many inasmuch as it is many, the accordant and the discordant, the contrary, and so on), so that some [sciences] employ them only in a certain way, and others only assume their definitions without discussing the manner of their existence.

[16] They are not proper accidents of any of the subjects of these particular sciences, nor are they among the things whose existence is but the existence of the attributes of the essences. They are not among the attributes belonging to everything either (in which case each one of them would be common to everything), nor is it possible that they are proper to a [single] category. They cannot be among the accidents of anything but of the existent inasmuch as it is existent.

[17] Therefore, it is evident to you from this totality that the existent inasmuch as it is existent is something common to all of these [things] and that it must be attributed as the subject to this discipline, [both] for what we have said and because there is no need to learn its quiddity and to establish [its existence], in which case it would be required that a science other than this science undertake to elucidate the state about it (because of the impossibility that establishing [the existence of] the subject and ascertaining its quiddity takes place in the science whose subject it is; [in this science takes place,] rather, only the assumption of its being and of its quiddity).

[18] Therefore the first subject of this science is the existent inasmuch as it is existent, and the things sought in it are the things which attach to it inasmuch as it is existent without any condition. Some of these things belong to it as [its] species, like the substance, the quantity and the quality; indeed the existent does not require, in order to be divided into them, a division prior to them, in the way substance requires [several] divisions in order that the division into man and not-man follows it necessarily. And some of these belong to it as [its] proper accidents, like the one and the many,

potency and act, the universal and the particular, the possible and the necessary; indeed the existent does not require, in order to receive these accidents and to be prepared for them, to be specified as natural, mathematical, ethical or something else.

[19] /14/ But someone could say that, if the existent is attributed as the subject to this science, [then] it is not possible that the establishment of the principles of the existents takes place in it, because the investigation in every science is of the things attaching to its subject, not of its principles.

[20] The answer to this is that also the examination of the principles is an investigation of the accidents of this subject, because the fact that the existent is a principle is not constitutive of it, nor is it prevented from being in it; it is rather, with respect to the nature of the existent, something occurring⁴⁸ to it. And it is among the accidents proper to it, because nothing is more common than the existent (so that it could attach to something other than it primarily), nor does the existent require to become natural, mathematical or something else in order that being a principle occurs to it.

[21] Moreover, the principle is not a principle of all the existent (were it a principle of all the existent, it would be a principle of itself); rather, all the existent has no principle, and the principle is only principle of the caused existent – so the principle is principle of part of the existent. Therefore, this science does not investigate the principles of the existent absolutely; rather, it only investigates the principles of part of what [falls] within it, as [also] all the particular sciences [do]: for, although they do not demonstrate the existence of their common principles (since they do have principles shared by all that each one of them pursues), they demonstrate the existence, among the things which [fall] within them, of what is a principle for what comes after it.

[22] It follows upon this science that it is necessarily divided into parts. One of them investigates the ultimate causes, for they are the causes of every caused existent from the point of view of its existence, and investigates the first cause from which every caused existent stems inasmuch as it is a caused existent, not only inasmuch as it is a moving existent or only [inasmuch as it is] a quantified [existent].

[23] One of them investigates the accidents of the existent.

[24] One of them investigates the principles of the particular sciences: since the principles of every more proper /15/ science are questions in the more common science (like the principles of medicine [are questions] in the natural [science] and [those] of geodesy in geometry), it occurs in this science that in it are illustrated the principles of the particular sciences, which investigate the states of the particulars of the existent. Therefore this science investigates the states of the existent and of

⁴⁸ *Amr 'āriḍ*, namely an accident.

the things which belong to it as [its] divisions and species, until it reaches a particularisation with which the subject of the natural science is originated and then it hands it over to it⁴⁹, and a particularisation with which the subject of the mathematical [science] is originated and then it hands it over to it⁵⁰, and similarly in the other [cases]. But what [comes] before that particularisation and is as the principle for it, it investigates it and determines its state.

[25] Therefore some of the questions of this science are about the causes of the caused existent inasmuch as it is a caused existent; some others are about the accidents of the existent; some others are about the principles of the particular sciences.

[26] Therefore, this is the science which is sought in this discipline. It is first philosophy, because it is the science of the first thing in existence, namely the first cause, and of the first thing in commonness, namely existence and unity⁵¹. And it is also the wisdom, which is the most noble scientific knowledge of the most noble knowable thing: indeed, it is the most noble scientific knowledge, namely the certitude, of the most noble knowable thing, namely of God – exalted be he – and of the causes which are after him. It is also the knowledge of the first causes of the whole. It is also the knowledge of God.

[27] To it belongs the definition of the divine science, which is “science of the things separated from matter in definition and existence”, since, [as for] the existent inasmuch as it existent, its principles and its accidents, the existence of none of them, as became plain, is but prior to matter and independent of its existence⁵². And if in this science is investigated what is not prior to matter, it is investigated in it only according to a [certain] notion; the existence of that notion does not require matter.

[28] In fact, the things which are investigated in it are according to four divisions, so that some of them are absolutely free from matter and from associations /16/ with matter; some others mingle with matter, but in the way of the constitutive cause prior [to it], while matter is not constitutive of it; some others can exist in matter and can exist not in a matter, like causality and unity, so that what

⁴⁹ Namely, this science (metaphysics) hands over the subject of the natural science to the natural science.

⁵⁰ See the preceding footnote.

⁵¹ Arabic: *Wa-huwa l-falsafatu l-ūlā li-annahū l-‘ilmu bi-awwali l-umūri fī l-wuġūdi wa-huwa l-‘illatu l-ūlā wa-awwali l-umūri fī l-‘umūmi wa-huwa l-wuġūdu wa-l-wahdatu*. Latin: *Et haec est philosophia prima, quia ipsa est scientia de prima causa esse, et haec est prima causa, sed prima causa universitatis est esse et unitas*. There are two main problems in the Latin translation. The first one concerns the translation of *awwal al-umūr* as *prima causa* rather than as *prima res*. The second problem is syntactical: the Latin translation seems to presuppose *wa-awwalu l-umūri fī l-‘umūmi huwa l-wuġūdu wa-l-wahdatu* (in other words, it presupposes the omission of the conjunction *wa* before *huwa*, which in turn requires that *awwal* be subject rather than dependent on *bi*. Interestingly, the Arabic text presupposed by the Latin translation is witnessed (as far as syntax is concerned) by the *Mubāḥaṭāt*.

⁵² Edited Latin text: *Quia ens, inquantum est ens, et principia eius et accidentalia eius, inquantum sunt, sicut iam patuit, nullum eorum est nisi praecedens materiam nec pendet esse eius ex esse illius*. Latin text as witnessed by ms. P: *Deus autem nullo modo est ens, inquantum est ens, nec principia eius nec accidentalia eius, sicut iam patuit, est, sed praecedit materiam nec pendet esse eius ex esse illius*.

belongs to them in common inasmuch as they are what they are is that their ascertainment is not in need of the existence of matter – this group shares also in the fact that its existence is not material, i. e. its existence is not acquired from matter; some others are material things, like motion and rest, but what is investigated in this science is not their state in matter, but rather the manner of existence they have. Therefore, when this division is taken together with the other divisions, they share in the fact that the manner of their investigation is from the point of view of a notion whose existence does not subsist through matter.

[29] As in the mathematical sciences was posited what is defined through matter, but the manner of the examination and of their investigation was from the point of view of a notion not defined through matter, and the dependence on matter of what is investigated did not preclude for it that the investigation was mathematical, so is the state here.

[30] Therefore it has already become evident and visible which the goal in this science is.

[31] This science shares with dialectics and sophistics in a respect, it is different from both in [another] respect and it is different from each one of them in [another] respect [yet]. As for [its] sharing with both, it is because the master of no particular science discusses what is investigated in this science, while the dialectician and the sophist discuss it. As for [its] being different, it is because the first philosopher, insofar as he is first philosopher, does not discuss the questions of the particular sciences, while those two do. As for [its] being different from dialectics in particular, it is in virtue of the power, because the dialectical discourse notifies opinion, not certitude, as you have learnt in the discipline of logic. As for [its] being different from sophistics, it is in virtue of the aim, because this [science] aims at the true itself, while that [one] aims at the fact that, through it, one is believed to be a wise man who says the truth, although he is not wise.

II – *Kitāb al-Šifāʾ, Ilāhiyyāt, Treatise I, Chapters 1-2: Commentary*

The first two chapters of the first treatise of Avicenna’s *Ilāhiyyāt*, dealing with the question of the subject of metaphysics, constitute a unique whole. The overall aim of the two chapters is to identify the subject of metaphysics. The first chapter could be considered as preparatory to the second one: Avicenna recalls the division of philosophical sciences, raises the issue of the subject of metaphysics (namely the subject of the science which should deal with things separated from matter in their definition and subsistence), and refutes two positions about the subject of metaphysics which he believes to be wrong. In the second chapter, Avicenna argues that the existent inasmuch as it is existent should be the subject of metaphysics and thence derives some conclusions regarding the structure of metaphysics, as well as its status and its relationship with other philosophical sciences.

1. Chapter 1

The title of the chapter presents a textual problem. In the Cairo edition of the text, the subject of *tatabayyana* (“becomes evident”) is *inniyyatuhū*, which should be probably read, however, as *anniyyatuhū*⁵³. The term *anniyya*, which seems to have different meanings in Avicenna’s *Šifāʾ*, is employed as synonymous with *wuġūd* in the *Ilāhiyyāt*, thus signifying “existence”. Another possible reading of the *rasm* of the word would be *ayyiyatuhū*, as suggested by Bertolacci⁵⁴. As Bertolacci notes, the pronoun attached to *ayyiyya* literally refers to the term “subject”, so that it should be meant as “the distinctive feature of the subject” (lit. “the which-ness of the subject”); however, the close of the sentence – *fī l-‘ulūm* – would make better sense if *ayyiyya* were specified as the distinctive feature of first philosophy⁵⁵.

The textual problem is closely connected to an issue of interpretation: what is the referent of the expression? In other words, what is such *ayyiyya* / *anniyya* of the subject of first philosophy? Adopting the reading *ayyiyya*, one might suggest that Avicenna has in mind the general feature of metaphysical realities, that is separation from matter in subsistence and definition⁵⁶. However, this

⁵³ See [Bertolacci 2012a], p. 291.

⁵⁴ [Bertolacci 2012a], pp. 299-300; see the whole article for a full account, including an analysis of the origin of the term and a possible parallel with Avicenna’s *Madḥal*.

⁵⁵ A possible solution would be to read “*fī l-‘ulūm*” as implying a reference to the subjects of the sciences, as in Avicenna, *Libro della Guarigione. Le cose divine* (tr. Bertolacci): “la sua qualità distintiva tra [i soggetti de] le scienze”.

⁵⁶ For example [De Haan 2020], p. 116. On the other hand, at p. 132 De Haan maintains that the *ayyiyya* at stake is the universality of the subject of metaphysics. I am not completely convinced in any case by De Haan’s inclusion of the question on the *ayyiyya* of the subject of metaphysics within a set of scientific questions – according to the model of *An. Post. B 1* – asked in *Ilāhiyyāt I 1* (if a given *x* is the subject of metaphysics, what the subject of metaphysics is, etc.). See [De Haan 2020], pp. 113-114.

feature is recalled in *Ilāhiyyāt* I 1 as something already established elsewhere; in other words, it does not “become evident” in this chapter.

Another possibility, more difficult to maintain, is that Avicenna would be referring to the distinctive feature of the subject of a science in general. In this case, the final *fī l-‘ulūm* would be perfectly understandable; on the other hand, the pronoun in *ayyiyatuhū*, which literally refers to “the subject of first philosophy”, should be meant as referring to a generic subject of science. One should therefore translate: “so that the distinctive feature of the subject in the sciences becomes evident”; the distinctive feature at stake would then correspond to the epistemological principles governing the choice of the subject of science which, as a matter of fact, emerge from Avicenna’s discussion in *Ilāhiyyāt* I 1 (existence of the subject must be presupposed, the proper accidents of the subject are investigated, etc.).

On the other hand, the possible mention of the *anniyya* of the subject of first philosophy would definitely have one precise meaning: the *anniyya* of the subject (“the fact that it is”) is one of the two assumptions – together with its *māhiyya* (quiddity) – which any science must make. More precisely, no science can demonstrate *anniyya* and *māhiyya* of its own subject; it rather must presuppose them. Thus interpreted, the verb *litatabayyana* (“in order that it becomes evident”) would only be too fitting: before the actual beginning of a science, one would make sure that the *anniyya* of the subject is clear. Again, however, the final phrase “in the sciences” turns out to be obscure; moreover, *Ilāhiyyāt* I 1 does not seem to concern the *anniyya* of the subject of metaphysics at all. In this case, the title of the chapter could at most describe the first paragraphs of *Ilāhiyyāt* I 2 (see [2-13]), as though they were meant to bring to light the reality of the subject of metaphysics from *within the other sciences* (physics, mathematics, and logic).

The opening lines of the chapter, namely [1], are meant as a brief presentation of the whole *Ilāhiyyāt*, stating its position and its role within the *Šifā’*: it follows the sections of logic, of physics, and of mathematics, and it conveys the highest science, namely wisdom.

The chapter then falls into two main sections:

- [2-10] Introduction to *Ilāhiyyāt* I 1-2
- [11-26] Rejection of two positions concerning the subject of metaphysics

[2-10] Introduction to Ilāhiyyāt I 1-2

This section should be considered as a general introduction to both *Ilāhiyyāt* I 1 and *Ilāhiyyāt* I 2. Its aim is – first – to recall some preliminary points which are supposed to have already been

established or mentioned in the preceding parts of the *Šifā'*, and – second – to formulate, against the background of these points, two questions on the subject and nature of metaphysics. The rest of *Ilāhiyyāt* I 1-2 is then meant to provide answers to the two questions.

Avicenna recalls the relevant preliminary points in [1-7, 9], and formulates the two questions in [8] and [10]. A more detailed outline of the section is the following:

- [2-4] Division of philosophy
- [5] The subject of physics
- [6] The subject of mathematics
- [7-10] Metaphysics
 - [7] Characterisation of the divine science
 - [8] Question: which is the subject of the divine science?
 - [9] Characterisation of wisdom
 - [10] Question: which science is wisdom?

[2-4] In these paragraphs, Avicenna recalls the division of philosophical sciences which, in his words, has already been “indicated in other places of the books”. In particular, [2-3] draw the distinction between theoretical and practical philosophy, while [4] mentions the tripartition of theoretical philosophy.

As for the distinction between theoretical and practical sciences, Avicenna is very careful to highlight precisely where their distinctive trait lies. To begin with, in both theoretical and practical sciences one seeks primarily the perfection of the theoretical faculty of the soul – which is due to the fact that both theoretical and practical sciences are pieces of scientific knowledge. Scientific knowledge is here described by two adjectives, derived from the nouns “conceptualisation” and “assent” respectively, which refer to the two operations of the intellect which take part in the edification of knowledge⁵⁷. So far the nature of theoretical and practical sciences is the same; their distinction is rather based on their different objects of knowledge, as Avicenna points out. The objects of theoretical sciences are not “our actions and states”, while the objects of practical science are precisely “our actions”. This difference in the objects entails a further difference in the aim of theoretical and practical sciences. The aim of theoretical sciences is just the attainment of a belief about their objects; in other words, they reach their goal when the perfection of the theoretical faculty

⁵⁷ See [Koutzarova 2009], pp. 59-63 for a discussion of these terms and further bibliography. See also [Goichon 1938], pp. 179-180, 191-193. Thomas Aquinas will identify the Avicennian distinction, which is meant to separate the formation of concepts from the formation of propositions, with a distinction found in Aristotle’s *De anima* Γ 6.

is achieved. Practical sciences have, by contrast, a further goal: the perfection of the theoretical faculty is itself intended to achieve the perfection of the practical faculty of the soul.

Leaving practical sciences aside, in [4] Avicenna focuses on theoretical philosophy, mentioning its tripartition into physical, mathematical, and divine sciences. Since Avicenna restricts himself here to a bare list of the three classes of theoretical sciences, it would be convenient to provide a brief overview of his distinction of theoretical philosophy as it is found in the “other places of the books” to which he refers.

In particular, it will be useful to report the division of theoretical philosophy which Avicenna draws in *Madḥal* I 2⁵⁸. In this chapter, after separating theoretical from practical philosophy by means of their respective objects of knowledge, Avicenna provides a complex classification of beings. At the end of this classification, which must not concern us now, theoretical philosophy is divided into three parts according to the following differences in their kinds of consideration:

- (i) consideration of beings inasmuch as they are in motion both in conceptualisation and in subsistence;
- (ii) consideration of beings inasmuch as they are separated from motion in conceptualisation, but not in subsistence;
- (iii) consideration of beings inasmuch as they are separated from motion both in conceptualisation and in subsistence.

These three kinds of consideration are proper to the three classes of theoretical sciences:

- (i) physics
- (ii) (pure) mathematics
- (iii) metaphysics

The distinction of three classes of theoretical sciences in *Madḥal* I 2 is therefore based on a general feature of their kind of consideration, which ultimately is a general feature of their objects of enquiry. In particular, such distinction does not presuppose the distinction of the subjects of the three theoretical sciences; it is rather meant to be prior to the identification of the subjects. In other words, given the general feature which singles out a given science, it still makes sense to ask which the subject of that science is.

Against this background one should read the paragraphs which follow, in particular [5-7]. Avicenna is writing the introductory chapter of his *Ilāhiyyāt*, which is supposed to follow the logical, physical, and mathematical sections of the *Šifā'*. Hence this chapter can presuppose that the subjects of physics and mathematics have already been identified – which must take place before the beginning of physical and mathematical investigation, respectively. As for the subject of metaphysics, however,

⁵⁸ For a translation and commentary on this chapter, see [Marmura 1980].

this chapter can only presuppose the general feature of the objects of metaphysical enquiry, which is in any case required in order to single out metaphysical enquiry from the other theoretical sciences.

[5-6] In these two paragraphs Avicenna recalls the subjects of physics and mathematics, respectively. The subject of physics are the bodies inasmuch as they are in motion and rest, while the subject of mathematics is quantity. More precisely, the subject of mathematics is said to be either a quantity abstracted from matter, or what possesses quantity; with all likelihood, this is meant to distinguish between pure (arithmetic, geometry) and applied (music, astronomy) mathematics⁵⁹. As all sciences are supposed to do, physics and mathematics investigate into the accidents/states which occur *per se* to their subjects.

[7-8] Having mentioned the subjects of physics and mathematics, Avicenna now turns to metaphysics. In [7], he recalls what is already known about metaphysics – which, in particular, does not include the identity of its subject. As a consequence of [7], [8] implicitly formulates the question about the subject of metaphysics.

First of all, Avicenna recalls the general feature of metaphysical reality, in a formulation which is not the same, but equivalent to the one found in *Madḥal* I 2: separation from matter both in subsistence and definition. He then states two further points as something already known about metaphysics: first, that it should enquire into the first causes of mathematical and physical existence; second, that it should enquire into “the cause of causes”, namely the divinity.

By contrast, [8] remarks that the identity of the subject of metaphysics has not become known yet, and that the only indication in this respect – which, however, turns out to be a general indication on the structure of a science – has been given in the *Burhān*. Such indication, which basically derives from Aristotle’s *Posterior Analytics*⁶⁰, is the following: in any science there is a subject, there are things which are sought (namely, that which the science ought to demonstrate), and there are principles which are the starting-points of demonstrations. Therefore metaphysics must indeed have a subject. Its identity is still to ascertain, though; for example, since metaphysics should enquire into the first cause, as [7] has recalled, one may wonder whether the subject of metaphysics is the first cause or not.

To sum up, [8] basically highlights the need to answer the following question: what is the subject of metaphysics?

⁵⁹ Avicenna, *Libro della Guarigione. Le cose divine*, p. n. 10.

⁶⁰ See for example *An. Post.* A 7.

[9-10] So far Avicenna's discussion was based on the division of philosophy, and in particular on the distinction of three classes of theoretical sciences. In [9-10] this line of thought is temporarily abandoned to introduce the notion of "first philosophy"/"wisdom". Again, [9] reports facts about wisdom which are supposed to be already known, or at least already heard of; [10] is meant to formulate implicitly some questions about wisdom, which *Ilāhiyyāt* I 1-2 will have to answer.

As for [9], it recalls the following points: *there is* a first philosophy, which establishes the principles of all the other sciences and which is wisdom. Moreover, wisdom is alternately characterised in three ways: it would be the most noble knowledge of the most noble object of knowledge, it would be the most perfect knowledge, it would be the knowledge of the absolutely first causes.

As [10] makes clear, however, these points about the existence of wisdom and its various characterisations are not sufficient to have a definite picture of what precisely wisdom is. Accordingly, two questions must be answered:

- what is "first philosophy"/"wisdom"?
- is there just one wisdom corresponding to the three descriptions above, or are there three distinct sciences each of which is called "wisdom"?

The end of [10] announces the answers which *Ilāhiyyāt* I 1-2 is going to provide:

- metaphysics is "first philosophy"/"wisdom";
- the three descriptions of wisdom belong to a single discipline, namely metaphysics.

The structure of [2-10] has now become entirely clear. Avicenna recalls the division of theoretical philosophy into three parts. He then goes on to mention the subjects of physics and mathematics, which are the first two parts of theoretical philosophy, and poses the problem of the subject of metaphysics, which is the third and last part of theoretical philosophy. In addition to the tripartition of theoretical philosophy, he introduces in [9] the idea of a form of knowledge which is called wisdom. The significance of this introduction is made clear by the end of [10], with the announcement of a return to theoretical philosophy: it will be shown that wisdom is nothing else than the third part of theoretical philosophy, namely metaphysics.

[11-26] *Rejection of two positions concerning the subject of metaphysics*

Ilāhiyyāt I 1-2 is supposed to give an answer to the two questions emerging from [2-10]. The first question (what is the subject of metaphysics?) is answered in two steps. First, in the rest of

Ilāhiyyāt I 1 Avicenna refutes two opinions on the subject of metaphysics (*pars destruens*). Second, he identifies the subject of metaphysics in *Ilāhiyyāt* I 2 (*pars construens*). As a consequence of this, Avicenna outlines the structure of metaphysics and provides an answer to the second question, explaining the reasons why metaphysics is first philosophy and wisdom.

The *pars destruens* of Avicenna's answer to the first question has two parts, corresponding to the two positions it is meant to refute: [11-17] deal with the view according to which God is the subject of metaphysics, while [18-26] concern the view that the first causes are its subject.

[11-17] Avicenna's discussion of the "theological position" on the subject of metaphysics is structured thus:

[11] Introduction

[12-16] Refutation

[17] Remark on the physical discussion of God

Avicenna's refutation in [12-16] is based on an epistemological principle ultimately deriving from Aristotle's *Posterior Analytics*, according to which a science must presuppose the existence of its subject. The argument is quite clear in its general lines; however, its final paragraphs present two difficulties which might be a sign of textual problems, as we shall see. In any case, in [16] Avicenna mentions the fact that some knowledge of God is provided in physics; this prompts the remark in [17], which clarifies the status of that knowledge.

[11] Having recalled that every science has a subject, [11] opens the investigation into the identity of the subject of metaphysics with the following question: is the *anniyya allāh* the subject of metaphysics, or is it something which is sought in metaphysics?

The use of the expression *anniyya allāh* ("God's being", "the fact that God is") on this occasion is not clear. It would seem more accurate to mention just "God" as a possible subject for metaphysics; his *anniyya* should rather be a presupposition of metaphysical enquiry, if God were the subject. Accordingly, the presence of *anniyya allāh* might be deemed as a simple inaccuracy. On the other hand, there seems to be a parallel between our sentence and a passage in [8], where the expression *dāt al-'illa al-ūlā* is used (which has been translated as "the first cause itself"). This might suggest that both the expressions should be meant as somehow referring to "God's being".

Be this as it may, the purport of the paragraph is quite clear: Avicenna is asking whether God is the subject of metaphysics. In [12-16] he provides a negative answer.

[12] The view that God is the subject of metaphysics is refuted by a single argument, which is stated in [12]. The argument can be summarised thus:

- (P1) Any science must presuppose the existence of its subject
- (P2) The existence of God is sought (and therefore not presupposed) in metaphysics
- (C) God is not the subject of metaphysics

(P1) is mentioned as something already known from “other places”. It is an epistemological principle ultimately deriving from Aristotle’s *Posterior Analytics*⁶¹; with all likelihood, by “other places” Avicenna is here referring to his *Burhān*.

On the other hand, Avicenna provides a proof for (P2) in [12]. The proof has the following structure: $\neg P2 \rightarrow (\alpha \vee \beta)$; $\neg(\alpha \vee \beta) \therefore P2$, where

α = “the existence of God is assumed in metaphysics and sought in another science”;

β = “the existence of God is assumed in metaphysics and not sought in any science”.

$\neg(\alpha \vee \beta)$ is in turn demonstrated in [13-14]. In particular, [13] is meant to demonstrate $\neg\alpha$, while [14] is meant to demonstrate $\neg\beta$.

[13] Avicenna demonstrates here that the existence of God is not sought in a science other than metaphysics ($\neg\alpha$). The proof is by exhaustion: the sciences other than metaphysics are listed; the list is said to be complete⁶²; finally, Avicenna notes that none of the sciences in the list provides an “establishment of the divinity”.

The last point is further corroborated: it is even impossible that one of the sciences in the list should provide a demonstration of God’s existence. The reasons behind this impossibility are not explained; apparently, they would be nearly obvious in Avicenna’s view. It is possible that Avicenna has in mind the fact that the objects of enquiry of a science have some general features, such as being mobile, being a quantity, and so on. Accordingly, his implicit reasoning would run as follows: since God is not mobile, has no quantity, etc., the investigation of his existence cannot pertain to physics, mathematics, and so on.

One last remark on terminology: the verb used by Avicenna, *itbāt* (“to establish”), is used here and elsewhere as a technical term, concerning the area of existence: *itbāt* means “to establish the existence of something”.

⁶¹ See [Bertolacci 2007], pp. 65-66; see pp. 73-74 for its use by Avicenna.

⁶² Note the expression “among the sciences of wisdom”: in this case, Avicenna is employing the term “wisdom” to refer to philosophy in its entirety, rather than to first philosophy.

[14] Avicenna argues that it is not possible that the existence of God is assumed in metaphysics and not sought in any science ($\neg\beta$). Again, the structure of the argument is the following: $\beta \rightarrow (\gamma \vee \delta)$; $\neg(\gamma \vee \delta) \therefore \neg\beta$, where

γ = “God’s existence is clear by itself”;

δ = “God’s existence cannot be clarified”.

Avicenna takes it for granted that God’s existence is not clear by itself, and therefore that γ is false. As for δ , he claims that it is not true that God’s existence cannot be clarified, for there is a “proof” (*dalīl*) thereof: δ is false as well. Moreover, Avicenna adds, even if δ were true, β would still be false, for it is not correct to assume as a premise in a science something that cannot become clear in any way.

Again, a terminological remark is in order: Avicenna states that there is a *dalīl* of the existence of God. By using the term *dalīl*, Avicenna refers to a “demonstration *quia*” (*burhān anna*), rather than a “demonstration *propter quid*” (*burhān li-mā*), as is made explicit in *Burhān* I 7⁶³. Going into details, in *Burhān* I 7 Avicenna draws a distinction between two kinds of “*burhān anna*”, one of which is named *dalīl*: this is characterised by the fact that the middle term of the demonstration is an effect of the inherence of the major term in the minor term⁶⁴.

This being the case, the possibility of a *dalīl* of God’s existence would not contradict Avicenna’s claim in *Ilāhiyyāt* VIII 4 that there is no demonstration about God. On that occasion, Avicenna argues that there is no demonstration about God because God has no cause: accordingly, he is definitely referring to a “demonstration *propter quid*”, rather than to a “demonstration *quia*”.

[15-16] The argument stated in [12] to the effect that God cannot be the subject of metaphysics becomes well-founded by the end of [14], with the completion of the proof for (P2). In other words, [12-14] could be a self-sufficient unity, with nothing essential lacking.

This being the case, paragraphs [15-16] turn out to be problematic. On one hand, they clearly continue the argument of [12-14]: in fact, at the beginning of [15] one finds an assertion of (P2), which is the conclusion to be drawn from [13-14]. However, [15-16] do not restrict themselves to drawing the relevant conclusions from [12-14]: as they stand, they seem to play a more substantial role in the rejection of the position that God is the subject of metaphysics.

⁶³ Cf. [Bertolacci 2006], p. 225 (especially n. 45); *Libro della Guarigione. Le cose divine*, n. 23.

⁶⁴ *Burhān* I 7, p. 79 ll. 17-20. It is also possible that Avicenna’s use of the term has connections with Aristotle’s discussion of “sign” in *Prior Analytics* B 27; for the corresponding passage in Avicenna’s *Šifā’*, see *Qiyās*, IX 24.

Going into details, [15-16] present two difficulties. The first problem is posed by [15], with its distinction between two investigations of God: the one from the point of view of his existence, the other from the point of view of his attributes. Starting from this distinction, [15] concludes that, if the investigation of God's existence takes place in metaphysics, then God cannot be the subject of metaphysics, for no science demonstrates the existence of its own subject. All of this is in agreement, of course, with what Avicenna has said in [12-14]. However, the introduction of a distinction between two investigations about God at this point of the argument is out of place, for Avicenna is supposed to have been discussing *only* about the investigation of God's existence since [12]. In other words, [12-14] do not speak about an enquiry about God in general, which should then be specified in [15] selecting the relevant kind of investigation – namely the one from the point of view of God's existence – in order to complete the argument. Rather, [12-14] speak about the investigation of God's existence from the very beginning, arguing that such an investigation should take place in metaphysics.

The second problem is posed by [16], which is supposed to demonstrate that God's existence cannot take place but in metaphysics. Apparently, this statement would amount precisely to (P2); at least, it is difficult to maintain convincingly that the claim made in [16] actually differs from (P2) in some relevant respect (in which case the word *aydan* should be translated as “also”, rather than “again”). Now, Avicenna had already provided a proof for (P2) in [13-14]; accordingly, if [16] is meant to be a proof for (P2), its role in the text coincides with the role of [13-14]. This being the case, the presence of [16] is at least superfluous. Of course, it is possible that more arguments are put forward in support of the same point; yet the fact that the supposedly second argument in [16] is separated from the argument in [13-14] by [15], which seems to draw the conclusions of the whole argument, makes that possibility unlikely.

To sum up, [15-16] are quite problematic as they stand in the text, and there seems to be no obvious solution to the two difficulties just expounded. In this respect, it is interesting to take into consideration the text of [15-16] as it is found in ms. Oxford, Bodleian Library, Pococke 117⁶⁵. In this manuscript, a large part of [15-16] is omitted in the text and copied in the margin. The text resulting from the omission is the following:

Therefore, it remained [that] the investigation of him from the point of view of his existence is not possible but in this science. [And] since it has already become clear to you, as to the state of this science, that it investigates the things entirely separated from matter, and it has already appeared to you in the *Physical Things* that the divinity is neither a body nor having a body, but is rather one thing free from matter and from intermingling with motion from every point of view, it is therefore necessary that the investigation of him [belongs] to this science.

⁶⁵ I was able to consult this manuscript thanks to the database of the ERC project “Phibor”.

Besides the omission, there are another couple of interesting variant readings in the manuscript. One of these is the addition of the phrase “from the point of view of his existence” in the first sentence⁶⁶.

Now, it is interesting to notice how both the problems mentioned above disappear if we read the text as it is found in Pococke 117. First, there would be no distinction between two investigations of God; rather, Avicenna would continue to speak about the investigation of God’s existence. Second, there would be no additional, independent argument in support of (P2); rather, Avicenna would simply provide a “positive” reason – i. e. God’s immateriality – why metaphysics should indeed investigate into God’s existence, after having acknowledged that such an investigation cannot be disregarded or entrusted to another science.

In addition to this, one should also notice that the omission has no apparent explanation on philological grounds. One could therefore take into consideration the possibility that the omission would not witness a scribal error in the manuscript tradition, and that the text omitted by ms. Pococke 117 was not present in the original version of Avicenna’s argument. In other words, the text omitted by ms. Pococke 117 might in principle be a later addition to the original Avicennian text.

Of course, a more careful analysis of ms. Pococke 117 and of the manuscript tradition would be needed in order to settle this question. However, it has already been argued by scholarship that some manuscripts (and/or the Latin translation) may preserve versions of passages of the *Šifā’* which are closer to Avicenna’s original text than the version which is widespread in the tradition, and that the “*textus vulgatus*” may be the result of revisions made within Avicenna’s school, possibly by his disciples⁶⁷. In the present case, for example, the possible modification of Avicenna’s original text might have been meant to provide an explanation of the words “from the point of view of his existence”, contrasting it with another investigation of God, namely “from the point of view of his attributes”.

[17] This paragraph is plausibly prompted by the mention of the physical enquiry of God in [16], where Avicenna has recalled some points about God established in the physical section of the *Šifā’*. In any case, the paragraph is meant to solve the following problem: how can paragraph [13] not be contradicted by the discussion of the first principle provided in the physical section of the work?

⁶⁶ Another interesting reading is found in the statement that the divinity is not “having a body”, rather than “a potency of a body”.

⁶⁷ See in particular [Bertolacci 2017] and [Di Vincenzo 2017]; see also [Alpina 2017] for a different example of intervention of Avicenna’s school in the redaction of the *Šifā’*.

Avicenna's answer is quite simple: the discussion of the first principle provided in the physical section does not in fact belong to the science of physics. Its presence there is not essential and even improper, serving only a didactical purpose.

This paragraph closes section [11-27], in which Avicenna has established one first point about the subject of metaphysics: God is not the subject of metaphysics. To recapitulate the contents of the section: God cannot be the subject of metaphysics, because metaphysics must presuppose the existence of its subject, while it demonstrates the existence of God. In particular, metaphysics cannot assume the existence of God inasmuch as it is demonstrated in physics, for the good reason that physics as such does not provide any demonstration of God's existence.

[18-26] These paragraphs contain the second half of the *pars destruens* of Avicenna's solution to the problem of the subject of metaphysics; they are meant to refute the view that the first causes are the subject of metaphysics. The structure of this section is the following:

[18] Introduction

[19] Distinction of four kinds of examination of the causes

[20-22] Second kind of examination of the causes

[23] Third kind of examination of the causes

[24] Fourth kind of examination of the causes

[25] First kind of examination of the causes

[26] Conclusion

Avicenna's argument to the effect that the first causes cannot be the subject of metaphysics is thus a proof by exhaustion. First, four possible kinds of examination of the first causes are distinguished in [19]; second, Avicenna argues that the causes cannot be the subject of metaphysics according to any of those kinds of examination; hence the conclusion that the first causes cannot be the subject of metaphysics at all.

[18] The meaning of the paragraph is quite clear. Avicenna recalls the fact that metaphysics – like any science – must have a subject, and that he has just ruled out one candidate for that role, namely God. Accordingly, he proposes to investigate about a second candidate, namely the four ultimate causes, which are believed to be the subject of metaphysics by some people.

Having said this, it is difficult to determine the exact meaning of the following passage: “*kulluhā arba ‘atuhā lā wāḥidan minhā alladī lam yumkin al-qawl bihī*”. Most importantly, one should determine the reference of the pronoun *alladī*, together with the meaning of the relative clause it opens. Related to this, there is a variant reading to take into consideration: “*wāḥidun*” rather than “*wāḥidan*”. The following are three different translations of the passage provided by scholarship:

- “the four of them, not one being excluded from the discussion” (Marmura)⁶⁸;
- “tutte e quattro, non una sola di esse (della quale non si è potuto dire [che fosse il soggetto])” (Bertolacci);
- “the four of them, not only one – [a topic] of which it was not possible to say [anything so far]” (Phibor).

In Marmura’s translation, “*lā wāḥidan minhā*” is interpreted as a negation of the genus. The indeterminate “*wāḥidan*” might be explained on the basis of the influence of “*minhā*”⁶⁹. Yet referring “*alladī*” to “*wāḥidan*” seems problematic. In addition to this syntactical problem, Marmura’s interpretation has the disadvantage of making the phrase “*lā wāḥidan minhā alladī lam yakun al-qawl bihī*” superfluous: it says nothing more than “*kulluhā arba ‘atuhā*”.

In Bertolacci’s translation, Avicenna would be underscoring the fact that he has already denied that the first efficient cause – namely God – may be the subject of metaphysics on its own; accordingly, the problem to be dealt with in [18-26] is whether *all the four* causes, rather than God only, can be the subject of metaphysics.

In the Phibor edition of the text, the reading “*wāḥidun*” is adopted. The relative clause, on the other hand, is not referred to “*wāḥidun*”; rather, the pronoun “*alladī*” is interpreted with no explicit antecedent, meaning “something that”. The meaning of Avicenna’s sentence would be the following: one should enquire whether all the four causes of the existents, rather than just one (plausibly this one would be God), can be the subject of metaphysics, for the four causes of the existents have not been the object of a dedicated exposition in the *Šifā’* yet.

Ultimately, it is difficult to provide a certain interpretation. In the translation provided above, I have followed Bertolacci’s understanding of the meaning of the text. I translated according to the reading “*wāḥidan*”, attaching to it an adverbial value. I have interpreted the pronoun “*alladī*” as having no antecedent: “that which cannot be maintained [to be its subject]”, meaning God. So interpreted, the relative clause would have a parallel in [18] itself: “*alladī yuzannu annahu huwa mawḍū ‘uhu*”, referring to God.

⁶⁸ Following the Cairo edition, Marmura reads “*yakun*” rather than “*yumkin*”.

⁶⁹ Cf. [Wright 2005], vol. 2, p. 96, §39 (b).

[19] Avicenna distinguishes between four kinds of examination of the causes:

i) examination of the causes inasmuch as they are existent;

ii) examination of the causes inasmuch as they are causes (the expression I have translated as “absolute causes” means “causes as such”, that is only inasmuch as they are causes, with no further specification);

iii) examination of the four causes inasmuch as each one is a specific kind of cause (in other words: examination of the efficient cause inasmuch as it is efficient, etc.);

iv) examination of the four causes inasmuch as they make up a totality⁷⁰.

As said, the distinction between these four kinds of investigation of the causes is meant to deal with each of them separately, in [19-22], [23], [24], and [25]. Before going into the details of these paragraphs, it would be useful to make two general remarks in advance.

First of all, Avicenna is not going to argue that metaphysics does not undertake any of the four investigations of the causes he has listed. Quite the contrary, he definitely believes that metaphysics takes into consideration the causes from all the four points of view (i-ii-iii-iv). What he is rather going to argue is that metaphysics does not examine the causes *as its subject* in any of those four ways.

Second, there is a substantial difference between the way in which Avicenna deals with the first kind of examination, namely (i), in [25], and the way in which he deals with the other three kinds of examination. As for (ii-iii-iv), he does in fact provide arguments, based on general epistemological criteria, to the effect that the causes from a given point of view cannot be the subject of metaphysics. In principle, however, it would be possible for a science to examine, as its subject, the causes in one of those three ways. The problem with (i) is somehow more fundamental: speaking of an examination of kind (i) with the causes as its subject is intrinsically false. The science undertaking examination (i) must have a different subject, and for the very nature of the examination at stake.

[20-22] In [20] Avicenna states that the causes inasmuch as they are causes cannot be the subject of metaphysics: in other words, that metaphysics cannot consist in an examination of kind (ii). Two arguments in support of this claim are put forward in [21] and [22], respectively.

⁷⁰ It is not completely clear to me what Avicenna has in mind. Plausibly, this kind of examination does not overlook, as (ii) does, the specific character of the different kinds of causes; yet it should consider, unlike (iii), the joint action of the four kinds of causes. [De Haan 2020], p. 123, speaks of the “aggregate effect” of the causes, which might be understandable as far as form and matter are concerned. Yet it seems to me that, once efficient and final causes are taken as parts of a totality, such totality cannot be called an effect of those causes properly.

The argument in [21] is based on the epistemological principle, deriving from the *Posterior Analytics*⁷¹, according to which the task of a science should consist in investigating into the proper accidents of its subject. The argument can be outlined thus:

- (P1) A science investigates into the proper accidents of its subject
- (P2) The notions investigated in metaphysics are not proper accidents of causes as such
- (C) Causes as such are not the subject of metaphysics

As said, (P1) ultimately derives from the *Posterior Analytics*. On the other hand, (P2) is substantiated by giving examples of notions investigated in metaphysics: the universal and the particular, potency and act, possibility and necessity. Avicenna argues that these notions are indeed investigated in metaphysics: on one hand, they require an investigation; on the other hand, they are not investigated in any other science. It remains that they are investigated in metaphysics, namely that (P2) is true. This brings to an end the argument in [21], for once the truth of (P1) and of (P2) is acknowledged, the conclusion (C) necessarily follows.

The second argument against the view that the causes as such may be the subject of metaphysics is stated in [22]. Avicenna begins by claiming that the scientific knowledge of the causes should presuppose the knowledge of the existence of the causes. This is nothing more than the application of the general epistemological principle concerning the existence of the subject, which may be considered the first premise of Avicenna's argument:

- (P1) A science presupposes the existence of its subject
- (P2) The existence of the causes is sought (rather than presupposed) in metaphysics
- (C) The causes are not the subject of metaphysics

The essential idea of the argument is the same as the one underlying the rejection of the view that God is the subject of metaphysics, in paragraph [12]: both the arguments are based on the epistemological principle according to which a science should presuppose the existence of its subject. In both arguments, one finds the same technical term "*itbāt*", meaning "to establish the existence of something". Furthermore, Avicenna's proof for (P2) follows, in its general lines, the strategy of [13-14], namely the proof of the claim that the existence of God is sought in metaphysics: Avicenna maintains, on one hand, that the existence of the causes is not sought in another science; on the other, that it is not clear on non-scientific grounds.

The way in which Avicenna argues for the latter point is interesting. Establishing the existence of the causes would consist in clarifying that something (the effect) has an ontological dependence on something else (the cause), which is prior to it in existence. Avicenna rules out the possibility that this point might be clear but as the conclusion of a scientific demonstration:

⁷¹ See for example *An. Post.* A 7, A 10, A 28.

- It cannot become clear through sensation, for the senses cannot by themselves provide knowledge of a causal connection. Senses can only witness to the simultaneous presence of two things, which does not guarantee that one of them is the cause of the other.
- It is not self-evident; rather, it is a “common opinion”. Avicenna’s remarks in this respect suggest that he deems the existence of the causes as close to being self-evident; however, it is not truly self-evident and therefore requires a demonstration.

To sum up: the existence of causes is not self-evident and does not become evident through sensation, therefore it must become evident as the conclusion of a scientific demonstration. This demonstration is not provided by a science other than metaphysics, though; therefore, it must take place within metaphysics. Hence the causes cannot be the subject of metaphysics, for – in Avicenna’s words – how can the existence of the subject of a science be sought in it?

This concludes Avicenna’s rejection of the view that the causes inasmuch as they are causes may be the subject of metaphysics. Before moving on to the other possible examinations of causes, I would go back to Avicenna’s claim that the existence of causes cannot be grounded on sensation. In making that claim, Avicenna also adds some remarks to explain why and to which extent the belief in the existence of the causes provided by sensation falls short of being certain knowledge. Even though Avicenna’s remarks are not completely clear, it is plausible that his reasoning should be summarised as follows. The simultaneous appearance of two things is no guarantee of a causal connection; yet the repeated appearance of two things together, as witnessed by experience, can convince the soul of the existence of a causal connection between those two things. In order for this conviction to become certain knowledge, however, one should also know that “the things which are existent for the most part are either natural or voluntary”. The expression I have translated as “existent for the most part” corresponds to Aristotle’s notion of that which is *ὡς ἐπὶ τὸ πολὺ*⁷². Without going into the details of Aristotle’s account, which would take us too far, the essential point of his use of the notion is its opposition to what is necessary/always, on one hand, and to what is merely *per accidens*, on the other. Now, returning to [22], Avicenna has already stated that sensation cannot perceive causal connections; yet experience can attest to the fact that two things occur together not always – which experience cannot grant – but at least *ὡς ἐπὶ τὸ πολὺ*. In order for this datum to become knowledge of a causal connection, one should presuppose that what happens *ὡς ἐπὶ τὸ πολὺ* is “either natural or voluntary”. Plausibly, by this Avicenna means the following: every time one infers a causal connection from something which happens *ὡς ἐπὶ τὸ πολὺ*, he is actually implicitly assuming that this must either have a natural explanation or depend on a determination of the will. Such assumption presupposes in turn the existence of causes, such as natural causes and the will.

⁷² See Avicenna, *Libro della Guarigione. Le cose divine*, n. 39.

Ultimately, the attempt to infer the existence of causes from sensation results in a circular argument and is, therefore, unsuccessful.

[23] Avicenna's rejection of the view that the four causes may be the subject of metaphysics according to their specific nature – namely according to examination (iii) – is very short, for it is supposed to be an immediate consequence of the rejection of (ii) in [20-22]. In particular, Avicenna adjusts the argument in [22] to the present case: just like the existence of the causes as such is sought in metaphysics, so is the existence which is proper to the four kinds of causes⁷³. Avicenna does not provide any argument to the effect that the proper existence of the four kinds of causes must be sought in metaphysics. This is not surprising, for the proper existence of the four kinds of causes does itself presuppose the existence of causes as such: if the latter cannot be assumed in metaphysics, the same must hold *a fortiori* for the former. In other words, the rejection of the view that the causes are the subject of metaphysics according to examination (ii) entails that they cannot be the subject of metaphysics according to examination (iii) either.

[24] Avicenna's rejection of the view that the causes may be the subject of metaphysics inasmuch as they make up a totality – namely according to examination (iv) – is based on the following claim: the examination of a totality presupposes a knowledge of the parts of the totality. Now, the examination of the ultimate causes is not provided in a science other than metaphysics, in which case metaphysics could presuppose it in order to discuss their totality. It remains that the discussion of the ultimate causes takes place in metaphysics: but then the ultimate causes, rather than their totality, would be the subject of metaphysics. Accordingly, the causes cannot be the subject of metaphysics inasmuch as they make up a totality.

Avicenna's argument in [24] introduces the examination of “the parts of the totality of the causes”. Should this be considered a fifth kind of examination of the causes, in addition to (i)-(iv)? If so, Avicenna's argument would leave one question unanswered: why can the subject of metaphysics not be the ultimate causes inasmuch as they are parts of a totality?

⁷³ The phrase “the existence which is proper to each one of them” must refer to the specific kind of existence enjoyed by each of the four causes. Of course, it recalls the expression “proper existence” found in *Ilāhiyyāt* I 5; this similarity might suggest that “proper existence” in *Ilāhiyyāt* I 5 should be interpreted as “specific kind of existence”, as in [Wisnovsky 2003], p. 155. This interpretation has also pushed some scholars to ascribe an intensional priority to the notion of “existent” with respect to the notion of “thing” (the latter being connected to the notion of “proper existence”); see [Bertolacci 2012c]. On the other hand, the parallel between Avicenna's “proper existence” and Ibn ‘Adī's notion of “essential existence”, as highlighted in [Rashed M. 2004], would point to a sharper distinction between the meanings of the word *existence* in the expression “proper existence” and in the characterisation of the notion of “existent”, respectively. Scholarly interpretations are various; an updated bibliography may be found in [Janos 2020], pp. 498-514. For a wider discussion of *Ilāhiyyāt* I 5, which is one of the best known chapters of Avicenna's metaphysical work, see for example [Marmura 1984] and [Aertsen 2008].

If, on the other hand, the examination of the parts of the totality of the causes is to be found among (i)-(iv), then it must be identified with (iii). In this case, Avicenna's remark that he is speaking of a totality, rather than of a universal, would have a major importance not only in distinguishing (iv) from (ii), but also in determining an order between examinations (ii)-(iii)-(iv). Unlike examination (iv), examination (ii) may indeed be considered the examination of the causes in universal, with respect to which the species of causes and individual causes are "particulars". This being the case, the distinction between (ii) and (iii) would mirror the distinction between universal and particular, while the distinction between (iii) and (iv) would reflect the distinction between parts and totality. Since the examination of the universal should be prior to the examination of the particular, and the examination of the parts should be prior to the examination of the totality, the three kinds of examination of the ultimate causes considered so far should follow the order (ii)-(iii)-(iv).

[25] This paragraph takes into account the remaining kind of examination of the ultimate causes listed in [19], namely (i). This is the examination of the causes inasmuch as they are existent, whose goal would be to investigate into the attributes of the causes inasmuch as they are existent. As already mentioned, the problem Avicenna finds in the view that the ultimate causes are the subject of metaphysics according to examination (i) is different from the problems involved in examinations (ii-iii-iv). In [25], Avicenna does not simply argue that metaphysics cannot consist in an investigation having "the ultimate causes *qua* existent" as its subject; rather, he argues that "the ultimate causes *qua* existent" would not be the subject of any investigation at all.

Basically, Avicenna's reasoning is quite simple, and is based on the principle according to which a science should investigate into the proper accidents of its subject. If metaphysical enquiry (or whichever science) had the causes *qua* existent as its subject, its task would consist in demonstrating the attributes of causes *qua* existent. But the attributes belonging to causes inasmuch as they are existent are nothing else than the attributes of the existent *qua* existent. Accordingly, the existent *qua* existent, rather than the causes, should be considered the subject of metaphysics.

The one just provided is a plausible reconstruction of Avicenna's argument in [25]. In order to achieve a deeper understanding of the argument, however, it is essential to focus on the expression "first subject" (*al-mawḍū' al-awwal*). Strictly speaking, Avicenna does not claim that, if metaphysics were the science of the ultimate causes *qua* existent, then the subject of metaphysics would be the existent *qua* existent. What he claims instead is that the existent *qua* existent would be "the first subject". Of course, the expression "first subject" must ultimately refer to the subject of metaphysics, for [25] is supposed to deny that the causes *qua* existent may be the subject of metaphysics. Yet this

reference is itself problematic, for there is no apparent reason why Avicenna should employ the expression “first subject” rather than “subject”.

Going into details, Avicenna uses the expression “first subject” in an epistemological sense twice in *Ilāhiyyāt*: the first time here in *Ilāhiyyāt* I 1 [25], the second time in *Ilāhiyyāt* I 2 [18]. All other times he simply refers to “the subject” of a science, or to “the subject” of metaphysics. As a matter of fact, the Arabic word for “subject” (*mawḍūʿ*) is the translation of the Greek “ὑποκείμενον”, and derives its epistemological connotation from Aristotle’s phrase “γένος ὑποκείμενον” in the *Posterior Analytics*. The expression “first subject” is not found in Aristotle’s *Posterior Analytics* to refer to the subject of science, though. It is rather used by al-Fārābī – it is definitely found in his *Fī agrād*, and possibly for the first time:

The first subject of this science is the absolute existent and what is equivalent to it in universality, namely the one⁷⁴.

The meaning al-Fārābī attaches to the expression “first subject” is not clear. On one hand, shortly before its occurrence in the work, al-Fārābī had also spoken of “subjects” of metaphysics, in the plural – which might suggest that the expression “first subject” should single out a privileged subject from among a multitude of subjects. On the other hand, in other works al-Fārābī also states that a science may have more than one “first subject”⁷⁵. Understanding the exact purport of the Farabian notion of “first subject” would be worth a closer scrutiny, and may shed light on the emergence of the corresponding Avicennian notion, for it is virtually certain that Avicenna inherits (at least) the expression “first subject” from al-Fārābī. For one thing, it is well known that, in his *Autobiography*, Avicenna himself states his dependence on the Farabian *Fī agrād*⁷⁶. Moreover, the paragraph in Avicenna’s *Ilāhiyyāt* I 2 in which the expression “first subject” occurs shows strong similarities with the relevant Farabian passage, as we shall see in due course. This notwithstanding, a clarification of the Farabian expression “first subject” is not necessary to understand the Avicennian one: we shall therefore focus on the latter.

Now, what can be said for sure is that in *Ilāhiyyāt* I 1-2 Avicenna does not oppose the “first subject” of a science with a plurality of “subjects”. In these two chapters, Avicenna always speaks of the subject of science in line with the principle that the subject of science can only be one⁷⁷. Even

⁷⁴ al-Fārābī, *On the goals of the Sage in each treatise of the book named by means of letters (Fī agrād al-ḥakīm fī kull maqāla min al-kitāb al-mawsūm bi-l-ḥurūf)*, tr. Bertolacci, in [Bertolacci 2006], p. 69 (in order to be consistent about the expressions used in this commentary, I have replaced the translation “primary subject-matter” with “first subject”).

⁷⁵ This happens in a treatise devoted to the *Posterior Analytics*, making it doubtful that the expression “first subject” is intended to work as said. For references to al-Fārābī’s treatise and translations of relevant passages see [Eichner 2010]. See the translation at pp. 79-80 (and compare it with the one at pp. 74-75: al-Fārābī seems to call “first subject” what he elsewhere calls simply “subject”).

⁷⁶ A proof of the dependence of Avicenna’s *Ilāhiyyāt* on al-Fārābī’s *Fī agrād* based on a comparison of several passages of the two works can be found in [Bertolacci 2006], pp. 88-94.

⁷⁷ This epistemological principle underlying Avicenna’s discussion traces back to Aristotle’s *Posterior Analytics*, in particular to the idea that the unity of a science depends on the unity of the genus it is about (*An. Post.* A 28).

before any further consideration, it seems that, from the Avicennian point of view, there cannot be a real difference between the expressions “subject of a science” and “first subject of a science”: they must refer to the same thing⁷⁸. If the adjective “first” has any significance at all in the expression “first subject of science”, then it must stand for a feature of the unique subject of science.

The starting-point to understand this feature is to be found in Aristotle’s *Posterior Analytics*. Even though, as already said, Aristotle does not employ the expression “first subject” in an epistemological sense, he makes a technical use of the adjective “first” in *Posterior Analytics* A 4-5. In *Posterior Analytics* A 4, Aristotle provides an explanation for three technical expressions: κατὰ παντός, καθ’ αὐτό, and καθόλου. After having clarified the first and the second, Aristotle comes to καθόλου:

An. Post. A 4, 73b 32 – 74a 3

Something holds universally when it is proved of an arbitrary and first case. E. g. having two right angles does not hold universally of the figure – you may indeed prove of a figure that it has two right angles, but not of an arbitrary figure, nor can you use an arbitrary figure in proving it; for the quadrangle is a figure but does not have angles equal to two right angles. An arbitrary isosceles does have angles equal to two right angles – but it is not first: the triangle is prior. Thus if an arbitrary first case is proved to have two right angles (or whatever else), then it holds universally of this first item, and the demonstration applies to it universally by itself. To the other items it applies in a certain way not by themselves – it does not apply to the isosceles universally, but extends further⁷⁹.

Aristotle prescribes two conditions for something to hold “universally” of something else. The first condition is “being proved of an arbitrary case”. The second condition is “being proved of the first”. The example given by Aristotle is explanatory enough. One can prove of whatever isosceles triangle that the sum of its angles is equal to two right angles (the first condition being so satisfied). However, the isosceles triangle is not the first thing of which this can be proved, for the triangle has the property at stake prior to the isosceles triangle. Indeed, all the triangles – whether isosceles or not – have that property; moreover, one can prove that property also of the isosceles triangle just inasmuch as it is a triangle.

Turning to Avicenna’s *Book of Demonstration* of the *Šifā’* (the re-working of the *Posterior Analytics*), one finds confirmation of the fact that Aristotle’s notion of “first” finds a place in Avicenna’s work. Actually, Avicenna employs the adjective *awwalī* (which I shall translate as “primary”) in order to speak of “primary predicates”: he would not state, as Aristotle does, that *x* is the “first” to which *y* belongs, but rather that *y* is a primary predicate for *x*. Yet the main idea behind

⁷⁸ Cf. [Bertolacci 2006], p. 146 n. 88.

⁷⁹ Barnes’ translation (slightly modified) in Aristotle, *Posterior Analytics*, p. 8. *An. Post.* A 4, 73b 32 – 74a 3: “τὸ καθόλου δὲ ὑπάρχει τότε, ὅταν ἐπὶ τοῦ τυχόντος καὶ πρώτου δεικνύηται. οἷον τὸ δύο ὀρθὰς ἔχειν οὔτε τῷ σχήματι ἐστὶ καθόλου (καίτοι ἐστὶ δεῖξαι κατὰ σχήματος ὅτι δύο ὀρθὰς ἔχει, ἀλλ’ οὐ τοῦ τυχόντος σχήματος, οὐδὲ χρῆται τῷ τυχόντι σχήματι δεικνύς· τὸ γὰρ τετράγωνον σχῆμα μὲν, οὐκ ἔχει δὲ δύο ὀρθαῖς ἴσας) – τὸ δ’ ἰσοσκελὲς ἔχει μὲν τὸ τυχὸν δύο ὀρθαῖς ἴσας, ἀλλ’ οὐ πρῶτον, ἀλλὰ τὸ τρίγωνον πρότερον. ὃ τοίνυν τὸ τυχὸν πρῶτον δεῖκνυται δύο ὀρθὰς ἔχον ἢ ὅτιοῦν ἄλλο, τοῦτ’ αὖ πρῶτ’ ὑπάρχει καθόλου, καὶ ἡ ἀπόδειξις καθ’ αὐτὸ τούτου καθόλου ἐστὶ, τῶν δ’ ἄλλων τρόπον τινὰ οὐ καθ’ αὐτό, οὐδὲ τοῦ ἰσοσκελοῦς οὐκ ἐστὶ καθόλου ἀλλ’ ἐπὶ πλέον”.

his notion of “primary” derives precisely from Aristotle’s notion of “first” in *Posterior Analytics* A 4-5.

A detailed examination of Avicenna’s re-working of Aristotle’s notion of “first” will prove to be essential to understand his use of the expression “first subject” in *Ilāhiyyāt* I 2⁸⁰. For the time being, however, what has been said is sufficient to understand the expression “first subject” in *Ilāhiyyāt* I 1 [25]. Using Aristotle’s example: in an enquiry into the isosceles triangle inasmuch as it is a triangle one would investigate into the attributes belonging to the isosceles triangle inasmuch as it is a triangle – the “first subject” to which these attributes belong is not the isosceles triangle, though, but the triangle *qua* triangle. In [25], Avicenna states exactly the same about the attributes belonging to the causes inasmuch as they are existent: the causes are not their first subject, for they belong to the existent beforehand.

In other words, by using the expression “first subject” in [25] Avicenna directly refers to the first subject of inherence of given attributes – which explains why he makes use of the expression “first subject” rather than “subject”. As already observed, the expression must also refer to the subject of metaphysics, at least indirectly. This move will be appreciated fully when the relevant passage in *Ilāhiyyāt* I 2 is analysed; yet one can already figure out the idea underlying it: the requirement that the subject of a science be the first subject of inherence of the attributes enquired into in that science.

To sum up, in [25] Avicenna rejects the possibility that the subject of metaphysics may be the causes *qua* existent. In that case, metaphysics would enquire into attributes whose first subject is the existent, rather than the causes. The subject of metaphysics would therefore be the existent, for a science should investigate into the primary attributes of its own subject.

[26] Having argued that the ultimate causes cannot be the subject of metaphysics from any of the four points of view (i)-(iv), Avicenna draws the conclusion that they are not the subject of metaphysics at all: rather, he claims that they are what is sought in metaphysics and its perfection.

This paragraph closes the argument concerning the ultimate causes and, more generally, it closes the *pars destruens* of Avicenna’s discussion on the subject of metaphysics. Neither God nor the ultimate causes are the subject of metaphysics: they are rather sought in metaphysics, which reaches its completion in the knowledge of them.

⁸⁰ In particular, I shall analyse Avicenna’s account as it is found in *Burhān* II 3. Yet Avicenna makes use of the expression “primary” (implying Aristotle’s notion of “first”) already in *Burhān* II 2 (see p. 128, ll.6-13). Cf. [Quartucci 2017], p. 459. This being the case, the idea of primary predicates, though not explicitly recalled, may be implied in the following passage from *Burhān* II 2, which one should compare with the argument in *Ilāhiyyāt* I 1 [25]. *Burhān* II 2, p. 132 (tr. Rashed in [Rashed M. 2004], p. 152): “Et si l’arithméticien considérait le nombre également comme quantité, ou si le géomètre considérait la grandeur en tant que quantité, le sujet scientifique de chacun des deux serait la quantité, non le nombre ou la grandeur”.

The subject of a science must be the starting point of the science itself. The science presupposes some knowledge of its subject and enquires into its attributes, in agreement with the epistemological criteria prescribed by the *Posterior Analytics*. Neither God nor the ultimate causes fulfil all those criteria. On the other hand, Avicenna's discussion is based on a rather clear distinction between the starting point and the end of a science, according to which the goal of metaphysics may rest with something that is, strictly speaking, different from its subject. Accordingly, Avicenna can state that the perfection of metaphysics consists in the knowledge of God and the ultimate causes, for they come to be known at the peak of metaphysical investigation – without being its subject⁸¹. It remains to provide a positive determination of the subject of metaphysics, which takes place in *Ilāhiyyāt* I 2.

2. Chapter 2

The title of the chapter indicates that Avicenna is going to clarify the identity of the subject of metaphysics. In [1], he states that this clarification is necessary in order to grasp the goal of metaphysics. This does not contradict Avicenna's point, at the end of *Ilāhiyyāt* I 1, that the perfection of metaphysics lies in the knowledge of God and the ultimate causes; yet it suggests that the whole course of metaphysics – and of a science more generally – is determined by its subject, no further clarification being needed. As a matter of fact, the structure itself of *Ilāhiyyāt* I 2 seems to mirror the distinction between subject and goal of metaphysics, and the derivation of the latter from the former. Going into details, the chapter falls into the following sections:

- [2-21] Determination of the subject of metaphysics
- [22-30] The goal of metaphysics
- [31] *Appendix*: metaphysics vs. dialectics and sophistics

Leaving aside [31], which plays a marginal role, the chapter has two main sections. In [2-21], Avicenna establishes that the existent *qua* existent is the subject of metaphysics. Based on this point, he then moves on to [22-30] in order to clarify the goal of metaphysics, which must be understood in a broad sense as the task which metaphysics is demanded to accomplish. Avicenna's discussion is closed by paragraph [30], which states that the goal of metaphysics has indeed been clarified.

It will be recalled that in the introductory section of *Ilāhiyyāt* I (namely [2-10]) Avicenna had put forward two questions to be answered in *Ilāhiyyāt* I 1-2: (i) what is the subject of metaphysics?; (ii) what is wisdom? Both questions are given an answer in *Ilāhiyyāt* I 2. Roughly speaking, question (i) is answered in [2-21], while question (ii) in [22-30].

⁸¹ Such “real” distinction between the subject and the goal of a science must not be taken for granted; it will be opposed, for example, by Scotus in his *Questions on the Metaphysics* I 1.

[2-21] Determination of the subject of metaphysics

The aim of this section is to argue that the existent *qua* existent is the subject of metaphysics. Basically, Avicenna provides two main arguments to prove his claim; he then draws his conclusion while adding a further argument to support his position. The following is an outline of the section:

- [2-14] First argument
- [15-16] Second argument
- [17] Conclusion I: existent as subject – with further argument
- [18] Conclusion II: existent as first subject
- [19-21] Objection and answer

[2-14] The first argument put forward by Avicenna in order to determine the subject of metaphysics is based on the view that the subject of science should be a notion common to all that is investigated in that science. Avicenna takes this view for granted, and indeed it may be seen as an interpretation of Aristotle's requirement that one science be about one genus (*An. Post. A 28*). In its essential lines, Avicenna's argument is stated in [14] and may be summarised thus: since the existent is the only notion common to all that is investigated in metaphysics, namely in the science of what is separated from matter in subsistence, the subject of metaphysics cannot but be the existent *qua* existent.

The argument in [14], as it has just been reported, assumes that a given set of things falls within metaphysical consideration. Avicenna devotes the largest part of the present section, namely [2-13], to ascertaining that those things are indeed investigated in metaphysics. In particular, in [2-5] Avicenna points to the necessity of a scientific enquiry into that which does not fall within the consideration of particular sciences; in [6-13] he argues that all these things do not depend on sensible things in their subsistence – accordingly, the relevant scientific enquiry should be metaphysics.

[2-5] These paragraphs point to the limited scope of the investigation carried out by particular sciences. In [2-4], Avicenna underscores that particular sciences investigate into their own subjects only from a given point of view; in [5], he mentions what is left uninvestigated by particular sciences and which deserves, accordingly, a dedicated enquiry.

[2], [3], and [4] deal with physics, mathematics, and logic, respectively. The structure of the three paragraphs is similar: Avicenna recalls which is the subject of science, then he specifies the point of view from which it is or is not investigated by the science in question. Going into details:

- [2] The subject of physics is body from the point of view of its being in motion and rest; physics does not consider body inasmuch as it is existent, it is substance, and it is something whose existence results from matter and form. *A fortiori*, the parts of physics do not consider the body inasmuch as it is existent, etc. The mention of the ethical sciences at the end of the paragraph is difficult to explain.
- [3] As for mathematics, Avicenna mentions the subjects of its four parts in the following order: geometry, astronomy, arithmetic, and music. Mathematical sciences investigate number and extension from the point of view of the accidents occurring to them after their mode of existence has been assumed; they are not meant to establish the mode of existence of number and extension. *A fortiori*, the parts of the four mathematical sciences do not establish the existence of number and extension.
- [4] The subject of logic is “the second intelligible notions” inasmuch as they allow one to reach the unknown from what is known; logic does not consider the intelligible notions from the point of view of their mode of existence, namely intellectual existence.

Avicenna closes paragraph [4] by claiming that his survey is complete, for there are no (particular) sciences except the ones he has mentioned. To recapitulate, Avicenna’s point in [2-4] is that particular sciences do not undertake the enquiry into their subjects inasmuch as they are existent and inasmuch as they have their own kind of existence (the existence of a material substance, the mathematical existence, the intellectual existence). Rather, particular sciences assume the existence and the kind of existence of their subjects, which they investigate only from a determined point of view.

Paragraph [5] basically continues this line of thought, adding that what is left uninvestigated by particular sciences is worth a separate investigation. Avicenna lists what falls outside the consideration of particular sciences:

- i) Substance inasmuch as it is existent and substance;
- ii) Body inasmuch as it is substance;
- iii) Extension and number inasmuch as they are existent and their mode of existence;
- iv) “Formal things” which are not in any matter or are in a non-corporeal matter.

The mention of (iv) is in principle obscure; yet the reference to the two alternatives about matter (absolute lack of matter / non-corporeal matter) and the overall structure of the section⁸² allow us to identify these “formal things” with the intelligible notions investigated by logic⁸³. This being the case, the list provided by Avicenna in [5] is nothing more or less than a summary of paragraphs [2-4]: knowledge of (i) and (ii) is assumed (and left uninvestigated) in physics, (iii) in mathematics, (iv) in logic.

[6-13] Having ascertained that some things require a dedicated scientific enquiry, Avicenna goes on to determine in a positive way that such enquiry should belong to the third part of theoretical philosophy, namely the science of what is separated from matter in subsistence and definition. In [6] he makes this general claim about all of (i)-(iv); in [7-13] he argues in favour of his general claim examining the single cases:

- [7] Substance (i)
- [8] Number (iii)
- [9-12] Extension (ii) ? – (iii)
- [13] The subject of logic (iv)

The part devoted to extension is by far the longest of the four; as we shall see, it is plausible to maintain that it includes both a discussion of mathematical extension and a discussion of body.

Avicenna’s discussion is intended to bring to light the following fact: the examination of substance, of number, of extension, and of logical realities is an examination of something not depending on sensible things. There are two levels in which this independence from sensible things is possible, which may be called “extensional” and “intensional” respectively. In the first case, something does not depend on sensible things inasmuch as it exists, either as a whole or in part, separated from sensible realities. In the second case, something does not depend on sensible things inasmuch as it is essentially prior to sensible things, or its kind of examination is prior to sensible things. The “extensional” independence entails the “intensional” one, but not vice versa.

[6] Avicenna states here his general claim, observing that the investigation of (i)-(iv) cannot belong to either physics or mathematics, drawing the conclusion that it must belong to metaphysics, “the science of that whose existence parts from sensible things”.

⁸² The mention of “formal things” should be read in connection with [4], on one hand, and with [13], on the other.

⁸³ Cf. [Bertolacci 2006], p. 273.

[7] Substance is shown to be independent of sensible realities by pointing to its extensional independence: since there are also non-sensible substances, substance cannot depend on what is sensible.

[8] Just like substance, number is said to be independent of sensible things from the extensional point of view, for number is an accident of both sensible and non-sensible things. This claim, though intuitive, may seem to contradict the view that mathematics deals with objects whose existence is bound to what is sensible. Avicenna is well aware of this objection, and deals with it in *Ilāhiyyāt* I 3: even though number exists in non-sensible things, the states and accidents of number enquired into by arithmetic attach to number only in virtue of its existence in matter⁸⁴.

[9] This paragraph initiates the discussion of extension with a preliminary remark: extension is an equivocal name⁸⁵, which we shall disambiguate writing extension₁ and extension₂ to distinguish its two meanings. Extension₁ is constitutive of the natural body: Avicenna must be referring to the extension which belongs to the body inasmuch as it is a continuous substance, in virtue of the *forma corporeitatis*⁸⁶. On the other hand, extension₂ is the one which falls within the consideration of geometry.

The distinction between extension₁ and extension₂ will be found again in *Ilāhiyyāt* I 3 to face a problem similar to the one mentioned about number, drawing a distinction between the extension considered by geometry and the extension considered by metaphysics. Unlike the case of number, however, Avicenna declares that neither extension₁ nor extension₂ is separated from matter⁸⁷: in other words, none of them is independent from matter at the extensional level. Yet both admit of a metaphysical consideration, as paragraphs [10] and [12] explain. [10] takes into account extension₁, while [12] takes into account extension₂. [11] contrasts extension₁ with “figure”.

⁸⁴ See *Ilāhiyyāt* I 3, p. 23 l. 10 – p. 24 l. 9.

⁸⁵ For terminology concerning equivocity, univocity, and related notions, see [Treiger 2012].

⁸⁶ See *Ilāhiyyāt* II 2 for Avicenna’s discussion of the “body inasmuch as it is a substance”, the *forma corporeitatis*, and the distinction between “body as substance” and “mathematical body”. According to some interpretations, Avicenna’s notion of body would not include extension, but a mere predisposition for extension; see especially [Wolfson 1929], p. 101, and [Hyman 1977], pp. 345-356. For a critical discussion of these interpretations and further bibliography, see [Lammer 2018], pp. 122-126. More recently, it has been convincingly shown that Avicenna’s “body as substance” must include extension within its notion; see [Lammer 2018], pp. 122-132. The passage under consideration (namely paragraph [9]), once it is compared with the relevant passages in *Ilāhiyyāt* II 2, may serve as confirmation of Lammer’s interpretation.

⁸⁷ By contrast, the number, inasmuch as it falls within metaphysical consideration, does not depend on matter.

[10] As for extension₁, even though it cannot exist but in sensible things, it is not dependent on sensible things, for it is actually one of their principles. Accordingly, sensible things owe their being to extension₁, rather than vice versa. Plausibly, this paragraph may be taken as establishing that (ii) the “body as substance” mentioned in [5] does not depend on sensible things.

[11] This paragraph contrasts extension₁ with figure. Unlike extension₁, figure does depend on sensible things, for, unlike extension₁, figure is not a principle of material substances. In fact, figure is a necessary concomitant of material substances, attaching to them inasmuch as they are finite bodies and have finite surfaces (while neither finitude nor having surfaces is included in the notion of extension₁). Accordingly, extension₁ cannot exist without being finite, without limits, without taking on a certain figure (“limits are necessary for the extension”), for extension₁ cannot exist but as a principle of material substances and limits/figure follow necessarily upon the latter. Yet the fact that extension₁ is a principle of material substances while figure is among its attributes entails the essential order “extension₁ – material substances – figure”, which makes figure, unlike extension₁, dependent on sensible things.

[12] This paragraph takes into account extension₂, namely the one falling under the consideration of geometry. Avicenna draws a distinction between two investigations into extension₂: the one from the point of view of its existence, the other from the point of view of its attributes. While the latter belongs to geometry, the former belongs to metaphysics – for it is carried out under a notion not depending on matter. Just to give one example: ascertaining the accidental nature of extension₂ (“to which division of existence it belongs”) is the task of metaphysics, rather than geometry.

[13] As for logical realities, Avicenna declares it evident that they are separated from sensible things. We have already met Avicenna’s statement that logical realities are not in matter or are in a non-corporeal matter. Therefore, logical realities are independent from sensible things also at the extensional level, just like substance and number. In fact, while substance and number are instantiated both in sensible and non-sensible things, logical realities are outside sensible things as a whole – which is why in [13] Avicenna deems his claim evident.

[14] As a conclusion of [7-13], Avicenna repeats the claim made in [6]: all items listed in [5], namely (i)-(iv), fall within the consideration of metaphysics. Hence Avicenna can conclude that the

existent should be the subject of metaphysics, based on the implicit assumption that the subject of science should be common to all that is enquired in the science itself:

(P1) Metaphysics enquires into (i)-(iv)

(P2) No notion is common to (i)-(iv) except the notion of “existent”

(C) The existent is the subject of metaphysics

(P1) is demonstrated in [6-12]; (P2) is said to be true because (i)-(iv) do not belong to a single category.

[15-16] The second argument put forward by Avicenna in order to determine the subject of metaphysics is based on the view that a science should investigate into the accidents of its subject. Avicenna takes this view for granted, and indeed it can be traced back to Aristotle’s *Posterior Analytics*. The argument actually remains implicit, but can be outlined thus:

(P1) Metaphysics investigates into notions a_1, \dots, a_n

(P2) a_1, \dots, a_n are accidents of the existent

(C) The existent is the subject of metaphysics

(P1) is justified in [15], while [16] provides a proof for (P2). Before turning to the details of these paragraphs, it would be useful to make a remark on Avicenna’s use of the generic term “accident”. Throughout the chapter, Avicenna repeatedly refers to the “accidents of the existent”; yet a more accurate expression would be “primary proper accidents of the existent”. The significance of this will become clear in full when Avicenna’s conception of primary predicates is taken into consideration, commenting on [18].

[15] This paragraph provides a “negative” argument for (P1): Avicenna observes that some notions, which “must be defined and ascertained in the soul”, are left uninvestigated by particular sciences. The notions at stake are the “common notions”, namely notions which are not proper to a single science. While employed by all (at least, many of) the sciences, no particular science undertakes their examination: the reader should draw the conclusion that they must be investigated in metaphysics.

[16] This paragraph provides a proof for (P2). Also this proof is “negative” in the following sense: Avicenna demonstrates that the common notions are accidents of the existent by denying that they are something else, until all other alternatives are ruled out. The same line of reasoning is found in [20], in which Avicenna demonstrates that “being a principle” is an accident of the existent; a comparison between [16] and [20] is extremely useful to understand both passages. Such comparison

reveals that Avicenna follows a definite scheme in arguing that an attribute of a given subject is one of its “primary proper accidents”. Going into details, a primary proper accident of a given subject should be:

i) an accident – which in turn implies that it must be: (a) inherent in the subject (ruling out attributes which cannot be predicated of that subject at all); (b) non-essential⁸⁸ to the subject (ruling out genus and constitutive differentia) and to its species (ruling out divisive differentia);

ii) not predicated of the subject in universal (ruling out necessary concomitants);

iii) proper to the subject (ruling out non-proper accidents, which are predicated of something not falling under the notion of the subject);

iv) primary (ruling out non-primary proper accidents, the ones which are also proper to a single species of the subject⁸⁹).

The argument in [16] should be read against this framework. To begin with, let us divide the text into its elementary parts:

[a] They are not proper accidents of any of the subjects of these particular sciences,

[b] nor are they among the things whose existence is but the existence of the attributes of the essences (*wa-laysat min al- umūri llatī yakūnu wuġūduhā illā wuġūda l-ṣifāti li-l-dawāti*).

[c] They are not among the attributes belonging to everything either (in which case each one of them would be common to everything),

[d] nor is it possible that they are proper to a [single] category.

[e] They cannot be among the accidents of anything but of the existent inasmuch as it is existent.

Sentence [b] is the most problematic piece of the argument. A possible interpretation would be the following: the expression *al-ṣifāt li-l-dawāt* should be read as meaning “essential attributes”, namely attributes entering the definition of the subjects of which they are predicated⁹⁰. If this is the case, then the sentences [a]-[e] state the following points concerning the common notions:

Thesis to be proved	[e]
i-a) Inherent	---
i-b) Non-essential	[b]
ii) Not universally predicated	[c]

⁸⁸ By “essential” I refer here to the first meaning of “*per se*” in Aristotle’s *An. Post.* A 4. In some places, Avicenna refers to the attributes falling within the definitions of their subjects as *ṣifāt dātiyya*. See for example *Madḥal* I 6, p. 35 l. 3.

⁸⁹ On this, see below the commentary on [18].

⁹⁰ In other words, attributes *per se* according to the first meaning of *per se* in *Posterior Analytics* A 4. For a different interpretation, see [Koutzarova 2009], pp. 162-164.

iii) Proper

iv) Primary

[a], [d]

Avicenna does not explicitly state (i-a) that the common notions can be predicated of the existent and (iii) that they are proper to the existent. As for the other points: [b] would state (i-b) that the common notions are not genera or differentiae; [c] would state (ii) that they are not necessary concomitants of the existent⁹¹; finally, [a] and [d] would be meant to state (iv) that the common notions are *primary* proper accidents of the existent, namely that they are not proper accidents of anything less common than the existent.

One last remark is in order. It has been mentioned that *Ilāhiyyāt* I 1 [25] seems to imply the requirement that a science investigate into the primary proper accidents of its subject. Accordingly, the statement of the “primary-ness” in the present paragraph is fundamental: if [a] were false, the common notions would be investigated in a particular science; if [d] were false, a single category would be the subject of the science enquiring into the common notions.

[17] From the two arguments in [2-14] and [15-16] Avicenna draws the conclusion that the existent *qua* existent is the subject of metaphysics. Having done so, he also takes care of adding another argument in order to make clear that the existent can indeed be the subject of metaphysics.

Going back to *Ilāhiyyāt* I 1, Avicenna employed two epistemological principles in order to refute the views that God or the causes *qua* causes may be the subject of metaphysics. First, a science must presuppose the existence of its own subject, while neither the existence of God nor the existence of the causes can be presupposed in metaphysics. Second, a science must investigate into the proper accidents of its subject, while the accidents investigated into by metaphysics are not proper to the causes *qua* causes.

Now, in [15-16] we have learnt that the accidents investigated in metaphysics are only proper to the existent *qua* existent, and thus that only the existent *qua* existent would satisfy the second of the aforementioned epistemological principles. Does it satisfy the first as well? In [17] Avicenna gives a positive answer: since there is no need at all to demonstrate the existence and learn the quiddity of the existent, metaphysics can safely presuppose them.

The fact that existence and quiddity of the existent do not have to be clarified is not explained; yet it must be surely traced back to “the existent” being one of the primary notions of the intellect⁹².

⁹¹ According to [Koutzarova 2009], p. 164, [c] would distinguish the common notions from the existent, which is obviously true. Yet I believe that Avicenna would take it for granted that, for example “the universal” is not the same as “the existent”, and that Avicenna’s true aim is to deny that the universal is a necessary concomitant of the existent.

⁹² See the well known Avicennian chapter on primary notions, namely *Ilāhiyyāt* I 5.

As such, its quiddity must be considered self-evident – and establishing the existence of the existent would be tantamount to demonstrating a tautology.

[18] Avicenna opens this paragraph stating again the conclusion to be drawn from the two arguments in [2-16] and the further argument in [17]: the existent *qua* existent is the subject of metaphysics. This being the case, Avicenna specifies that metaphysics investigates into what attaches to the existent: its species, on one hand, and its proper accidents, on the other. This is, in its essentials, the content of [17] at a superficial level of reading.

The passage also admits of a deeper level of understanding, though, which is hinted at by the expression “first subject” employed in its opening sentence instead of the simple and more common “subject”. The expression “first subject” has already been met in *Ilāhiyyāt* I 1 [25]: it has been said on that occasion that these two are the only occurrences of the expression in an epistemological sense in the *Ilāhiyyāt*. It has also been said that Avicenna inherits the expression from al-Fārābī’s *Fī agrād*; in fact, the dependence on al-Fārābī is suggested most clearly by *Ilāhiyyāt* I 2 [18], which shows strong similarities to the relevant Farabian passage:

The first subject of this science is the absolute existent and what is equivalent to it in universality, namely the one. But since the knowledge of opposite correlatives is one, the investigation of non-existence and multiplicity is also included in this science.

Then, after these subjects and their verification, it investigates the things which are like species to them, like the ten categories of the existent, the species of the one [...], and similarly the species of non-existence and of multiplicity.

Then [it investigates] into the attributes of existent [...], the attributes of unity [...], and the attributes of non-existence and multiplicity⁹³.

In both the Farabian and the Avicennian texts, the reference to the “first subject” of metaphysics is followed by the mention of species and attributes (one difference is noteworthy, though: unlike Avicenna, who refers only to the existent, its species, and its attributes, al-Fārābī repeatedly mentions together the existent, the one, non-existence and multiplicity). Yet Avicenna adds some interesting remarks to the mention of species and attributes of the existent (“*indeed the existent does not require, in order to be divided into them / in order to receive these accidents [...]*”); as we are going to see, these remarks are to be traced back to his own notion of “first subject”.

To begin with, let us recall the main points made above about the occurrence of “first subject” in *Ilāhiyyāt* I 1 [25]:

- The adjective “first” in “first subject” should be understood by means of Aristotle’s notion of “πρῶτον” as it is found in *An. Post.* A 4-5;

⁹³ al-Fārābī, *Fī agrād*, tr. Bertolacci, in [Bertolacci 2006], p. 69 (with minor terminological changes).

- The occurrence of “first subject” in *Ilāhiyyāt* I 1 is plausibly due to Avicenna’s endorsement of an epistemological principle, according to which the subject of science ought to be the first subject of inherence of the attributes investigated in the science itself.

These two points are confirmed by the occurrence of “first subject” in *Ilāhiyyāt* I 2. More precisely, in order to understand *Ilāhiyyāt* I 2 [18] properly, a fuller account of Avicenna’s notion of “first subject” is required, which may be summarised thus:

- The adjective “first” in “first subject” should be understood by means of Avicenna’s reworking and development of Aristotle’s notion of “πρῶτον” as it is found in *An. Post. A* 4-5;
- The two occurrences of “first subject” in *Ilāhiyyāt* I 1-2 are plausibly due to Avicenna’s introduction and endorsement of an epistemological principle, according to which the subject of science ought to be “first” with respect to both the species and the attributes investigated in the science itself.

First of all, it is essential to understand the purport of Avicenna’s reworking of Aristotle’s notion of “πρῶτον” in itself, before taking into account the expression “first subject” in *Ilāhiyyāt*. As already mentioned, Aristotle’s notion of “πρῶτον” can be guessed thanks to the example he gives in *Posterior Analytics* A 4: an arbitrary isosceles triangle has the sum of its angles equal to two right angles; yet the first thing to which this property belongs is the triangle, rather than the isosceles triangle. Without going into details, I would focus here on just three features of Aristotle’s exposition:

1. Aristotle is speaking of something being “first” for a certain accident whose inherence can be demonstrated. Aristotle’s notion of “πρῶτον” thus qualifies the inherence of an *accident* in a given subject; applications of “πρῶτον” beyond the accidental domain are not witnessed by the *Posterior Analytics*;
2. Aristotle is speaking of an accident being *demonstrated*. This being the case, there is room for middle terms between an accident and the “first” to which it belongs⁹⁴. There is a kind of mediation which is precluded, though. Suppose A is intensionally included in B (or B extensionally included in A⁹⁵); suppose C is proved of an arbitrary A. Then C is proved of an arbitrary B through the mediation of A, and this is exactly what prevents B from being the “first” to which C belongs;

⁹⁴ This feature of Aristotle’s account has been considered problematic. See [Mignucci 1975], pp. 83-84.

⁹⁵ Both the extensional and the intensional points of view are present in Aristotle’s account. However, Aristotle’s observation in *An. Post. A* 5, 74a 16-17 seems to suggest that the intensional point of view is actually the most relevant one (because of the possibility that intensional distinctions do not imply extensional ones; cf. [Mignucci 1975], pp. 90-91).

3. As already said, Aristotle employs the notion of “πρῶτον” in the characterisation of “καθόλου”. In so doing, he prescribes two conditions for something to hold “καθόλου” of something else: it must be proved “of an arbitrary case” and “of the first”. The second condition is never defined in isolation from the first one. The isosceles triangle and the triangle (with respect to the property “having the sum of the angles equal to two right angles”) exemplify the cases in which only the first condition and both the conditions are fulfilled, respectively. No example is provided for which only the second condition holds. The possibility of such an example is not ruled out explicitly, but it is at least not witnessed by the *Posterior Analytics*. In other words, Aristotle’s account of “πρῶτον” does not extend beyond cases of universal predication (“all triangles are P”).

Turning to Avicenna, his reworking of Aristotle’s notion of “πρῶτον” is one of the main topics of *Burhān* II 3⁹⁶. As already said in commenting *Ilāhiyyāt* I 1 [25], Avicenna introduces some new terminology employing the adjective *awwalī* in order to speak of “primary predicates”: where Aristotle states that x is the “first” to which y belongs, Avicenna would say that y is a primary predicate for x . As for the three features of Aristotle’s account listed above, Avicenna’s approach may be summarised thus:

1. Avicenna speaks of primary predicates without any restriction to the class of accidental predicates – in fact, he takes into account the several classes of predicables (genus, constitutive and divisive differentia, necessary concomitant, proper accident);
2. Like Aristotle’s “πρῶτον”, Avicenna’s notion of “primary” does not entail the lack of mediation between accident and subject, as Avicenna states explicitly⁹⁷ – of course, the kind of mediation is precluded which contradicts the very notion of “primary”, namely the mediation involving intensional/extensional inclusions⁹⁸;
3. Avicenna’s notion of “primary” is not restricted to universal predication – in fact, he takes into account separately predicables which are universally predicated (genus, constitutive differentia, necessary concomitant) and predicables which are not (divisive differentia, proper accident).

Going into the details of the text, it will be sufficient to consider the following statements⁹⁹:

⁹⁶ Even though the basic idea is already found in *Burhān* II 2. See [Quartucci 2017], pp. 458-461.

⁹⁷ *Burhān* II 3, p. 136 ll. 14-15: “It is not in the condition of the ‘first’ that there should not be a middle [term] between it and the subject. Indeed, between this accident of the triangle and the triangle there are middle and joining terms all of which are accidents closer than it [to the subject]”. Cf. [Strobino 2016], pp. 219-220.

⁹⁸ Yet it must be said that in some passages Avicenna also employs the adjective “primary” in a stricter sense, according to which any kind of mediation is precluded. Also this meaning of “primary” can probably be traced back to Aristotle. See [Quartucci 2017], p. 460 n. 46; [Benevich 2018], pp. 207-216.

⁹⁹ The present analysis of primary predication in *Burhān* II 3 is only meant to highlight the conditions which must be fulfilled by each predicable in order for it to be primary. For a wider account of *Burhān* II 3, including an analysis of

If the thing is predicated of the universality of the subject (like the genus, the differentia, and the necessary concomitant accident), it is primary (*awwaliyyan*) for it [i. e. the subject] only if it is not firstly (*awwalan*) predicated of something more common than it (in which case it would be predicated of it through the mediation of that thing).

[...]

As for what is not predicated of the universality of the subject, it is not possible that this [belongs] to the set of the essential things entering the quiddity of the thing. Rather, it [belongs] either to the set of the essential things entering the quiddity of the species of the thing, or to the set of the proper accidents essential to the thing. [...] As for the first division, it is like the differentiae dividing the genus which do not divide any species under it at all (so that they are primary differentiae of the species insofar as they constitute them [i. e. the species] without constituting their genera, while they are primary differentiae of the genera insofar as they divide them [i. e. the genera] without dividing their species). As for the second division, they are the accidents proper to a certain genus which do not encompass it and [such that] the genus does not need to become a certain distinct species in order to be prepared to receive such an accident [...] ¹⁰⁰.

For each predicable, Avicenna states the condition which must be satisfied in order for it to be primary, as summarised in the following table:

	<i>Kind of predicable</i>	<i>Primary-ness condition</i>
Predicated in universal	Genus	If they are not firstly predicated of something more common than the subject
	Constitutive differentia	
	Necessary concomitant	
Not predicated in universal	Divisive differentia	If it does not divide any species of the subject
	Proper, non-coextensive accident	If the subject does not need to become a determinate species in order to receive it

From the extensional point of view, the two classes of predicables are characterised by opposite primary-ness conditions. Genus, constitutive differentia, and necessary concomitant are primarily predicated of the *most general* subject of which they are predicated. On the other hand, divisive differentia and non-coextensive proper accident are primarily predicated of the *most specific* subject of which they are predicated¹⁰¹. The following examples will help to clarify Avicenna's point:

- a. “body” is a genus of “man”, but not its primary genus; “body” is the primary genus of “living body”; “animal” is the primary genus of “man”;
- b. “sensitive” is a constitutive differentia of “man”, but not its primary constitutive differentia; “sensitive” is the primary constitutive differentia of “animal”; “rational” is the primary constitutive differentia of “man”;

other distinctions regarding primary predicates, see [Strobino 2016], pp. 217-234 – which, however, focuses only on universal predicates (namely genus, constitutive differentia, and necessary concomitant). See also [Benevich 2018], pp. 199-202.

¹⁰⁰ *Burhān* II 3, p. 135 ll. 8-9; p. 136 l. 17 – p. 137 l. 7.

¹⁰¹ I believe that this divergence can be accounted for on the basis of a unitary notion of primary-ness. See [Quartucci 2017], p. 463 n. 51.

- c. “mobile” is a necessary concomitant of “man”, but not one of its primary necessary concomitants; “mobile” a primary necessary concomitant of “body”; “capable of laughing” is a primary necessary concomitant of “man”;
- d. “rational” is a divisive differentia of “body”, but not its primary divisive differentia; “rational” is a primary divisive differentia of “animal”; “living” is a primary divisive differentia of “body”;
- e. “even” is a proper accident of “quantity”, but not one of its primary proper accidents; “even” is a primary proper accident of “number”; “divisible into two equal parts” is a primary proper accident of “quantity”.

On the basis of Avicenna’s enlarged range of application of the notion of “primary”, the expression “first subject” in *Ilāhiyyāt* I 2 [18] can now be explained. First of all, the text of [18] should be divided in the following sections:

- [a] Therefore the first subject of this science is the existent inasmuch as it is existent,
- [b] and the things sought in it are the things which attach to it inasmuch as it is existent without any condition.
- [c] Some of these things belong to it as [its] species, like the substance, the quantity, and the quality;
- [c₁] indeed the existent does not require, in order to be divided into them, a division prior to them, in the way substance requires [several] divisions in order that the division into man and not-man follows it necessarily.
- [d] And some of these belong to it as [its] proper accidents, like the one and the many, potency and act, the universal and the particular, the possible and the necessary;
- [d₁] indeed the existent does not require, in order to receive these accidents and to be prepared for them, to be specified as natural, mathematical, ethical, or something else.

In [a], Avicenna makes his claim that the “first subject” of metaphysics is the existent *qua* existent. He then states in [b] that metaphysics investigates into the things attaching to the existent *qua* existent *without any condition*; these things are of two kinds, mentioned in [c] and [d] respectively: they are either species or proper accidents of the existent¹⁰². Finally, [c₁] and [d₁] contain some explanatory remarks concerning [c] and [d], respectively.

Now, at first glance the explanatory remarks in [c₁] and [d₁] may seem to be meant to clarify why the things mentioned in [c] and [d] are species and proper accidents of the existent, respectively. Actually, this is not correct, for both “substance” and “man” may be called species of the existent; similarly, even proper accidents of a determinate genus may be called proper accidents of the existent. Rather, [c₁] and [d₁] are meant to explain why the things mentioned in [c] and [d] can be said to attach to the existent *without any condition*.

¹⁰² Avicenna actually states that some things belong to the existent “as species” or “as proper accidents”. As far as the ten categories are concerned, Avicenna would call them “species of the existent” only in an improper sense, for he follows Aristotle in maintaining that the existent is not a genus.

At closer inspection, one realises that in [c₁] and [d₁] Avicenna is just arguing for the fulfilment of the requirements for primary predication prescribed in *Burhān* II 3:

- in [c₁] Avicenna maintains that the existent is (like) the primary genus of the species enquired into in metaphysics, namely the categories¹⁰³. He notices that the existent does not need previous divisions in order to be divided into them. Indeed, were there a previous division, then the existent would be divided into something – let it be *x* – more common than the categories falling under it. Consequently, the existent would be predicated of *x* before being predicated of the subordinate categories – in other words, it would not be primarily predicated of these categories¹⁰⁴;
- in [d₁] Avicenna maintains that the accidents enquired into in metaphysics are primary proper accidents of the existent. He notices that the existent does not need to be specified in order to receive these accidents.

It has been said that [c₁] and [d₁] are closely connected to the expression “*without any condition*” in [b]; on the other hand, it has been shown that they concern primary predication. The two points of view are basically the same, for the fulfilment of the requirements for primary predication makes sure that certain things attach to something else “*without any condition*”. Going into details:

- [c₁] if A is a genus of B, then:
 - A is a primary genus of B if and only if there is no C such that C is a species of A and A may be B only *on the condition* of being C;
- [d₁] if A is a proper accident of B, then:
 - A is a primary proper accident of B if and only if there is no C such that C is a species of B and A may inhere in B only *on the condition* of B being C.

This clarification of the meaning of [c₁] and [d₁] and of their connection with the phrase “*without any condition*” in [b] has now made the occurrence of the expression “first subject” in [a] completely clear. By saying that the existent is the *first* subject of metaphysics, Avicenna means to underscore that the existent is the primary genus of certain species (the ten categories), and that certain attributes (the common notions) are primary proper accidents of the existent.

¹⁰³ Like the primary genus, for the existent is not a genus in Avicenna’s view.

¹⁰⁴ The idea that the existent is primarily divided into the categories poses a doctrinal question, which I restrict myself to pointing out. Several passages of the *Ilāhiyyāt* suggest or explicitly state that the existent is divided into necessary existent and possible existent. However, *Ilāhiyyāt* VIII 4 implies that the necessary existent does not fall within any of the categories. Consequently, the division of the existent into necessary existent and possible existent would be prior to the division into the categories, which concerns only the possible existent. This seemingly contradicts the primary division of the existent into the categories, since the possible existent is more common than the categories falling under it.

By convention, we may reformulate the last point saying that the existent is “first” with respect to certain species and attributes, which are investigated in metaphysics. This brings us straightforwardly to a further aspect of the significance of Avicenna’s use of the expression “first subject” in *Ilāhiyyāt* I 1-2. Once the notion of “first subject” has been properly understood, the relevant texts in *Ilāhiyyāt* I 1-2 strongly suggest that Avicenna is also implicitly introducing a new epistemological requirement for something to be the subject of a science. This “first subject principle” may be formulated thus: a given thing can be the subject of a science only if it is “first” with respect to both the species and the accidents enquired into in that science. In the case of metaphysics, the application of this principle leads to the conclusion that only the existent *qua* existent can be the subject of science.

To conclude, it is worth making one final remark on the interpretation of “first subject” provided so far. It seems that such interpretation is confirmed, albeit vaguely and partially, by the paragraph concerning *Ilāhiyyāt* I 2 [18] in the *Mubāḥaṭāt*¹⁰⁵. The expression “first subject” is here replaced by “subject”, while the adverbial “*awwalan*” explicitly qualifies the relation between the existent and the categories:

The subject of the science known as metaphysics: the existent inasmuch as it is existent. The things sought by it are the things which attach to it inasmuch as it is existent without any condition. Some of these things are as the species, like the substance, the quantity, and the quality. Indeed the existent is firstly (*awwalan*) divided into them¹⁰⁶.

[19-21] Having reached the conclusion that the existent is the subject of metaphysics, Avicenna raises and answers an objection against that conclusion. The objection is raised in [19]; it is given two answers, in [20] and in [21]. The two answers can be kept distinct, yet they are in a way complementary in expressing the same view against the objection, as we shall see.

[19] It will be recalled that in *Ilāhiyyāt* I 1 [7] Avicenna had reported a common view about metaphysics, according to which metaphysics would enquire into the first causes of physical and mathematical existence and into the “cause of causes”, namely God. The objection in [19] is precisely formulated against the background of this conception of metaphysics.

Going into details, Avicenna argues that, if the existent is the subject of metaphysics, then metaphysics cannot demonstrate the principles of the existents. The entailment is justified again on the basis of a conception of the task of a science descending from Aristotle’s *Posterior Analytics*. The

¹⁰⁵ On the nature of this work, see [Reisman 2002].

¹⁰⁶ *Mubāḥaṭāt*, 799 , p. 278 (ed. Bīdārfar).

task of a science consists in demonstrating the attributes of its subject; it does not consist, in particular, in an investigation into the principles of the subject¹⁰⁷.

Both Avicenna's answers to the objection consist in showing that, provided that the existent is the subject of metaphysics, the investigation into the principles of the existents would still not amount to an investigation into the principles of the subject; in fact, it would fall within the investigation of its attributes.

[20] The first answer to the objection consists in showing that "being a principle" is actually an accident of the existent. In light of the discussion of primary predicates provided above, one can be more accurate, saying that the aim of [20] is to show that "being a principle" is a primary proper accident of the existent.

Avicenna's strategy has already been outlined in the commentary on [16]: he argues that something is a primary proper accident of the existent by denying that it is something else, until all other alternatives have been ruled out. To begin with, the text can be divided into its elementary parts as follows:

[a] The answer to this is that also the examination of the principles is an investigation of the accidents of this subject,

[b] because the fact that the existent is a principle is not constitutive of it,

[c] nor is it prevented from being in it;

[d] it is rather, with respect to the nature of the existent, something occurring to it.

[e] And it is among the accidents proper to it,

[f] because nothing is more common than the existent (so that it could attach to something other than it primarily),

[g] nor does the existent require to become natural, mathematical or something else in order that being a principle occurs to it.

The role of each part of the text should be understood by resorting to the general framework (see again the commentary on [16]) of a demonstration that something is a primary proper accident of a given subject – in this case, of the existent. This being the case, sections [a]-[g] make the following points about "being a principle":

Thesis to be proved

[a], [d], [e]

i-a) Inherent

[c]

¹⁰⁷ The mention of "principles" in the objection refers to causal principles. I believe that the following interrelated claims in [De Haan 2020], p. 134, are not correct: first, [19] implies that principles are assumed, rather than demonstrated; second, [19] is based on an equivocation in the meaning of the term "principle".

i-b) Non-essential	[b]
ii) Not universally predicated	---
iii) Proper	[f]
iv) Primary	[g]

Avicenna states his thesis three times, in [a], [d], and [e]. Yet it is plausible that a distinction should be made about the meaning and role of [a], [d], and [e]. In particular, [a] definitely contains Avicenna’s answer to the objection in [19], and therefore the ultimate claim to be defended in [20]. The argument to support this claim is in two steps. First, Avicenna claims that “being a principle” is an accident of the existent, in a generic sense of the term “accident”; second, he proves that it is a *primary proper* accident of the existent. The first step of the argument is contained in [b], [c], and [d]: [d] states its conclusion, which is the result of the two points made in [b] and [c]. The second step of the argument is contained in [e], [f], and [g]: [e] states its conclusion, which is the result of the two points made in [f] and [g]. If this is correct, then Avicenna would state the overall thesis to be proved in [20] twice, in [a] and [e]; by contrast, [d] would state only a partial conclusion of the argument, preliminary to its second step.

One final remark on [f] might be helpful to prevent misunderstandings. Avicenna states that nothing is more common than the existent: as a consequence, “being a principle” cannot exceed the existent and is therefore bound to be one of its proper accidents (provided that it is one of its accidents, which has been proved in the first part of the argument). As a matter of fact, the same point is true in general: any accident of the existent is also a *proper* accident of the existent. Accordingly, the table above has classified [f] as claiming that “being a principle” is a *proper* accident.

Yet the text could seem to suggest that [f] concerns the fulfilment of the primary-ness condition for proper accidents (“[...] so that it could primarily attach to something else”). In fact, it does not. [f] does not claim that “being a principle” is a primary proper accident of the existent, but only that it is proper to the existent. Now, if something is a proper accident of *x*, it cannot be a *primary* proper accident of anything more common than *x*. This does not amount to saying that it is a *primary* proper accident of *x*.

[21] The second answer to the objection points out that the investigation into the principles of the existents must not be understood as an investigation into the principles of the existent in its entirety. Only in this latter case – this is Avicenna’s underlying idea – one would be dealing with the

principles of the subject of metaphysics, provided that the subject of metaphysics is indeed the existent *qua* existent.

The reason why the investigation of principles cannot be an investigation of the principles of the existent in its entirety is quite simple: there is no such principle of the existent in its entirety, for in that case it should be a principle of itself, which is absurd. It is implicit in this reasoning that a possible principle of all the existent would have to fall itself under the notion of the existent – which would make it self-caused.

Having clarified that there is no principle of all the existent, Avicenna also determines in a positive way what one should understand by “investigation into the principles of the existents”. Metaphysics investigates into the principles of part of the existent, namely of the existents which have principles. This basically consists in demonstrating that something falling within the existent is a principle of other, posterior existents.

In so doing, metaphysics acts in the same way as particular sciences do. Particular sciences do not enquire into the principles of their subject in its entirety; they rather restrict themselves to demonstrating that something falling within their subject is a principle of other things falling within their subject.

There is a difference between the case of metaphysics and the case of particular sciences, though, which Avicenna himself mentions in the text. Unlike the subject of metaphysics, there are indeed principles of the subjects of particular sciences in their entirety. Nonetheless, considering such principles falls outside the task of particular sciences – as we are going to see, it is metaphysics which enquires into the principles of the subjects of particular sciences in their entirety.

[22-30] *The goal of metaphysics*

Starting-point of this section is the main conclusion of [2-21], namely that the existent *qua* existent is the subject of metaphysics. The aim of this section is to provide an account of the goal of metaphysics, namely of the task which metaphysical enquiry is demanded to carry out. In providing this account, Avicenna also answers the second of the two questions asked in the introductory section of *Ilāhiyyāt* I 1: “what is wisdom?”. The following is an outline of the section:

- [22-25] The goal of the science of the existent in its single parts
- [26] The science of the existent is first philosophy and wisdom
- [27-29] The science of the existent is metaphysics
- [30] Conclusion

Before examining the single paragraphs in detail, one remark is in order on the role of [27-29]. In [2-21], Avicenna has demonstrated that the existent *qua* existent is the subject of metaphysics – “divine science”, in Avicenna’s words –, namely of the science of what is separated from matter in definition and subsistence. In [27-29], he argues that the science of the existent, whose articulation has just been described in [22-25], deserves to be called “metaphysics”/“divine science”. Strictly speaking, [27-29] is superfluous: we already know that the science of the existent is metaphysics, for the existent has been identified precisely as the subject of metaphysics. Accordingly, one should attach to [27-29] the value of a confirmation/clarification – rather than a proof – of the identity between the science of the existent and metaphysics. This confirmation moves, as it were, “backwards”. If we agree to see the argument in [2-21] as “top-down”, from the feature of a science to the determination of its subject, then [27-29] is “bottom-up”: all that falls within the science of the existent is shown to share in a general feature, namely immateriality in subsistence and definition.

[22-25] In the opening sentence of [22], Avicenna states that the science of the existent is necessarily divided into parts¹⁰⁸. We discover soon that it is divided into three parts, which are taken into account in [22-24]:

- [22] Investigation of the ultimate causes
- [23] Investigation of the (primary proper) accidents of the existent
- [24] Investigation of the principles of the particular sciences

As a consequence, in [25] Avicenna divides the “questions” – i. e. what a science undertakes to demonstrate – of the science of the existent into three classes: the ones concerning the ultimate causes, the ones concerning the accidents of the existent, and the ones concerning the principles of the particular sciences.

The second of the three parts of the science of the existent is the only one which is required by epistemological principles with general validity: any science should investigate into the accidents of its subject. Yet the presence of both the second and the third part does not come unexpected if one recalls the two arguments which Avicenna had used to prove that the existent is the subject of metaphysics, in [2-14] and [15-16] respectively¹⁰⁹. According to the first argument, an investigation into the subjects of particular sciences from the point of view of their kind of existence can only belong to the science whose subject is the existent. According to the second argument, the investigations into the common notions is an investigation into the primary proper accidents of the

¹⁰⁸ For an analysis of this section, see also [Bertolacci 2006], pp. 153-159.

¹⁰⁹ Cf. [Bertolacci 2006], pp. 157-158.

existent. These two investigations result in the third and the second part of the science of the existent, respectively.

As for the first part, strictly speaking the fact that Avicenna singles it out contradicts [20]. In [20], Avicenna had argued that the investigation into the principles of the existent was part of the investigation into the accidents of the existent; by contrast, in [22-25] principles and accidents belong to two distinct investigations.

Let us now have a closer look at Avicenna's description of the three parts of the science of the existent. The second part is just mentioned in [23] without comments – possibly because its presence in a scientific enquiry is obvious, as already explained.

In [22], Avicenna clarifies why the enquiry into the ultimate causes is part of the science of the existent: because they are the causes of every caused existent *from the point of view of its existence*. This explanation refines in a way Avicenna's observation in [21] that the causes of the existent should be understood as causes of the *caused* existent, rather than of the existent in its entirety. On the other hand, it has already been said that the presence of an autonomous “aitiological” part of the science of the existent contradicts Avicenna's claim that principles are investigated as accidents of the existent. In separating this first part of the science of the existent from its second part, Avicenna must also introduce a new, independent reason to justify the investigation of the ultimate causes – which is exactly what he does. To recapitulate, *Ilāhiyyāt* I 2 explains in two different ways why the ultimate causes should be investigated in the science of the existent:

- (i) because “being a cause” is an accident of the existent;
- (ii) because the ultimate causes cause their effects *from the point of view of the existence of the latter*.

It must be underscored that these two explanations do not contradict each other. Yet they are properly distinct, and it is not clear whether their simultaneous presence may be explained in a unified account. We shall come back on this shortly. For the time being, it remains to be noticed how Avicenna closes the paragraph: he specifies that, among the ultimate causes, the science of the existent takes into consideration “the first cause”, the one from which all the caused existent *qua* existent issues – namely God. In other words, the “aitiological” part of the science of the existent is, at least at its highest point, theology.

In [24], Avicenna clarifies the reason why the principles of particular sciences are investigated in the science of the existent. Particular sciences investigate specific kinds of existents (lit. “the particulars of the existent”), and therefore the science of the existent is “more common” than them. This being the case, the principles of particular sciences are questions in the science of the existent, for this is true in general about two sciences whose subjects are related as “more specific – more

common”. The paragraph also provides information – and this is perhaps its most interesting aspect – on the way in which the science of the existent is supposed to prove the principles of particular sciences. The science of the existent divides the existent into its species and investigates into their attributes. It keeps doing so, dividing those species further until the subject of a particular science is reached. Enquiring into the attributes of the latter will then be the task of the particular science in question. Yet the complete knowledge of all the genera which are “above” that subject is achieved in the science of the existent, and is simply assumed by the particular science.

To conclude, let us compare Avicenna’s tripartition of the science of the existent with the actual structure of the *Ilāhiyyāt*. It has already been observed that the latter is structured according to a definite scientific plan¹¹⁰. In particular, [Bertolacci 2006] has recognised the three parts listed in [22-24] in the organisation of the work: [22] the investigation of ultimate causes and especially the first cause in treatises VIII-X; [23] the investigation of the accidents of the existent in treatises IV-VI; [24] the investigation of the principles of particular sciences in treatises II-III.

As for treatises II-III, they contain the enquiry into the species of the existent (the categories), and we know that investigating the principles of particular sciences consists precisely in investigating the divisions of the existent which precede the subjects of the particular sciences. Yet a complete foundation of particular sciences is perhaps not to be confined to treatises II-III: it has been argued that it would also presuppose Avicenna’s treatment of universals (in treatise V, as far as logic is concerned) and of causality (in treatise VI, as far as physics is concerned)¹¹¹.

As for the discussion of the accidents of the existent, it begins with treatise IV and there is evidence to maintain that it ends with treatise VI, for treatise VII begins with the following words: “It seems that we have exhaustively discussed, with respect to our goal here, the things that are proper to ‘being *qua* being’ or are consequent to it”¹¹². Treatise VI contains a discussion of causality, so that it would seem that the investigation of causes is considered to be part of the investigation of the accidents of the existent.

Finally, VIII-X argue in favour of the finitude of causal chains, provide a discussion of God and of the emanation of the caused existent from God: this is definitely an investigation of the “first cause”, and could be plausibly be considered more generally an investigation of the “ultimate causes”.

Were this the case, then in the *Ilāhiyyāt* one would find both an investigation of causes inasmuch as “being a cause” is an accident of the existent (in VI) and an investigation of the *ultimate* causes in VIII-X. One might then suggest that the two different reasons behind the inclusion of an

¹¹⁰ For a detailed account, see [Bertolacci 2006], pp. 165-180.

¹¹¹ See [Bertolacci 2006], chapter 7, for a complete account of Avicenna’s view that metaphysics should provide the foundation of particular sciences.

¹¹² Tr. Bertolacci, in [Bertolacci 2006], p. 173.

investigation of causes in the science of the existent (“inasmuch as they are accidents of the existent”, “inasmuch as they cause their effects *qua* existent”) actually correspond to two different investigations of causes, in treatises VI and VIII-X respectively. Yet this only takes us back to the problem raised in [19]: why should the science of the existent enquire into the ultimate causes of the existents, given that a science only investigates “the things attaching to its subject”, namely its species and proper accidents?

In addition to these considerations one should take into account another small, yet interesting detail: in [18] Avicenna has stated that “the things sought” in metaphysics are the ones attaching to the existent, which are either its species or its proper accidents. No mention is made of the ultimate causes of the caused existent¹¹³. Moreover, if we read [18] and [20] together, so as to include the investigation of causes within the investigation of proper accidents, we may think of a bipartition, rather than a tripartition, of the science of the existent: on one hand, metaphysics enquires into the species of the existent (treatises II-III); on the other, into its proper accidents, eventually extending to the cognition of God (treatises IV-X).

If one also takes into account the fact, already mentioned, that the foundation of particular sciences cannot apparently be confined to treatises II-III – which therefore cannot perfectly coincide with the “investigation of the principles of particular sciences” –, it becomes hard to escape the impression of a tension between two conceptions – both at work in the *Ilāhiyyāt* – of the structure of the science of the existent. On one hand, the science of the existent is thought of as tripartite, along the lines of the structure described in [22-25]. On the other hand, it is thought of as composed of only two parts, investigating the species and the proper accidents of the existent respectively.

Both conceptions may be traced back in different ways to Avicenna’s reading of al-Fārābī’s *Fī aḡrād*. The most relevant Farabian passage in this respect is the following:

Universal science, on the other hand, investigates the thing that is common to all existents (like existence and oneness), its species and attributes, the things which are not proper accidents of any of the subjects of the particular sciences [...] and the common principle of all existents, namely the thing that ought to be called by the name of God – may His glory be exalted¹¹⁴.

The first subject of this science is the absolute existent and what is equivalent to it in universality, namely the one. But since the knowledge of opposite correlatives is one, the investigation of non-existence and multiplicity is also included in this science. Then, after these subjects and their verification, it investigates the things which are like species to them, like the ten categories of the existent, the species of the one [...], and similarly the species of non-existence and of multiplicity. Then [it investigates] into the attributes of existent [...], the attributes of unity [...], and the attributes of non-existence and multiplicity. The [it investigates] into the principles of each one of these [i. e. of existent, one, non-existence and multiplicity]. And that is branched out and divided, until the

¹¹³ In other words, [18] does not seem to agree perfectly well with [22-25]. In addition to this, one should notice something quite strange about the presence of [18] after [17]: in drawing the conclusion that the existent is the subject of metaphysics, they partly overlap.

¹¹⁴ al-Fārābī, *Fī aḡrād*, tr. Bertolacci, in [Bertolacci 2006], p. 68.

subjects of the particular sciences are reached and [consequently] this science ends. In it the principles of all particular sciences and the definitions of their subjects are clarified¹¹⁵.

The first passage proposes a tripartition of metaphysics, inasmuch as it investigates into species, proper accidents, principle (God) of the existent. The second passage seems to propose the same tripartition, except that the reference to God is replaced with a more generic reference to the “principles” of the things investigated in metaphysics. It is not clear how the final reference to the clarification of the principles of particular sciences should be integrated within the tripartition.

Now, the Farabian tripartition “species – accidents – principles” seems to be the one which Avicenna’s *Ilāhiyyāt* most directly follows in its actual articulation. As for the tripartition described by Avicenna in [22-25], it immediately derives from the Farabian tripartition, once the investigation of the species of the existent is altogether identified with the investigation of the principles of particular sciences.

By contrast, the bipartition of the science of the existent in the two investigations of species and proper accidents derives from the Farabian tripartition, once the investigation of principles has been moved into the investigation of proper accidents. In this respect, it must be recalled that *Ilāhiyyāt* I 2 [18], which can be taken as a witness of the bipartite conception of metaphysics, heavily depends on the second Farabian passage quoted above. It is striking then that the third part of metaphysics in al-Fārābī’s account simply disappears in Avicenna’s re-working of the passage. In fact, it seems to be replaced by [19-21], where Avicenna explains that the enquiry into the principles of the existents falls within the enquiry into the proper accidents of the existent. In so doing, as we have seen in [21], Avicenna also makes clear that the existent in its totality has no principle. A comparison with al-Fārābī on this point is telling, for it seems to reveal an intentional revision of al-Fārābī’s views by Avicenna:

[F.] The divine science ought to belong to this [universal] science, because God is a principle of the absolute existent (*li-l-mawǧūd al-muṭlaq*), not of one existent to the exclusion of another¹¹⁶.

[A.] Therefore, this science does not investigate the principles of the existent absolutely (*muṭlaqan*); rather, it only investigates the principles of part of what [falls] within it [...]

To sum up, while the way in which Avicenna organises his *Ilāhiyyāt* is completely faithful to al-Fārābī’s account, in *Ilāhiyyāt* I 2 two different conceptions of the structure of the science of the existent seem to be expressed which derive from al-Fārābī’s account, but are also different from it. The Avicennian “tripartite conception” of the science of the existent seems to be the result of an interpretation of al-Fārābī’s tripartition, while the Avicennian “bipartite conception” seems to be the result of a more substantive revision of al-Fārābī’s views.

¹¹⁵ al-Fārābī, *Fī aǧrād*, tr. Bertolacci, in [Bertolacci 2006], p. 69 (with minor changes).

¹¹⁶ al-Fārābī, *Fī aǧrād*, tr. Bertolacci, in [Bertolacci 2006], p. 68.

If this is correct, then it is also likely that Avicenna’s “tripartite conception” is anterior to the other. For one thing, it is closer to al-Fārābī’s account, which is Avicenna’s main source. Second, it has been shown that the “tripartite conception” is expressed in other, earlier Avicennian works as well¹¹⁷. Third, it would not be difficult to imagine the reasons behind Avicenna’s change of mind and eventual endorsement of the “bipartite conception”. It is plausible that these reasons are of a purely epistemological nature, deriving from Avicenna’s reading of the *Posterior Analytics*.

In particular, the *Posterior Analytics* do not prescribe that a science should enquire into the principles of its subject, or of part of its subject. Avicenna might have eventually questioned the Farabian tripartition in so far as an enquiry into the principles of the subject – or of part of the subject – would have no right to take place in a science, unless it is traced back to an enquiry into the accidents of the subject. On the other hand, in [21] Avicenna shows to be aware of the fact that *all* sciences demonstrate that, among the things which fall within their considerations, something is a principle of something else. Accordingly, there must be a *general epistemological ground* to legitimise what other sciences do for sure, and eventually to justify an investigation of the ultimate causes within the science of the existent. Such general epistemological ground becomes evident automatically, as soon as “being a principle” is recognised to be an accident¹¹⁸.

[26] In this paragraph Avicenna shows that the science of the existent, whose structure he has just outlined, is first philosophy and wisdom.

It is *first* philosophy for two reasons: i) it investigates into the *first* thing in existence (God); ii) it investigates into the *first* thing in commonness (existence and unity).

It is wisdom because wisdom – Avicenna repeats one of the characterisations of wisdom given in *Ilāhiyyāt* I 1 [9] – is the most noble scientific knowledge of the most noble knowable thing. The science of the existent is said to be such a knowledge: it is “certitude”, and it concerns God. To this Avicenna adds that the science of the existent is also the knowledge of the first causes of the whole; finally, he repeats that it is knowledge of God.

Returning to *Ilāhiyyāt* I 1 [9], the three characterisations of “wisdom” given there are:

- Most noble scientific knowledge of the most noble knowable thing
- Most perfect and exact knowledge

¹¹⁷ See [Bertolacci 2006], pp. 159-162. See [Gutas 2014], p. 7 for the translation of a relevant passage from the *Nafs ‘alā sunnat al-iḥtiṣār*.

¹¹⁸ Even though “being a principle” is not a proper accident of the subjects of particular sciences, it is reasonable to assume that it is the task of the particular sciences to divide their subjects into “principles/effects”.

- Knowledge of the first causes of the whole

In *Ilāhiyyāt* I 1 [10], Avicenna had then asked whether these three characterisations would qualify three different sciences, or only one science to be called wisdom. If we assume that the “certitude” is also the most perfect and exact knowledge, then we are finally given an answer to that question. In *Ilāhiyyāt* I 2 [26], Avicenna would be claiming that the three characterisations of wisdom belong to a single science, namely the science of the existent.

[27-29] In these paragraphs Avicenna shows that the science of the existent is “metaphysics”/“divine science”, namely the science of what is separated from matter in definition and subsistence. Avicenna makes his claim in [27] and then goes on to justify it. Actually, he seems to justify it twice: the first time in [27]; the second time in [28-29] with a more detailed survey of the objects investigated in metaphysics and their relation with matter.

[27] The first justification of the identity between metaphysics and science of the existent is the following: the existent, its principles, and its accidents do not depend on matter as far as their existence is concerned. Of course, if they are separated from matter in their existence, *a fortiori* they are also separated from matter in their definition – so that Avicenna does not need to repeat the same point about their definition.

The reference to the triplet “existent, its principles, and its accidents” is interesting. It is partially reminiscent of the tripartition of the science of the existent described in [22-25], provided that the principles in question are the principles of the *caused* existent. There seems to be nothing in [27] corresponding to the investigation into the principles of particular sciences or into the species of the existent, though; the subject of science (the existent *qua* existent) is mentioned instead.

Avicenna concludes the paragraph with a sort of disclaimer: it is true that the science of the existent may also investigate into something which is not prior to matter – let it be *x*. Yet in this case the science of the existent would not investigate into *x* from every point of view, but only “according to a certain notion” whose existence does not depend on matter. This point about material realities becomes clear when one reads [28]: plausibly, Avicenna has in mind the fourth class of objects mentioned there. We can therefore omit further comments and turn immediately to [28-29].

[28-29] Avicenna provides here a second justification of the identity between science of the existent and metaphysics. More precisely, such justification is provided in [28], while in [29] Avicenna clarifies one aspect of [28] by drawing a parallel between metaphysics and mathematics.

[28] In [28], Avicenna identifies four different classes of objects investigated in the science of the existent on the basis of their different relation with matter:

- 1) Things absolutely separated from matter;
- 2) Things joined with matter, but prior to matter inasmuch as they are “constitutive causes”;
- 3) Things which can exist both in matter and not in matter;
- 4) Material things.

Avicenna gives examples only for (3) and (4): (3) unity and causality, on one hand, and (4) motion and rest, on the other. It is not difficult to find an example for (1): Avicenna must have in mind God and separate substances. (2) is more of a problem, yet I dare say that an example is provided by Avicenna himself in *Ilāhiyyāt* I 2 [10]: extension₁, namely the extension which is constitutive of natural bodies¹¹⁹.

The objects of the first three classes, Avicenna states, have two common features (which also distinguishes them from the fourth class): their “ascertainment” does not need the existence of matter, and their existence is not acquired from matter. By mentioning these two features Avicenna is plausibly referring separately to independence from matter in definition, on one hand, and in subsistence, on the other.

By contrast, the objects of the fourth class depend on matter. Yet they are not investigated in the science of the existent from any point of view: the science of the existent only enquires into “the manner of existence they have”. In other words, they are only investigated in this science from the point of view of the notion of existent, or some other notion “whose existence does not subsist through matter” (the notion of substance, etc.).

The latter feature is therefore common to the objects of all the four classes: they are investigated in the science of the existent according to a notion whose existence does not depend on matter. Indeed, the first three classes of objects cannot but be investigated in this way, for they do not depend on matter at all, in their entirety. The objects of the fourth class, by contrast, also admit of an investigation which is not metaphysical, for they can be considered under a notion whose existence does depend on matter. In fact, the possibility of a non-metaphysical consideration of these objects is not in question; rather, Avicenna’s intention is to shed some light on the possibility of a metaphysical consideration of them. He does so by drawing a parallel between metaphysics and mathematics in [29].

¹¹⁹ Another possibility is the one suggested by Bertolacci in Avicenna, *Libro della Guarigione. Le cose divine*, p. 161, n. 81, according to which Avicenna would be referring to celestial souls.

Before moving to [29], however, one final comment on Avicenna's fourfold classification of metaphysical realities is in order. It has already been recalled that in *Madḥal* I 2 Avicenna outlines a division of sciences on the basis of a complex division of things according to their relation with motion¹²⁰. In particular, Avicenna distinguishes two classes of "immaterial things": things which are necessarily separated from motion, on one hand, and things which can be separated from motion, on the other. Examples of the latter class of things are "unity, being, causality, and number"¹²¹; when these are considered in themselves, their investigation belongs to metaphysics, together with the investigation of necessarily immaterial things.

The two classes of immaterial things in *Madḥal* I 2 correspond to the first and third class of objects investigated by metaphysics in *Ilāhiyyāt* I 2 [28]. We can thus take the fourfold division of metaphysical realities in *Ilāhiyyāt* I 2 as a refinement of Avicenna's description of the scope of metaphysical investigation, as it is implied by *Madḥal* I 2. On the other hand, this must not be understood as a refinement in Avicenna's classification of immaterial realities. In the fourfold division, there are still two classes of immaterial realities, namely the first and the third class; the other two classes are properly material, meaning that their objects cannot exist but in matter.

[29] As mentioned above, Avicenna makes a point about mathematical sciences in order to clarify the possibility of a metaphysical consideration of some material realities. He observes that mathematical sciences investigate into something which is defined through matter. Yet this does not imply that the investigation ceases to be mathematical, for it is in any case carried out according to a notion which is not defined through matter.

In spite of the simplicity of Avicenna's claim about mathematical sciences, there are two aspects which need clarifying. First of all, the claim is ambiguous in itself. Second, the parallel with metaphysics might be misunderstood. Let us begin considering this second point.

Avicenna's statement of the parallel between mathematical sciences and metaphysics ("so is the state here") might be misleading, in so far as it might suggest that metaphysics and mathematics adopt the very same procedure when dealing with material realities. In fact, it is not so, and Avicenna's parallel is not intended to conceal the difference between a metaphysical and a mathematical investigation. The wording is quite precise in this respect:

- Metaphysical investigation: "from the point of view of a notion whose *existence* does not subsist through matter"

¹²⁰ See above the commentary on *Ilāhiyyāt* I 1 [2-4].

¹²¹ Cf. [Marmura 1980], pp. 244-245. I have replaced the reference to "individual identity" in Marmura's translation with "being" (Arabic: *huwiyya*).

- Mathematical investigation: “from the point of view of a notion not *defined* through matter”

It is true that metaphysics and mathematics follow a similar strategy in investigating a material object, for they do not consider the material object in every respect. Rather, they consider it only under a certain notion, whose relation with matter must be different from the relation of the object itself with matter. On the other hand, the notion which makes an investigation metaphysical is intrinsically different from the notion which makes an investigation mathematical: the former is independent from matter *in its existence*, while the latter is independent from matter only *in its definition*. That this should be the case is actually quite obvious, and any possible misunderstanding of the parallel between metaphysics and mathematics is easily avoided once Avicenna’s words are read carefully.

By contrast, the other problematic aspect of Avicenna’s account is slightly more subtle. As far as I can see, there are two different ways of reading Avicenna’s claim about mathematical sciences. According to one interpretation, Avicenna would be making a general point about mathematics in its entirety, referring to its proper kind of abstraction. All the mathematical sciences, he would be saying, investigate into physical realities, which are defined through matter. Yet their investigation of physical realities is from the point of view of a notion not defined through matter, for it only concerns quantities which are abstracted from them.

This interpretation would seem to be suggested by the generic reference to the “mathematical sciences” at the beginning of [29]. At closer inspection, however, it turns out to be problematic for at least two reasons. First, from Avicenna’s perspective it would be somehow improper to say that mathematics in its entirety enquires into “what is defined through matter”, namely into physical realities, from the point of view of their quantities. Rather, in *Ilāhiyyāt* I 1 [6] he states that the subject of the mathematical sciences is either an abstracted quantity (pure mathematics) or something endowed with quantity (applied mathematics). In other words, as far as pure mathematics is concerned, Avicenna would say that it enquires into quantities themselves (of course, abstracted from physical realities), rather than into physical realities from the point of view of their quantities. The same can be said about Avicenna’s more detailed description of the four parts of mathematics in *Ilāhiyyāt* I 2 [3]: arithmetic and geometry are said to enquire into number and extension themselves, rather than in physical realities from the point of view of number and extension.

Second, the interpretation mentioned above does not fit well with the role that the parallel between metaphysics and mathematics is supposed to play. The parallel is meant to clarify the possibility for metaphysics to enquire into the fourth class of objects mentioned in [28], including material realities such as motion and rest. Metaphysics can investigate motion and rest, Avicenna says, inasmuch as its investigation of them is from the point of view of a notion whose existence does

not depend on matter. In this case, Avicenna probably has in mind the notion of “existent”, for he claims that metaphysics enquires into “the manner of existence” of motion and rest. Now, enquiring into the manner of existence of motion and rest cannot simply consist in enquiring into the existent *qua* existent in general; rather, it must consist in an enquiry of the existence which is proper to motion and rest. As for the enquiry into the existent *qua* existent – which is a notion that belongs also to material realities and can be abstracted from them –, its belonging to metaphysics is not in question and does not need to be clarified. The existent *qua* existent does not depend on matter, and its investigation is by nature metaphysical.

Returning to Avicenna’s claim about mathematical sciences – and thus going in a direction opposite to Avicenna’s –, we can now try to clarify his claim about mathematical sciences in the light of the parallel between metaphysics and mathematics. Just like the enquiry into the existent *qua* existent is by nature metaphysical, so is the enquiry into abstracted quantities by nature mathematical. The possibility of a mathematical investigation of quantities does not need to be clarified, for quantities are themselves *not defined through matter*. What is not trivial – and may serve in turn to clarify a non-trivial point about metaphysics – is the possibility of a mathematical investigation of what is not an abstracted quantity. As we have seen, Avicenna does claim that part of mathematics does not investigate abstracted quantities, but something which is endowed with quantity. In so doing, he refers to applied mathematics, namely music and astronomy. That these two disciplines should be part of mathematics is far from obvious, for they investigate into something which is defined through matter and is, strictly speaking, a physical reality. That they are indeed part of mathematics is due to their manner of investigation, which is “from the point of view of a notion not defined through matter”.

To conclude, I would say that [29] should be interpreted in the following way. Avicenna is not making a general claim about mathematics in its entirety. Rather, he is making a claim about part of mathematics: in mathematics, he would be saying, there is also an investigation into physical realities, which are defined through matter (in music and astronomy). Yet this investigation is properly mathematical, for it is carried out from the point of view of the notion of quantity, which is not defined through matter.

[30] This brief sentence closes section [22-30], claiming that the goal of metaphysics has now been clarified.

[31] In this final paragraph, Avicenna compares metaphysics with dialectics and sophistics. The comparison basically develops the one found in Aristotle’s *Metaphysics* Γ 2, adding the reason why

metaphysics is different from both dialectics and sophistics. Going into details, the text tells us that metaphysics shares one feature with both dialectics and sophistics, but also has distinctive traits. In particular, there is one feature which distinguishes metaphysics from dialectics and sophistics together; one feature which distinguishes metaphysics from dialectics specifically; one feature which distinguishes metaphysics from sophistics specifically:

1 *Common feature* *Enquiring into what is left uninvestigated by particular sciences*

2	Difference from both	Not enquiring into what particular sciences investigate
3	Difference from dial.	Providing certitude
4	Difference from soph.	Aiming at the truth

The second point, as mentioned, is not found in Aristotle’s account. The fact that it is found in Avicenna’s account, on the other hand, is quite interesting, for it is closely connected to Avicenna’s use of the expression “first subject” in *Ilāhiyyāt* I 1-2 and reaffirms the significance of primary predicates in the doctrine of science. It will be recalled that, in commenting upon *Ilāhiyyāt* I 2 [18], it has been noticed that the two occurrences of the expression “first subject” in *Ilāhiyyāt* I 1-2 strongly suggest Avicenna’s endorsement of a “first subject epistemological principle”, according to which the subject of science must be “first” with respect to both the species and the proper accidents taken into consideration in the science itself. Let us focus on the proper accidents. Since the proper accidents of the subjects of particular sciences are not *primary* proper accidents of the existent, the “first subject epistemological principle” tells us that the science of the existent must not investigate into the proper accidents investigated by particular sciences¹²².

In other words, in [31] Avicenna is telling us that metaphysics is different from both dialectics and sophistics because metaphysics fulfils the “first subject epistemological principle”, while dialectics and sophistics do not. This in turn confirms that Avicenna does endorse that principle as valid for metaphysics and – plausibly – for a proper philosophical science in general.

¹²² At the same time, particular sciences do not investigate into the proper accidents belonging to their subjects inasmuch as they are existent. The “first subject epistemological principle” is essential to safeguard the identity and distinction of properly scientific disciplines. See for example *Burhān* II 2, p. 133 (tr. Rashed in [Rashed M. 2004], p. 152): “Ou l’arithméticien étudierait le nombre en tant qu’existant, et il lui appartiendrait d’étudier ce qui survient à l’existant en tant qu’existant, en sorte qu’il n’y aurait pas de différence entre l’arithmétique et la philosophie première”.

PART TWO

ALBERT THE GREAT AND THOMAS AQUINAS

Introduction

In this second part of the thesis, I shall analyse Albert's and Aquinas' conceptions of metaphysics. In spite of the visible differences between the two authors, the common background provided by their sources creates a fundamental affinity between their expositions. The questions they ask are basically the same, and the solutions they provide, though different, can be easily compared. The following (for the most part) parallel analysis of their views will confirm – I believe – this claim. Related to this, I should report that it has been argued that several questions emerging in the scholarship on Albert are somehow due to the scholars' expectations “to find in Albert anticipations of later developments”¹²³. In the case of the subject of metaphysics, these expectations would be especially related to Aquinas' and Scotus' views. I hope that the following study may not suffer from this defect, for it is in fact animated by the belief that Albert's reflection on the system of philosophical sciences and on the nature of metaphysics is far wider and more important than Aquinas'.

This study of Albert and Aquinas will fall into six chapters. The first chapter takes into consideration the two authors' views on the system of theoretical sciences and, in particular, their account of the traditional tripartition of theoretical philosophy into physics, mathematics, and metaphysics. The second and third chapters are devoted to the epistemological structure of metaphysics, including the question of its subject, in Albert and Aquinas respectively. The fifth chapter deals with the two authors' interpretation of the structure of Aristotle's *Metaphysics*, highlighting the connection between such interpretations and their conceptions of the structure of metaphysics as a science. The sixth chapter analyses Albert's views on the relation of metaphysics to the other theoretical sciences. The same analysis could be easily carried out in the case of Aquinas, taking into account his few statements on the order of sciences and his claim that metaphysics is the founding discipline¹²⁴. Yet Albert's account in this respect is incomparably richer and worth a close scrutiny: I shall thus focus on it. Finally, the fourth chapter is devoted to an aspect of Aquinas' thought which has provoked a lively scholarly debate, namely his distinction between *abstractio* and *separatio* in *Super De Trinitate* 5.3. Since it has been argued that Aquinas ascribes to *separatio* an important foundational role with respect to metaphysics, a discussion of the topic must be included in the present study. *Super De Trinitate* 5.3 is actually quite a complex text. I shall therefore provide a commentary upon it in order to be in a better position to evaluate its significance for Aquinas' conception of metaphysics.

¹²³ [Noone 2013], pp. 545.

¹²⁴ For some aspects of Aquinas' views, see [Wippel 1984a], [Wippel 1984b], [Kielbasa 2013].

In investigating the several aspects of Albert's and Thomas' conceptions of metaphysics, I shall have recourse to various places of their philosophical and theological works. Yet the starting-point and main core of this chapter will consist in an analysis of some passages, which may be considered the "*loci classici*" where the two authors expressly deal with the scientific status of metaphysics in itself or within the context of a division of theoretical sciences. It is therefore undoubtedly useful to introduce these texts in advance.

Both in the case of Albert and in the case of Aquinas, the relevant texts are found in two different works, one of which quite earlier than the other. As for Albert, the works in question are two Aristotelian commentaries, namely his *Physica* and his *Metaphysica*. In the case of Aquinas, they are his commentary on Boethius' *De Trinitate* and his commentary on Aristotle's *Metaphysics*.

The *Physica* is Albert's very first Aristotelian commentary; its composition was plausibly started in 1251-1252¹²⁵. The *Metaphysica*, on the other hand, seems to have been written at least ten years later: it was probably begun not much later than 1262-1263¹²⁶. In the very first chapter of the *Physica*, Albert also makes clear the method ("*modus*") which he would adopt in writing his Aristotelian commentaries. He would follow Aristotle's text, without quoting it explicitly, but adding explanations and proofs of its statements: this would result in chapters in which Aristotle's text is basically paraphrased. To these chapters, Albert would also add "digressions", meant to solve difficulties arising from the text and to provide integrations to it whenever its succinctness might generate obscurities. If a chapter is a digression, Albert informs us, this would be expressly notified in its title¹²⁷.

The *Physica* is a "commentary" – in the sense just explained – on the eight books of Aristotle's *Physics*, while the *Metaphysica* is a commentary on 13 books of Aristotle's *Metaphysics* – all except K – based on the so called *translatio media*.

For present purposes, the "basic texts" to analyse Albert's conception of metaphysics will be the following:

- *Physica* L. 1 T. 1
 - c. 1: "Et est digressio declarans, quae sit intentio in hoc opere et quae pars essentialis philosophiae sit scientia naturalis et cuius ordinis inter partes"

¹²⁵ See *Physica*, Prolegomena, pp. V-VI.

¹²⁶ See *Metaphysica*, Prolegomena, pp. VII-VIII.

¹²⁷ *Physica* 1.1.1, p. 1 ll. 23-36: "Erit autem modus noster in hoc opere Aristotelis ordinem et sententiam sequi et dicere ad explanationem eius et ad probationem eius, quaecumque necessaria esse videbuntur, ita tamen, quod textus eius nulla fiat mentio. Et praeter hoc digressiones faciemus declarantes dubia suborientia et suppletentes, quaecumque minus dicta in sententia Philosophi obscuritatem quibusdam attulerunt. Distinguemus autem totum hoc opus per titulos capitulorum, et ubi titulus simpliciter ostendit materiam capituli, significatur hoc capitulum esse de serie librorum Aristotelis, ubicumque autem in titulo praesignificatur, quod digressio fit, ibi additum est ex nobis ad suppletionem vel probationem inductum".

- *Metaphysica* L. 1 T. 1

- c. 1: “Et est digressio declarans, quod tres sunt scientiae theoricæ et ista est principalis inter tres et stabiliens alias duas”
- c. 2: “Et est digressio declarans, quid sit huius scientiæ proprium subiectum; et est in eo disputatio de tribus opinionibus philosophorum, quæ sunt de subiecto”
- c. 3: “Et est digressio declarans, qua unitate et qualiter sit hæc scientia una”

As indicated in their titles, all these chapters are digressions. They belong to the “proemial sections” of Albert’s *Physica* and *Metaphysica*, respectively, which are placed before the actual beginning of his commentary on Aristotle’s words. The proemial section of the *Physica* is made of four chapters, extending as far as *Physica* 1.1.4. Yet *Physica* 1.1.2-4 deal with problems which concern physics specifically; by contrast, *Physica* 1.1.1 has a much wider scope and will be one of our main pieces of evidence about Albert’s conception of the system of theoretical philosophy. As for the *Metaphysica*, its proemial section is composed by its first three chapters; all of them are fundamental to investigate Albert’s conception of metaphysics. To the chapters mentioned so far, one should add a small portion of *Physica* 1.3.18, which deals with the question of the subject of metaphysics in relation to Averroes’ criticism of Avicenna’s views.

Turning to Aquinas, his *Super De Trinitate* was probably written during his first stay in Paris as a teacher, roughly between 1256 and 1259¹²⁸. As he had already done in his *Commentary on the Sentences*, Aquinas adopts a mixed kind of commentary in *Super De Trinitate*: every chapter of Boethius’ *De Trinitate* is followed, first of all, by a “literal exposition”, namely an explanation of the text; secondly, by two *quaestiones* dealing with doctrinal issues arising from the chapter itself. Since Aquinas’ commentary is not complete, concerning only the preface and the first two chapters of Boethius’ work, the overall number of *quaestiones* amounts to six – and since each *quaestio* includes four articles, the overall number of articles is 24.

Aquinas’ *Commentary on the Metaphysics* is a later work, probably composed between 1270 and 1272¹²⁹. Unlike the *Super De Trinitate*, the *Commentary on the Metaphysics* is a simple literal commentary upon the Aristotelian text: Aquinas comments on the first twelve books of the *Metaphysics* (in other words, he does not comment upon M and N) employing, as a basis, the Latin translation of the *Metaphysics* revised by William of Moerbeke¹³⁰; the commentary on each book is divided into *lectiones*. As in the other commentaries, Aquinas introduces his work with a preface; in

¹²⁸ For a detailed discussion, see [Porro 2012], pp. 124-127. For a general analysis of the work, see [Hall 1992].

¹²⁹ In Paris and – perhaps – in Naples. See [Porro 2012], p. 371. For a general introduction to the work, see [Doig 1972], [Wippel 2007c].

¹³⁰ Aquinas also makes use of other translations; on some occasions, he explicitly mentions different translations of the same passage. See [Doig 1972].

the preface he clarifies the nature of metaphysics, namely of the science expounded in the work he is going to comment upon.

For present purposes, the “basic texts” to analyse Aquinas’ conception of metaphysics will be the following:

- *Super De Trinitate*, q. 5
 - q. 5 a. 1: “utrum sit conveniens divisio qua dividitur speculativa in has tres partes: naturalem, mathematicam, et divinam”;
 - q. 5 a. 4: “utrum divina scientia sit de his quae sunt sine materia et motu”;
- *In Metaph.*, prooemium

Super De Trinitate qq. 5-6 are the *quaestiones* concerning Boethius’ *De Trinitate* c. 2. In this chapter, Boethius states a tripartition of theoretical philosophy (*naturalis, mathematica, theologia*) and characterises the three philosophical sciences with the different methods they should follow (*rationabiliter, disciplinaliter, intellectualiter*). After the “literal commentary” of Boethius’ chapter, Aquinas deals with the tripartition of sciences in q. 5 and with the methods of sciences in q. 6. Q. 5 a. 1 has a broad scope, concerning the actual division of theoretical philosophy; the other three articles of q. 5 (namely aa. 2-4) deal with physics, mathematics, and *scientia divina* respectively. Q. 5 a. 4 will therefore be one of our main pieces of evidence for Aquinas’ conception of metaphysics. Q. 6 aa. 1-4 add interesting details on Aquinas’ conception of the three theoretical sciences in general, and of metaphysics in particular, some of which will be also taken into consideration. Finally, a separate analysis will be devoted to q. 5 a. 3, which I have not counted among the “basic texts” for Aquinas’ conception of metaphysics. This article concerns mathematics; yet part of the scholarship has maintained, as mentioned above, that it contains fundamental information on Aquinas’ conception of the possibility itself of metaphysics. In any case, q. 5 a. 3 is undoubtedly a most interesting as well as complex text which deserves close scrutiny.

I - The system of theoretical sciences

1. The division of sciences and its sources: Aristotle, Boethius, Avicenna

The ultimate source for the divisions of theoretical philosophy we are going to take into consideration is Aristotle's *Metaphysics* E 1. It is, of course, well beyond the scope of the present section to reconstruct the history of the division of philosophy from Aristotle to Albert and Thomas, going through Greek, Arabic, and Latin tradition. Rather, my aim here is simply to expound Albert's and Thomas' divisions of theoretical philosophy, and to highlight their immediate dependence on Avicenna. In so doing, I shall also take into consideration Boethius' *De Trinitate* c. 2, for this is the text which Aquinas is commenting upon while providing his own division of philosophy in *Super De Trinitate* q. 5 a. 1. I shall consider briefly Aristotle's and Boethius' texts first, moving then to Aquinas and Albert.

Aristotle and Boethius

The Aristotelian passage which is most relevant for present purposes is *Metaph.* E 1 1026a13-16:

ἡ μὲν γὰρ φυσικὴ περὶ χωριστὰ μὲν ἀλλ' οὐκ ἀκίνητα, τῆς δὲ μαθηματικῆς ἕνια περὶ ἀκίνητα μὲν οὐ χωριστὰ δὲ ἴσως ἀλλ' ὡς ἐν ὕλη· ἡ δὲ πρώτη καὶ περὶ χωριστὰ καὶ ἀκίνητα.

[*Translatio media*] Physica namque circa separabilia quidem sed non immobilia, et mathematica quedam circa immobilia quidem sed inseparabilia forsan, verum quasi in materia; prima vero et circa separabilia et immobilia.

[*Translatio moerbekana*] Physica namque circa inseparabilia quidem sed non immobilia, mathematice autem quedam circa immobilia quidem sed inseparabilia forsan, verum quasi in materia; prima vero circa separabilia et immobilia.

The adjective *χωριστά* in the characterisation of the objects of physics is actually a conjecture by Schwegler, whereas all the Greek manuscripts have the reading *ἀχώριστα*, i. e. “inseparable”. Taking Schwegler's conjecture for good, then “separation” in this text would mean separation in existence (rather than separation from matter), namely the kind of independent existence which distinguishes substances from accidents.

The Latin translations commented by Albert (*media*) and Thomas (*moerbekana*) follow the reading *χωριστά* and *ἀχώριστα*, respectively. Accordingly, Aristotle's possible reference to a distinction between substances and accidents is lost in part of the Latin tradition: once the objects of physics are described as *inseparabilia*, Aristotle's text is easily read as implying a distinction between what is and what is not *separated from matter*¹³¹. Even Albert, however, who employed the *translatio*

¹³¹ Cf. [Zimmermann 1998], pp. 134-135. Zimmermann, however, refers to the Latin tradition in general, pointing to the presence of *inseparabilia* in the description of the objects of physics. As we have seen, this is not correct as far as the *translatio media* is concerned. Having said this, Zimmermann is certainly right in maintaining that Latin commentators

media as a basis for his *Metaphysica*, did not interpret the text as implying a distinction between substances and accidents:

Physica namque est quidem circa separabilia, sicut universale separatur a particulari, sed non est circa immobilia, eo quod in ratione diffinitiva concipit materiam determinatam principiis motus. Quaedam autem mathematica est quidem circa immobilia, sed tamen forsitan est circa ea quae secundum esse sunt inseparabilia a mobili materia, sed est circa ea quae secundum esse quasi sunt in materia sensibili. Prima vero philosophia, quae ab utrisque diversa est, et circa immobilia simpliciter est et circa simpliciter separabilia¹³².

In order to make sense of the passage, Albert suggests that Aristotle must be resorting to different meanings of separation. Mathematics deals with what is not separable “*secundum esse*”; metaphysics with what is separable “*simpliciter*”; physics deals with what is separable, meaning that it concerns in any case what is universal, which is in some sense “separated from the particular”.

Let us now compare Aristotle’s text with Boethius’ *De Trinitate* c. 2:

Arist., *Metaph.* E 1

[1] ἡ μὲν γὰρ φυσικὴ περὶ χωριστὰ μὲν ἀλλ’ οὐκ ἀκίνητα, [2] τῆς δὲ μαθηματικῆς ἕνια περὶ ἀκίνητα μὲν οὐ χωριστὰ δὲ ἴσως ἀλλ’ ὡς ἐν ὕλῃ· [3] ἡ δὲ πρώτη καὶ περὶ χωριστὰ καὶ ἀκίνητα.

[...] ὥστε τρεῖς ἂν εἶεν φιλοσοφίαι θεωρητικά, μαθηματική, φυσική, θεολογική (οὐ γὰρ ἄδηλον ὅτι εἶ που τὸ θεῖον ὑπάρχει, ἐν τῇ τοιαύτῃ φύσει ὑπάρχει)

Boethius, *De Trinitate* c. 2

Nam cum tres sint speculativae partis, [1] naturalis: in motu inabstracta ἀνυπεξάιρετος. Considerat enim corporum formas cum materia, quae a corporibus actu separari non possunt. Quae corpora in motu sunt ut cum terra deorsum ignis sursum fertur, habetque motum forma materiae coniuncta – [2] mathematica: sine motu inabstracta. Haec enim formas corporum speculatur sine materia ac per hoc sine motu, quae formae cum in materia sint, ab his separari non possunt – [3] theologia: sine motu abstracta atque separabilis. Nam dei substantia et materia et motu caret [...]

[1] Boethius characterises physics as “*in motu inabstracta ἀνυπεξάιρετος*”. The term *inabstracta* would correspond to the Greek ἀχώριστα and refers to conjunction with matter. The term ἀνυπεξάιρετος does not seem to be justified in isolation from *inabstracta* – it is possibly just meant to corroborate the latter (like “*abstracta atque separabilis*” in [3] seems to be just a hendiadys)¹³³.

[2] Mathematics is said to be “*sine motu inabstracta*”. Again, *inabstracta* refers to conjunction with matter.

[3] The third science is characterised as “*sine motu abstracta atque separabilis*”. Aristotle had called the third science of his tripartition “first [philosophy]” and, later on, “theology”, justifying the latter name by claiming that, if the divine exists, it is separated and immobile. Boethius, on the other hand, calls the third science “theology” from the beginning, employing the same justification: God’s substance lacks matter and motion. In the subsequent portion of Aristotle’s *Metaph.* E 1, theology is

do not see a distinction between substances and accidents in the text: even Albert, who employs the *translation media*, does not.

¹³² *Metaphysica*, L. VI t. 1 c. 2, p. 305 ll. 9-18.

¹³³ Cf. [Porro 2007a], p. 470.

further identified with the universal science; by contrast, no hint at an “ontological perspective” is found in Boethius¹³⁴.

For present purposes, it is interesting to notice how Boethius introduces a distinction between two levels at which matter turns out to be relevant to the division of sciences. First, the objects of the theoretical sciences can be separated or not in act from matter: it seems that Boethius expresses this alternative by means of the pair *abstracta/inabstracta*. Second, they can be investigated with or without matter by a given science: it seems that Boethius expresses this alternative by means of the pair *in motu/sine motu*¹³⁵. This “double level of materiality” is relevant in particular to distinguish mathematics from physics. Both sciences are *inabstractae*, for they investigate forms which are joined with matter. Yet mathematics, unlike physics, is *sine motu*, for it investigates without matter the forms of bodies.

To sum up, in stating his tripartition of theoretical philosophy Boethius draws a distinction between the way in which things exist (they can be in matter or not) and the way in which things are investigated (they can be considered with matter or not). Latin authors could already find in Boethius a double level of relation with matter of the objects of scientific enquiry: in being, on one hand, and in consideration, on the other. Any further specification is absent in Boethius: for example, there is no explanation of the possibility of considering material objects without matter.

One last point is worth making about Boethius’ account. Strangely enough, he refers the qualifications *abstracta/inabstracta* and *sine motu/in motu* to the sciences themselves, rather than to their objects. This is a peculiarity of Boethius’ exposition which may help in outlining its reception.

It is now time to analyse Albert’s and Thomas’ divisions of sciences. We shall begin with Thomas; yet before analysing his own division of sciences in *Super De Trinitate* q. 5 a. 1, it is interesting to highlight some aspects of his literal commentary on *De Trinitate* c. 2.

¹³⁴ Cf. [Porro 2007a], p. 470. In addition to this, one could also notice an ambiguity concerning the nature of the *theologia* in Boethius’ text: on one hand, it is included in a list of philosophical sciences; on the other, it is allegedly the science in which the trinitarian doctrine should be investigated. [McInerny 1990], pp. 128-130, states that, even though Boethius never draws a distinction between two kinds of theology, the grounds for this distinction can be found in the methods followed in his works. In this respect, while *De ebdomadibus* would not be based on Christian faith specifically, *De Trinitate* and other works would be. As we are going to see, Aquinas will entirely remove the ambiguity concerning the nature of *theologia* by explicitly drawing a distinction between two kinds of *scientia divina* in *Super De Trinitate* q. 5 a. 4.

¹³⁵ Cf. [McInerny 1990], pp. 124-128, for the meanings of the terms employed by Boethius, and also for observations on the Aristotelian and Neoplatonic aspects of the text. See more generally [McInerny 1990], ch. 4, for the claim that the tripartition of science in *De Trinitate* c. 2, unlike the one found in Boethius’ commentary on the *Isagoge*, is based both on an ontological distinction between different objects and on the different ways in which these objects are considered.

Two aspects of Aquinas' literal exposition of Boethius' text are noteworthy. In order to see them, it will be sufficient to quote a small portion of the text, where Aquinas comments on Boethius' remarks on the third science:

Deinde ostendit de quibus sit tertia, scilicet divina: Theologia, id est tertia pars speculative, que dicitur divina, vel metaphisica, vel philosophia prima, est sine motu, in quo convenit cum mathematica et differt a naturali; abstracta, scilicet a materia, atque inseparabilis, per que duo differt a mathematica: res enim divine sunt secundum esse abstracte a materia et motu, set mathematice inabstracte, sunt autem consideratione consideratione separabiles, set res divine inseparabiles, quia nichil est separabile nisi quod est conciuinctum; unde res < divine > non sunt secundum considerationem separabiles a materia, set secundum esse abstracte, res vero mathematice e contrario. Et hoc probat per Dei substantiam, de qua scientia divina considerat principaliter, unde et inde nominatur¹³⁶.

First, Aquinas develops Boethius' distinction between the materiality of the objects of science (*abstracta/inabstracta*) and the materiality of their consideration (*sine motu/in motu*) into a distinction between what is separable/abstracted or not *secundum esse* and *secundum speculationem*, respectively. The objects of mathematics are separable in the latter sense, but not in the former. By contrast, Aquinas claims, the objects of the divine science are abstracted *secundum esse*, but not separable *secundum speculationem*¹³⁷. This most peculiar statement – which will leave no trace in the *quaestiones* – is due to an error in the text of *De Trinitate* c. 2 actually read by Aquinas, where *separabilis* in the characterisation of *theologia* is replaced by the reading *inseparabilis*.

Second, it seems that Aquinas tries to overcome Boethius' strictly theological conception of the last science. To begin with, he lists other names for this science in addition to Boethius' "*theologia*". Moreover, it is possible that, in suggesting that Boethius' reference to "God's substance" is a reference to *the main object* of enquiry of the science, Aquinas is actually underscoring the fact that God is *not its only object* of enquiry.

To sum up, Aquinas highlights the double dependence on matter (*secundum esse, secundum speculationem*) which the objects of sciences may have or not, developing an idea he could in fact find in Boethius' text itself. On the other hand, he modifies Boethius' understanding of the third speculative science. These two operations, which he carries out in the literal commentary, allow him to base his division of sciences in q. 5 a. 1 on another model, namely Avicenna's.

¹³⁶ *Super De Trinitate, c. 2.*

¹³⁷ As observed in [Porro 2007a], pp. 470-471, in the literal exposition Aquinas applies the term "abstracted" to indicate the relation of objects with matter *secundum esse* and the term "separable" to indicate the relation of objects with matter *secundum considerationem*; strangely enough, abstraction and separation are somehow used in the opposite way in *Super De Trinitate* q. 5 a. 3. In any case, it must also be noticed that in the literal commentary Aquinas is not strict with terminology: he also employs the term "separable" to refer both to immateriality *secundum esse* and *secundum considerationem*. *Super De Trinitate, c. 2*: "[...] et sic secundum speculationem sunt separabiles, non secundum esse".

Aquinas' division of sciences in Super De Trinitate q. 5 a. 1

Super De Trinitate q. 5 a. 1 is meant to ascertain whether Boethius' division of philosophy is appropriate. Most of the arguments *quod non* either propose alternative divisions or suggest that some discipline should be removed from or added to Boethius' tripartition. In his *solutio*, Aquinas intends to show that Boethius' division is correct on the basis of a criterion which would make sure that the theoretical sciences are all and only the three mentioned in *De Trinitate* c. 2. In employing this criterion, as we shall see, Aquinas has recourse to Avicenna's division of philosophy. In particular, I believe that a comparison of the texts reveals the dependence of q. 5 a. 1 on Avicenna's *Logica* I 1, namely the Latin translation of *Madḥal* I 2¹³⁸.

Aquinas' *solutio* may be divided into three parts. In the first part, he draws a distinction between theoretical and practical philosophy; in the third part, he divides theoretical philosophy into its three parts. Both these parts seem to depend on Avicenna. The second part is Aquinas' original addition to the Avicennian framework, having the task of providing a justification for the criterion according to which theoretical sciences would be divided in the third part.

[1] In the first part, Aquinas draws a distinction between theoretical and practical intellect. Aristotle is quoted in support of the distinction. Avicenna is not, but Aquinas' text resembles closely Avicenna's *Logica* I 1 and *Philosophia prima* I 1:

Super De Trinitate q. 5 a. 1

Dicendum, quod theoreticus sive speculativus intellectus in hoc proprie ab operativo sive pratico distinguitur, quod **speculativus habet pro fine veritatem quam considerat, practicus vero veritatem consideratam ordinat in operationem tamquam in finem**; et ideo dicit Philosophus in III De anima quod differunt ad invicem fine, et in II Metaphisicae dicitur quod finis speculative est veritas, set finis operative scientie est actio. Cum ergo oporteat materiam fini esse proportionatam, oportet practicarum scientiarum materiam esse **res illas que a nostro opere fieri possunt**, ut sic earum cognitio in operationem quasi in finem ordinari possit; speculativarum vero scientiarum materiam oportet esse **res que a nostro opere non fiunt**, unde earum consideratio in operationem ordinari non potest sicut in finem.

Logica I 1

Res autem quae sunt aut **habent esse non ex nostro arbitrio vel opere**, aut **habent esse ex nostro arbitrio et opere**. Cognitio autem rerum primi membri vocatur philosophia speculativa, sed cognitio rerum secundi membri vocatur philosophia activa. Finis vero philosophiae speculativae non est nisi **perfectio animae ut sciat tantum**. Finis vero practicae est non ut sciat tantum, sed **ut sciat quod debet agere et agat**.

Philosophia prima I 1

Incipiamus ergo, auxiliante Deo, et dicamus quod scientiae philosophicae, sicut iam innuimus in aliis libris, dividuntur in speculativas et activas, et iam innuimus differentiam inter eas. Et diximus quod speculativae sunt illae in quibus quaerit **perfecti virtus animae speculativa** per acquisitionem intelligentiae in effectu, scilicet per adeptionem scientiae imaginativae et creditivae **de rebus quae non sunt nostra opera nec nostrae dispositiones**. In his ergo finis est certitudo sententiae et opinionis: sententia enim et opinio non sunt ex qualitate nostri operis nec ex qualitate initii nostri operis secundum quod est initium operis. Practicae vero sunt illae in quibus primum quaerit **perfecti virtus animae speculativa** per adeptionem scientiae imaginativae et creditivae **de rebus quae sunt nostra opera**, ad hoc **ut secundo proveniat perfectio virtutis practicae in moribus**.

¹³⁸ *Madḥal* I 1 is omitted in the Latin translation.

Both Aquinas and Avicenna distinguish theoretical from practical philosophy on the basis of both their objects of enquiry and their goals. Aquinas' distinction is based primarily on the difference of goals (the difference of objects is inferred as a corollary); Avicenna's distinction, at least in *Logica* I 2, seems to be based primarily on the objects. Apart from this, there are close similarities between the two authors. The objects of theoretical and practical philosophy are described in basically the same terms. As for their goals, it is interesting that neither Aquinas nor Avicenna simply opposes knowledge/truth to action: the goal of practical philosophy, like the goal of theoretical philosophy, is knowledge; however, unlike theoretical philosophy, practical philosophy has in turn a further goal, namely action.

[2] In the second part of his *solutio*, Aquinas tries to justify the criterion on the basis of which theoretical sciences will be distinguished in the third part. His starting-point is the conception of a science as a *habitus* of the intellect¹³⁹, and the assumption that sometimes *habitus* are distinguished by means of their *obiecta*¹⁴⁰. The introduction of the term *obiectum* is relevant, for it does not refer strictly speaking to all that falls within the scope of a given *habitus*. Rather, the *obiectum* is some one thing, in virtue of which an *habitus* refers to everything to which it refers¹⁴¹. Colour, for example, is the *obiectum* of sight, for things can be seen only inasmuch as they are coloured. The same thing can also fall within the scope of different *habitus* in virtue of different *obiecta*. In our case, the same thing can fall within the consideration of different sciences¹⁴². The division of sciences cannot thus be based on a division of *res*; it must presuppose a division of *obiecta*¹⁴³. The *obiecta* of the theoretical (speculative) faculty are called *speculabilia*.

Now, the main point of this second part of Aquinas' *solutio* is to individuate a non-arbitrary criterion for the division of *speculabilia*. Concretely, Aquinas intends to justify the fact that, later on, sciences will be divided according to the different relations of their *obiecta* to matter and motion¹⁴⁴. In order to do so, he notices that the divisions of *habitus* must derive from the differences of *obiecta*

¹³⁹ See [Zimmermann 1998], pp. 127-130, for Aristotle's conception of science as ἐπιστήμη as a source for the medieval debate on the subject of metaphysics. As Zimmermann observes, the problem of identifying the subject of a given science turns out to be a particular case of the general problem of identifying the *obiectum* of a given *habitus*. For Aquinas in particular, see [Zimmermann 1998], pp. 201-207.

¹⁴⁰ Aquinas deals with this topic in detail in other places. Since *habitus* are referred *ad aliquid*, Aquinas claims, one of the ways to distinguish them is by means of their correlatives, namely their *obiecta*. This is not the only way, though. In *Summa theologiae* I-II q. 54 a. 2 Aquinas lists three ways to distinguish *habitus*. For example, they can be distinguished by means of the faculties to which they belong. However, as observed in [Zimmermann 1998], p. 203, such kind of distinction could not be applied between *habitus* belonging to the same faculty.

¹⁴¹ See *Summa theologiae* I-II q. 54 a. 4.

¹⁴² Cf. [Zimmermann 1998], p. 203: the distinction based on *obiecta* is not strictly speaking *material*, but *formal*, for it takes into consideration the point of view from which things are investigated by a given science. For the same reasons Aquinas denies that particular sciences are parts of metaphysics in *Super De Trinitate* q. 5 a. 1 ad 6; cf. [Wipperl 2000], p. 10.

¹⁴³ As observed in [Porro 2007a], pp. 472-475, it is telling that Aquinas employs the term *obiecta* after having spoken of *res* in distinguishing theoretical from practical philosophy.

¹⁴⁴ This would allow him to answer objections such as *Super De Trinitate* q. 5 a. 1 arg 8, claiming that some divisions of beings are more essential than the divisions into mobile/immobile and abstracted/non-abstracted.

qua obiecta: for example, the division of senses does not derive from any difference in sensible things, but only from the differences *per se* of sensible things *qua* sensible¹⁴⁵. It remains to identify the differences *per se* of *speculabilia qua speculabilia*. Aquinas argues that they are exactly the relation with matter and motion, for immateriality would compete to the *speculabile* inasmuch as it is the object of the intellect (*potentia*), while necessity, and thus immobility, would belong to it inasmuch as it is the object of science (*habitus*).

Even though Aquinas does not make it explicit, he takes the two features of immateriality and immobility to entail each other. Accordingly, his division of science will be based on one single criterion, namely the different grade of materiality and mobility of the *speculabilia*.

[3] In the third part of his *solutio*, Aquinas moves to a division of the *speculabilia*. First, they are divided into two classes: some of them depend on matter *secundum esse*, others do not. The first class is in turn divided into two sub-classes: some depend on matter *secundum intellectum*, others do not. By contrast, the second class cannot be further divided in this way, for what does not depend on matter *secundum esse* cannot depend on matter *secundum intellectum*. Therefore the division of *speculabilia* into three classes, and thus the tripartition of sciences, is exhaustive:

<i>Speculabilia</i>	a) Dependent on matter <i>secundum esse</i>	aa) Dependent on matter <i>secundum intellectum</i>	<i>Physica</i>
		ab) Not dependent on matter <i>secundum intellectum</i>	<i>Mathematica</i>
	b) Not dependent on matter <i>secundum esse</i>		<i>Metaphysica</i>

As already said, Avicenna's *Logica I 1* seems to be the main source of Aquinas' account:

Super De Trinitate q. 5 a. 1

Quedam ergo speculabilium sunt que dependent a materia secundum esse, quia non nisi in materia esse possunt. Et hec distinguuntur; [aa] quia quaedam dependent a materia secundum esse et intellectum, sicut illa in quorum diffinitione ponitur materia sensibilis [...] Quedam vero sunt, [ab] que quamvis dependeant a materia secundum esse, non tamen secundum intellectum, quia in eorum diffinitionibus non ponitur materia sensibilis [...] Quedam vero speculabilia sunt [b] que non dependent a materia secundum esse, quia sine materia esse possunt [...] Non est autem possibile quod sint aliquae res que secundum intellectum dependeant a materia et non secundum esse, quia intellectus quantum est de se immaterialis est: et ideo non est quartum genus philosophie preter predicta.

Logica I 1

Ergo partes scientiarum sunt aut speculatio de concipiendo ea quae sunt **secundum hoc quod habent in motu esse et existentiam et pendent ex materiis propriarum specierum**; aut speculatio **secundum quod sunt separatae a motu et materia in intellectu, non in esse**; aut speculatio **secundum quod sunt separatae ab hiis in esse et in intellectu**. Prima autem pars divisionis est scientia naturalis. Secunda est disciplinalis pura et scientia de numero, sed illa quae est notior: nam cognitio de natura numeri ex hoc quod est numerus non pertinet ad disciplinalem. Pars vero tertia est scientia divina. Postquam autem ea quae sunt naturaliter sunt hiis tribus modis, tunc scientiae philosophicae et speculativae sunt istae.

¹⁴⁵ "Animal" and "plant" may be differences *per se* of sensible things *qua* living; they are not differences *per se* of sensible things *qua* sensible. *Super De Trinitate* q. 5 a. 1: "Sciendum tamen quod quando habitus vel potentie penes obiecta distinguuntur, non distinguuntur penes quaslibet differentias obiectorum, set penes illas que sunt per se obiectorum in quantum sunt obiecta: esse enim animal vel plantam accidit sensibili in quantum est sensibile, et ideo penes hoc non sumitur distinctio sensuum, set magis penes differentiam coloris et soni; et ideo oportet scientias speculativas dividi per differentias speculabilium in quantum speculabilia sunt"

The similarities between Avicenna’s and Aquinas’ accounts are actually stronger than what appears from the texts above. The systematic division of *obiecta* which is found in Aquinas’ text actually depends on – and is somehow a simplification of – a more complex division of beings in *Logica* I 1, which is preliminary to the division of sciences quoted above. Without going into the details of Avicenna’s division of beings, which – despite several differences – is ultimately equivalent to Aquinas’ division of *obiecta*, it will be sufficient to focus on his description of immaterial things. Avicenna distinguishes two classes of immaterial things: things which necessarily exist without matter, on one hand, and things which can be without matter, on the other. Aquinas does the same, distinguishing two kinds of *obiecta* which do not depend on matter, namely (b)¹⁴⁶:

Super De Trinitate q. 5 a. 1

[b] Quedam vero speculabilia non dependent a materia secundum esse, quia sine materia esse possunt, [b1] sive numquam sint in materia, sicut Deus et angelus, [b2] sive in quibusdam sint in materia et in quibusdam non, ut substantia, qualitas, ens, potentia, actus, unum et multa, et huiusmodi [...]

Logica I 1

Rerum ergo quae possunt denudari a motu veritas, aut est veritas necessaria – ut Deus et intelligentia – aut veritas earum non est veritas necessaria, sed sunt sic quod non est hoc eis impossibile, sicut est dispositio idemptitatis et unitatis et causalitatis et numeri qui est multitudo.

To sum up, in *Super De Trinitate* q. 5 a. 1 Aquinas argues that the tripartition of theoretical philosophy into physics, mathematics, and *theologia* – which is here identified with metaphysics – is appropriate. To this end, he provides a systematic division of philosophy which would make clear that theoretical sciences are all and only the three just mentioned. The first part of Aquinas’ *solutio*, namely the division of philosophy into theoretical and practical and the corresponding division of *res*, heavily depends on Avicenna’s *Logica* I 1 or *Philosophia prima* I 1. The third part of Aquinas’ *solutio*, namely the tripartition of theoretical philosophy and the corresponding division of *obiecta*, definitely depends on *Logica* I 1. The second part of the *solutio*, on the other hand, has no antecedent either in Avicenna or – to my knowledge – in other authors. It is intended to make sure that the “Avicennian” tripartition of theoretical philosophy is not arbitrary by arguing that theoretical sciences must indeed be distinguished in virtue of the grade of materiality of their *obiecta*.

In addition to this, Aquinas’ *solutio* also elaborates on Avicenna’s account in other respects. First of all, Aquinas reformulates the tripartition of sciences by means of his technical notion of *obiectum*. Second, the complex Avicennian division of things – which ultimately resulted in any case

¹⁴⁶ The claim in [Porro 2007a], p. 477, according to which Avicenna does not present us with a sharp dichotomy of immaterial realities – as Aquinas does – is certainly correct, if we take into consideration Avicenna’s classification of metaphysical realities in *Philosophia prima* I 2. By contrast, Aquinas’ dichotomy immediately depends on Avicenna’s *Logica* I 1.

in a tripartition of sciences – is simplified by Aquinas in a tripartition of *obiecta*¹⁴⁷. Third, there are slight modifications concerning the descriptions of physical and mathematical objects. For example, the *speculabilia* (aa) are described as the ones whose definition includes sensible matter; by contrast, *speculabilia* (ab) do not include sensible matter in their definitions. The specification “sensible” is essential for Aquinas, while it is extraneous to Avicenna, who employs expressions which seem to refer to the matter characterising a given species (“*materia propria*”, “*ex materiis propriarum specierum*”). Aquinas’ introduction of “sensible matter” traces back to an interpretation of Aristotle’s distinction between sensible and intelligible matter to which we shall return shortly, taking into consideration also Albert’s account.

Albert’s division of sciences in Physica 1.1.1 and Metaphysica 1.1.1

In the first chapter of his *Physica*, after stating his goal and the method he would follow, Albert lists the three parts of theoretical philosophy¹⁴⁸:

Cum autem tres sint partes essentialis philosophiae realis, quae, inquam, philosophia non causatur in nobis ab opere nostro, sicut causatur scientia moralis, sed potius ipsa causatur ab opere naturae in nobis, quae partes sunt naturalis sive physica et metaphysica et mathematica, nostra intentio est omnes dictas partes facere Latinis intelligibiles. Inter partes vero illas prima quidem secundum ordinem rei est, quae est universalis de ente secundum quod ens, quod non concipitur cum motu et materia sensibili secundum se et secundum sua principia nec secundum esse nec secundum rationem. Et haec est philosophia prima, quae dicitur metaphysica vel theologia. Secunda autem in eodem ordine rei est mathematica, quae quidem concipitur cum motu et materia sensibili secundum esse, sed non secundum rationem. Ultima autem est physica, quae tota secundum esse et rationem concipitur cum motu et materia sensibili¹⁴⁹.

In its structure, the passage is similar to Avicenna’s and Aquinas’ divisions of sciences: Albert mentions the difference between theoretical and practical philosophy and then moves to a list of the theoretical sciences. Theoretical and practical philosophy are named *philosophia realis* and *scientia moralis*, respectively; the latter depends on “our action”, while the former does not¹⁵⁰. The three theoretical sciences are distinguished in virtue of a double relation with matter, *secundum esse* and *secundum rationem*.

Both Boethian and Avicennian traits are detectable in Albert’s text. The reference to the *partes* of theoretical philosophy recalls *De Trinitate* c. 2 (“*nam cum tres sint speculativae partes*”). The same is true of the fact that, in the two cases of mathematics and physics, Albert qualifies the sciences themselves, rather than their objects, with a level of materiality (“*quae concipitur*”): in Boethius’ account, the terms *inabstracta/abstracta* and *in motu/sine motu* qualify the sciences. On the other

¹⁴⁷ In this respect, I believe that an important aspect of Aquinas’ account is that he formulates his division in terms of *dependence on/independence from* matter (rather than simple existence with or without matter), which gives a modal strength to the division from the beginning.

¹⁴⁸ For a commentary on the division of sciences in *Physica* 1.1.1, see also [Bertolacci 2001].

¹⁴⁹ *Physica* 1.1.1, p. 1 ll. 43-60.

¹⁵⁰ The expressions employed by Albert to distinguish theoretical and practical philosophy are peculiar (*causatur / non causatur ab opere nostro*), but ultimately must mean that the existence of practical philosophy depends on human actions, which it investigates, while the existence of theoretical philosophy does not.

hand, in addition to some terminological choices (“*ab opere nostro*”), the double level of materiality *secundum esse* and *secundum rationem* can be traced back to the Avicennian background, corresponding to the couple *in esse/in intellectu*. As also Aquinas does in *Super De Trinitate* q. 5 a. 1, Albert qualifies the relevant kind of matter in the division of sciences as *sensible* matter.

The different levels of materiality characterising the three sciences are explained at length in the continuation of the chapter. As an example of metaphysical object, Albert takes into consideration substance, arguing that sensible or mobile things do not enter either the definition or the *esse* of substance (i. e. substance is not sensible/mobile either *secundum rationem* or *secundum esse*, respectively). Otherwise, he continues, all substances would be sensible, which is not true. A comparison with Avicenna is in order:

Physica 1.1.1

Si quis enim diffinire velit substantiam in eo quod substantia et esse eius considerare voluerit, nihil sensibilium vel mobilium ingreditur in esse et rationem suam, quia si talia in esse substantiae et rationem ingrederentur, oporteret, quod essent de esse et ratione omnis substantiae, et hoc patet non esse verum, cum nihil horum conveniat substantiis separatis.

Philosophia prima I 1

Manifestum est enim quod esse substantiae, in quantum est substantia tantum, non pendet ex materia; alioquin non esset substantia nisi sensibilis.

A similar argument is employed to show that mathematical objects cannot include sensible matter in their definition – said otherwise, that they are not “conceived” with sensible matter *secundum rationem*. Were the circle, for example, defined as wooden, golden, and so on, then wooden and golden circles would be equivocal, for they would have different definitions. Since this is not the case, sensible matter cannot be included in the definition of the circle. On the other hand, no circle can exist apart from sensible bodies: they are “conceived” with sensible matter *secundum esse*. All mathematical objects behave just like the circle: sensible matter does not enter their definition, but they cannot exist except in sensible matter¹⁵¹. In this respect, they are different from metaphysical objects, whose *esse* is entirely prior to sensible bodies¹⁵².

Finally, physical objects are conceived with sensible matter both *secundum esse* and *secundum rationem*: they exist in sensible matter, which also enters their definition. Since sensible matter is subject to motion, the latter also falls within the definition of physical realities: for example, circular motion enters the definition of the heavens¹⁵³.

The division of the three theoretical sciences is recalled by Albert at the beginning of his *Metaphysica*:

¹⁵¹ See *Physica* 1.1.1, p. 1 l. 67 – p. 2 l. 24.

¹⁵² See *Physica* 1.1.1, p. 2 ll. 24-31.

¹⁵³ See *Physica* 1.1.1, p. 2 ll. 31-43.

Naturalibus et doctrinalibus iam, quantum licuit, scientiis elucidatis, iam ad veram philosophiae sapientiam accedimus, quae sic perficit intellectum, secundum quod ut divinum quiddam existit in nobis, sicut naturalis scientia perficit eundem, prout est cum tempore, et quemadmodum perfectus est a doctrinalibus, in quantum ad continuum inclinatur. Omnino enim necesse est perfici intellectum speculativum secundum omnem rationem formae speculatae, circa quam verum speculatur. Constat autem ex his quae subtiliter in naturis considerata sunt, omnem diffinitivam rationem formarum physicarum conceptam esse cum materia, quae motui subiacet aut mutationi aut utrique. Et ideo concipi oportet eam cum tempore, secundum quod tempus est in re temporali. [...] Ex his autem quae in quadruvio bene probata sunt, scitur omnes scientias doctrinales medium suae demonstrationis accipere rationem diffinitivam formae, quae licet esse habeat in physicis et extra physica non inveniatur, tamen rationem diffinitivam non habet conceptam cum materia physica neque secundum principia essentialia dependet ad physicam materiam, sed extra eam accipit principia essentiae. [...] Haec autem speculatio est rerum altissimarum divinarum, quae sunt esse simplicis differentiae et passiones praeter conceptionem cum continuo et tempore [...] ¹⁵⁴

The criterion behind the division of sciences in *Physica* 1.1.1 is detectable also in *Metaphysica* 1.1.1. In this case, the relevant relations with matter are definitely ascribed to the objects of the sciences (*forma speculata*), rather than to the sciences themselves. Physical forms include matter in their definition. Mathematical forms do not include matter in their definition, even though they do not exist except in physical things, and thus in conjunction with matter. Again, the double level of materiality, corresponding to the pair *ratio (diffinitiva) / esse*, is the ground for the distinction between physics and mathematics.

As for metaphysical realities, in *Metaphysica* 1.1.1 Albert does not actually highlight their immateriality *secundum esse*, which distinguishes them both from physical and from mathematical objects. Rather, he points to the fact that metaphysical objects are not conceived with continuum and time. Being not conceived with time, they are different from physical objects – which are conceived with time: “*et ideo concipi oportet eam cum tempore*”. On the other hand, Albert does not explicitly say that mathematical objects are conceived with continuum, even though he points to a connection between the continuum and mathematics: “*perfectus est a doctrinalibus, in quantum ad continuum inclinatur*”. Accordingly, we can assume that, in not being conceived with continuum, metaphysical objects are distinguished from mathematical ones.

As a matter of fact, Albert often refers to the objects of the three theoretical sciences as *temporalia*, *continua*, and *divina*. In the passage quoted, Albert also connects these characterisations of the objects of sciences with the necessity to learn all the three theoretical sciences in order to bring the theoretical intellect to its full perfection. The intellect exists with time, is inclined to the continuum, and is something divine: accordingly, it must be perfected by physics, mathematics, and metaphysics, respectively.

To sum up, Albert basically follows an Avicennian scheme in the division of sciences, opting for a recourse to a double level of materiality, *secundum esse* and *secundum rationem*. Mathematical

¹⁵⁴ *Metaphysica* 1.1.1, p. 1 l. 9 – p. 2 l. 18.

objects are distinguished from physical objects because the former are not material *secundum rationem*; they are distinguished from metaphysical objects because they are material *secundum esse*.

In this division of sciences, the pair *esse / ratio* is essential, as it was essential in Aquinas' division of sciences in *Super De Trinitate* q. 5 a. 1. Taking into consideration the *ratio* only, one could not distinguish mathematics from metaphysics. Taking into consideration the *esse* only, one could not distinguish mathematics from physics.

Having said this, in Albert's *Metaphysica* 1.1.1 another way of distinguishing metaphysics from mathematics is detectable, which does not directly resort to the material *esse* of mathematical objects: "divine things" appear to be different from mathematical objects because the former are *praeter conceptionem continui*. As a matter of fact, it is possible to outline a general picture, valid for both Albert and Thomas, in which this statement is fully understandable.

2. An alternative division of sciences

Albert's and Thomas' "official" divisions of sciences, which have been considered so far, may be deemed "Avicennian" inasmuch as they follow Avicenna's *Logica* I 1 in its essentials. In particular, the three theoretical sciences are distinguished according to the relations of their objects with matter *secundum esse*, on one hand, and *secundum rationem/intellectum*, on the other. Both Albert and Thomas introduce the qualification "sensible" to characterise the matter at stake.

Besides these official divisions of sciences, an alternative way to draw a distinction between physics, mathematics, and metaphysics is detectable both in Albert's and in Thomas' works. According to the alternative strategy, the objects of the three sciences are distinguished solely on the basis of what falls within their essences/definitions, regardless of what is conjoined with them in their existence. In other words, the distinction is not drawn from a double point of view, *secundum esse* and *secundum rationem*, but only considering how things are different *secundum rationem*.

As already noticed, however, taking into consideration only the relation with sensible matter *secundum rationem* is not sufficient to distinguish metaphysics from mathematics, for the definitions of both metaphysical and mathematical objects lack sensible matter. A further element must come into play in order to distinguish mathematical definitions from metaphysical ones: this further element is quantity. The objects of the three theoretical sciences can be distinguished from each other according to their definitions once both quantity and sensible qualities – or the related notions of intelligible matter and sensible matter – are taken into account.

As an example, we can consider some passages from Albert's *Physica* which clarify the different kinds of essences of the objects of the three sciences:

Nihil ergo cadit in ratione mathematicorum de materia sensibili, sed potius de materia intelligibili, quae est quantitas imaginabilis [...] ¹⁵⁵

Propter quod omnia naturalia diffinitiones habent materiales; per materiam enim sensibilem et motui subiectam diffiniuntur, quia essentialia rei naturalis, quae in diffinitione ponenda sunt, talia sunt, quod motui et sensibilibus qualitatibus subiciuntur ¹⁵⁶.

Adhuc autem, cum prima simplex quiditas primum det esse, a quo fluit esse huius quiditatis in mensurato per quantitatem, a quo ulterius etiam profluit esse huius sensibilis distincti per quantitatem et distincti per formas activas et passivas [...] ¹⁵⁷

Adhuc autem, cum quiditas essentiae absolutae sit entis in universali non contracti in partem aliquam, quiditas autem essentiae contractae ad materiam quantitativam vel contrarias formas passionis et actionis habentem sit entis secundum partem accepti [...] ¹⁵⁸

Sensible matter falls within the definition of physical objects: basically, this means that the definitions of physical objects include sensible qualities. Albert also refers to sensible qualities as “active and passive forms”, or mentioning the “contrariety” of these forms. By contrast, sensible matter does not enter the definition of mathematical objects. However, the definitions of mathematical objects include quantity, which is also named “intelligible matter”. It must be noticed that intelligible matter is presupposed by sensible matter. Accordingly, both enter the definition of physical realities: “*esse huius sensibilis distincti per quantitatem et distincti per formas activas et passivas*”. Finally, the definitions of metaphysical objects do not include any kind of matter, either sensible or intelligible, and are thus distinguished both from physical and from mathematical objects.

We can now return to *Metaphysica* 1.1.1, and in particular to Albert’s description of metaphysical realities: “*praeter conceptionem cum continuo et tempore*”. The framework in which this description should be read is the “alternative” distinction of the three sciences, based solely on the definitions of their objects. Time falls within the definition of physical objects. The continuum falls within the definition of mathematical objects ¹⁵⁹. Again, it seems that Albert would state that physical objects presuppose the continuum (“*esse mobile est esse continuum*” ¹⁶⁰). Finally, metaphysical objects do not include either time or the continuum in their definition.

The picture which has been outlined so far is valid, in its general lines, for Aquinas as well. One passage from the *Summa Theologiae* provides a particularly comprehensive account concerning the definitions of the objects of the three theoretical sciences:

Ad secundum dicendum quod quidam putaverunt quod species rei naturalis sit forma solum, et quod materia non sit pars speciei. Sed secundum hoc, in definitionibus rerum naturalium non poneretur materia. Et ideo aliter dicendum est, quod materia est duplex, scilicet communis, et signata vel individualis, communis quidem, ut caro et os; individualis autem, ut hae carnes et haec ossa. Intellectus igitur abstrahit speciem rei naturalis a materia sensibili individuali, non autem a materia sensibili communi. Sicut speciem hominis abstrahit ab his carnibus et his ossibus, quae non sunt de ratione speciei, sed sunt partes individui, ut dicitur in VII Metaphys.; et ideo sine eis considerari potest. Sed species hominis non potest abstrahi per intellectum a carnibus et ossibus. Species autem

¹⁵⁵ *Physica* 1.1.1, p. 2 ll. 1-3.

¹⁵⁶ *Physica* 1.1.1, p. 2 ll. 39-43.

¹⁵⁷ *Physica* 1.1.1, p. 2 ll. 76-80.

¹⁵⁸ *Physica* 1.1.1, p. 2 l. 85 – p. 3 l. 3.

¹⁵⁹ This poses a problem concerning arithmetic, which takes into consideration discrete quantity.

¹⁶⁰ *Metaphysica* 1.1.1, p. 2 l. 38.

mathematicae possunt abstrahi per intellectum a materia sensibili non solum individuali, sed etiam communi; non tamen a materia intelligibili communi, sed solum individuali. Materia enim sensibilis dicitur materia corporalis secundum quod subiacet qualitatibus sensibilibus, scilicet calido et frigido, duro et molli, et huiusmodi. Materia vero intelligibilis dicitur substantia secundum quod subiacet quantitati. Manifestum est autem quod quantitas prius inest substantiae quam qualitates sensibiles. Unde quantitates, ut numeri et dimensiones et figurae, quae sunt terminationes quantitatum, possunt considerari absque qualitatibus sensibilibus, quod est eas abstrahi a materia sensibili, non tamen possunt considerari sine intellectu substantiae quantitati subiectae, quod esset eas abstrahi a materia intelligibili communi. Possunt tamen considerari sine hac vel illa substantia; quod est eas abstrahi a materia intelligibili individuali. Quaedam vero sunt quae possunt abstrahi etiam a materia intelligibili communi, sicut ens, unum, potentia et actus, et alia huiusmodi, quae etiam esse possunt absque omni materia, ut patet in substantiis immaterialibus¹⁶¹.

The passage does not deal with the definitions of the objects of sciences in themselves, but in relation to the possibility of abstraction; as a matter of fact, its main goal is to clarify the abstraction of the universal from the particular. Moreover, it also refers to the fact that “metaphysical objects” (being, one, potency and act, etc.) can *exist* without any matter. This notwithstanding, it is clearly detectable a distinction of the objects of sciences based solely on their definitions. Physical definitions include (common, rather than individual) sensible matter, for they include sensible qualities. Mathematical definitions do not include sensible matter; yet they include (common, rather than individual) intelligible matter – which is said to be “substance, inasmuch as it is subject to quantity”¹⁶². Finally, metaphysical definitions do not include either sensible or intelligible matter.

To recapitulate, the objects of the three theoretical sciences can be distinguished in two alternative ways. On one hand, they can be distinguished by means of their relations only with sensible matter both in existence and in definition. On the other hand, they can be distinguished by means of their relations with both sensible and intelligible matter only in definition. The following table provides a comparison of the two strategies:

Physics	Dependent on sensible matter in definition and existence	Dependent on sensible matter in definition
Mathematics	Dependent on sensible matter in existence, not in definition	Dependent on intelligible matter, not on sensible matter, in definition
Metaphysics	Not dependent on sensible matter either in definition or in existence	Not dependent on any matter in definition

Ultimately, the connection between the two different strategies lies in the relation between sensible and intelligible matter. Intelligible matter is independent from sensible matter *secundum rationem*, but dependent on it *secundum esse*. Said otherwise: quantities can be understood without sensible qualities, but they cannot exist except in conjunction with sensible qualities. More precisely, there is a definite order between quantities and sensible qualities *secundum rationem*, for the former can be understood without the latter but the latter cannot be understood without the former. On the

¹⁶¹ *Summa Theologiae* I q. 85 a. 1 ad 2.

¹⁶² It has already been observed that Aquinas oscillates between describing intelligible matter as the “substance inasmuch as it is subject to quantity” and as quantity itself. See [Geiger 2000], p. 178.

other hand, quantities and sensible qualities are “equivalent” *secundum esse*, for they must exist in conjunction with each other.

The possibility of understanding quantities without sensible qualities is worth a closer inspection. On this point, Albert’s and Thomas’ accounts – which have been quite similar so far – seem to diverge. I shall restrict myself to providing an outline of the views of the two authors, for such views are related to topics which will be examined in greater detail in the following chapters¹⁶³.

Beginning with Aquinas, the text quoted above states that it is evident that the inherence of quantities in substances is prior to the inherence of sensible qualities. The same point is stated in several other passages, both in earlier and in later works: Aquinas clarifies that quantities inhere in substances immediately, while other accidents inhere in substances through the mediation of quantities. The substances in question are material substances, namely compounds of matter and form. All their accidents ultimately inhere in the compound. Yet this does not prevent the presence of an “essential order” between them, so that what is prior in this order can be understood without what is posterior, but not vice versa.

Just like Aquinas, Albert also maintains – already in his *Physica* – that quantities inasmuch as they are quantities do not have any essential dependence on sensible qualities¹⁶⁴. I cannot say whether Albert clarifies this point further in his *Physica*; however, he definitely provides a justification in his *Metaphysica*¹⁶⁵. Quantities are prior to sensible qualities because the former inhere in the body *qua* body, namely the compound of prime matter and the *forma corporeitatis*, while the latter inhere in the physical body, namely the body which has already been specified by a physical form:

Attende igitur, quod quia quantitatum mensurae non insunt subiecto determinato secundum aliquam formam specialem, sed secundum ipsam formam corporeitatis primam, ideo in diffinitiva ratione quantitatum disciplinalium non intrat subiectum sensibilis materiae [...]¹⁶⁶

To sum up, both Albert and Thomas argue that mathematical realities do not include sensible matter in their definitions because the inherence of quantities is prior to the inherence of sensible qualities. Thomas, however, maintains that this priority concerns only the order in which the accidents inhere in a subject which is one and the same under every respect. On the other hand, Albert seems to maintain that the subjects of inherence of quantities and of sensible qualities are in some sense distinct. The priority of quantities over sensible qualities can then be traced back to the priority of the

¹⁶³ See chapter IV for Aquinas, chapter VI for Albert.

¹⁶⁴ See *Physica* 2.1.8, p. 89 ll. 68-74: “Licet autem sic differant considerationes mathematicae et physicae, tamen haec differentia non facit, quod una ducat ad veritatem et altera ad falsitatem, quia una procedit vere ex his quae sunt essentialia quantitati, secundum quod est quantitas, et ideo abstrahit illa a sensibilibus, ad quae non pendet quantitas, in eo quod est quantitas [...]”-

¹⁶⁵ In any case, the explanation found in Albert’s *Metaphysica* is based on some views which probably Albert did not endorse at the time he was writing the *Physica*.

¹⁶⁶ *Metaphysica* 5.3.2., p. 259, ll. 52-57.

body *qua* body, which is the subject of quantities, over the physical body, which is the subject of sensible qualities.

3. Sense, imagination, intellect: theoretical sciences and psychological faculties

In *Physica* 1.1.1, after having distinguished the three theoretical sciences according to the relations with matter of their objects *secundum esse* and *secundum rationem*, Albert draws an interesting connection between the three theoretical sciences and the three cognitive faculties of sense, imagination, and intellect:

Est autem in his tribus philosophiae realis partibus adhuc advertere, quod secundum dicta **[metaphysics]** ea quae abstrahuntur a motu et materia secundum esse et diffinitionem, sunt intelligibilia tantum, **[mathematics]** ea vero quae abstrahuntur a motu et materia secundum diffinitionem et non secundum esse, sunt intelligibilia et imaginabilia. **[physics]** Quae autem concepta sunt cum materia per esse et diffinitionem, sunt simul intelligibilia et imaginabilia et sensibilia. **[metaphysics]** Si enim accipiatur diffinitio substantiae, secundum quod substantia est, ipsa erit abstrahens ab omni magnitudine et sensibilibus, et ideo dabitur diffinitio illa per quidditates simplices, quae simplicia concepta sunt intellectus. **[mathematics]** Si vero diffiniantur figurae sphaerarum et circulorum, non potest esse quidditas eorum nisi in quantitate; quantitas autem secundum omnes partes sui imaginabilis est; et ideo, in eo quod quidditates talium sunt, intelligibilia sunt, sed in eo quod quantitas est horum quidditas, necessario imaginationi imprimuntur. **[physics]** Physicorum vero quidditas in eo quod quidditas est in intellectu, quia omnis rei ratio per intelligibilia est. In eo autem quod talia quantitate distincta sunt, imaginabilia sunt, in eo autem quod sunt distincta formis activis et passivis, sunt sensibilia, quia agere et pati non contingit nisi secundum aliquam qualitatem sensus¹⁶⁷.

Metaphysical objects are only intelligible; mathematical objects are both intelligible and imaginable; physical objects are intelligible, imaginable, and sensible. The reasons behind this lie in the differences between the definitions of the objects of the three sciences as they have been outlined in the preceding section.

The quiddities of the objects of the three sciences, inasmuch as they are quiddities, are intelligible: it is the intellect, rather than sense or imagination, that grasps the definition and the universal notion of anything. Incidentally, the fact that physics, mathematics, and metaphysics are sciences requires that their objects be intelligible, for a science is a properly intellectual endeavour.

The quiddities of the objects of mathematics and physics include “intelligible” matter, which Albert identifies with the “*quantitas imaginabilis*”. Accordingly, mathematical and physical objects can be grasped by imagination. By contrast, the quiddities of metaphysical objects do not include quantity; rather, they are defined through “simple concepts of the intellect”, and thus cannot be instantiated in themselves as objects of the imagination.

The quiddities of the objects of physics include sensible matter, namely sensible qualities. Accordingly, physical objects can be grasped by senses. By contrast, the quiddities of metaphysical

¹⁶⁷ *Physica* 1.1.1, p. 2 ll. 51-75.

and of mathematical objects do not include sensible qualities, and thus in themselves they cannot be the objects of the senses.

Albert's statements may be reformulated as expressing conditions for things to be objects of imagination or of senses. Something can be an object of imagination only inasmuch as it is endowed with quantity; it can be an object of senses only inasmuch as it is endowed with sensible qualities.

This cannot mean, in Albert's view, that things are imagined only under their quantitative aspects; said otherwise, that their sensible features cannot be grasped by imagination. Rather, sensible qualities are indeed grasped by imagination, but they owe their imaginability to quantities and cannot be imagined in isolation from quantities (while quantities can be imagined without sensible qualities). Similarly, the intellect can grasp both quantitative and sensible aspects of things, in addition to their merely intelligible features.

On the other hand, Albert's statements cannot mean that substances are not imagined or sensed at all, or that circles are not sensed at all. Of course, a wooden circle must be sensible – in addition to being intelligible and imaginable –, and a material substance must be both imaginable and sensible – in addition to being intelligible. Yet the wooden circle and the material substance owe their being sensible to their sensible qualities, and the material substance owes its being imaginable to quantity. The circle *qua* circle, on the other hand, is not sensible; the substance *qua* substance is neither sensible nor imaginable.

A connection between psychological faculties and theoretical sciences is also found in Aquinas' *Super De Trinitate*. Aquinas' account is, I believe, basically equivalent to Albert's and animated by the same basic conceptions, in particular the connection between senses and sensible qualities, on one hand, and between imagination and quantities, on the other. Yet Aquinas' formulation is quite different, and interesting for some points it brings to light.

In *Super De Trinitate* q. 6 a. 2 Aquinas distinguishes between the consideration of the principle and of the end of a given knowledge; the principle is ascribed to apprehension, while the end to judgement. Now, he continues, the principle of all human knowledge is in senses, rather than in imagination or in intellect: intellectual apprehension presupposes the apprehension of *phantasmata* in the imagination, which in turn presupposes the apprehension of senses. This means, in particular, that all the system of human knowledge, including mathematics and metaphysics, ultimately depends on sensation. As for the end of knowledge, it varies depending on the objects about which scientific judgements are supposed to conform:

Sed terminus cognitionis non semper est uniformiter: quandoque enim est in sensu, quandoque in ymaginatione, quandoque autem in solo intellectu. [physics] Quandoque enim proprietates et accidentia rei que sensu demonstrantur, sufficienter exprimunt naturam rei, et tunc oportet quod iudicium de rei natura quod facit intellectus, conformetur his que sensus de re demonstrat, et huiusmodi sunt omnes res naturales, que sunt determinate ad materiam sensibilem. Et ideo in

scientia naturali terminari debet cognitio ad sensum, ut scilicet hoc modo iudicemus de rebus naturalibus secundum quod sensus eas demonstrat, ut patet in III Celi et mundi; et qui sensum negligit in naturalibus, incidit in errorem. Et hec sunt naturalia, que sunt concreta cum materia sensibili et motu, et secundum esse et secundum considerationem. **[mathematics]** Quedam vero sunt quorum iudicium non dependet ex his que sensu percipiuntur, quia quamvis secundum esse sint in materia sensibili, tamen secundum rationem diffinitivam sunt a materia sensibili abstracta; iudicium autem de unaquaque re potissime fit secundum eius diffinitivam rationem. Sed quia secundum rationem diffinitivam non abstracta a qualibet materia, sed solum a sensibili, et remotis sensibilibus conditionibus remanet aliquid ymaginabile, ideo in talibus oportet quod iudicium sumatur secundum id <quod> ymaginatio demonstrat; huiusmodi autem sunt mathematica. Et ideo in mathematicis oportet cognitionem secundum iudicium terminari ad ymaginationem, non ad sensum, quia iudicium mathematicum superat apprehensionem sensus. Unde non est idem iudicium quandoque de linea mathematica quod est de linea sensibili, sicut in hoc quod recta linea tangit speram solum secundum punctum; quod convenit recte linee separate, non autem recte linee in materia, ut dicitur in I De anima. **[metaphysics]** Quedam vero sunt que excedunt et id quod cadit sub sensu et id quod cadit sub ymaginatione, sicut illa que omnino a materia non dependent, neque secundum esse, neque secundum considerationem; et ideo talium cognitio secundum iudicium neque debet terminari ad ymaginationem neque ad sensum. Sed tamen ex his que sensu vel ymaginatione apprehenduntur in horum cognitionem devenimus, vel per viam causalitatis, sicut ex effectu causa perpenditur que non est effectui commensurata sed excellens, vel per excessum, vel per remotionem, quando omnia que sensus vel ymaginatio apprehendit a rebus huiusmodi separamus. Quos modos cognoscendi divina ex sensibilibus ponit Dionisius in libro de divinis nominibus. **[conclusion]** Uti ergo possumus in divinis et sensu et ymaginatione sicut principiis nostre considerationis sed non sicut terminis, ut scilicet iudicemus talia esse divina qualia sunt que sensus vel ymaginatio apprehendit; deduci autem ad aliquid est ad illud terminari, et ideo in divinis neque ad ymaginationem neque ad sensum debemus deduci, in mathematicis autem ad ymaginationem et non ad sensum, in naturalibus autem etiam ad sensum. Et propter hoc peccant qui uniformiter in his tribus speculative partibus procedere nituntur¹⁶⁸.

Physical judgements must conform to what is shown by senses; mathematical judgements to what is shown by imagination; metaphysical judgements are said to be above senses and imagination¹⁶⁹. Aquinas makes it explicit that these differences trace back to the distinction of the essences/definitions of the objects of the theoretical sciences: “*iudicium autem de unaquaque re potissime fit secundum eius diffinitivam rationem*”. Since the definitions of physical objects include sensible qualities, the judgements about them depend on what is perceived by senses. By contrast, the definitions of mathematical objects do not include sensible matter; yet they include “something imaginable”, which we may assume to be quantities. Accordingly, mathematical judgements depend on something which is imaginable, but not sensible. Finally, the definitions of metaphysical objects do not include anything sensible or imaginable, so that metaphysical judgements exceed both senses and imagination. To what Aquinas explicitly says, we may perhaps add that the end of metaphysical knowledge should rest with the intellect – the reason being that metaphysical objects can be grasped solely by the intellect.

To sum up, Aquinas’ exposition basically depends on the view that physical objects are sensible, mathematical objects are imaginable but not sensible, and metaphysical objects are neither

¹⁶⁸ *Super De Trinitate* q. 6 a. 2.

¹⁶⁹ Here and in what follows, I am assuming that Aquinas’s statements concerning *divina* would refer to metaphysics in general. On one hand, it seems that his main focus in the article is on separate entities, as suggested by the reference to the three “Dionisian ways” to gain knowledge of the *divina* from sensible things. On the other hand, however, in q. 5 a. 1 Aquinas has interpreted the Boethian chapter as referring to the three philosophical sciences, and he has made clear that all metaphysical objects are separated from matter *secundum esse*.

imaginable nor sensible. Moreover, Aquinas would definitely maintain, just like Albert does, that the objects of all the sciences are intelligible – as a matter of fact, scientific judgements are strictly speaking intellectual and must concern something which is grasped by the intellect (“*iudicium de rei natura quod intellectus facit*”). Finally, Aquinas would certainly agree with Albert on the fact that physical objects are imaginable, in addition to being sensible.

Albert’s and Aquinas’ expositions are thus motivated by the same basic idea, which is the connection between the psychological faculties and the features which characterise the essences of the objects of the theoretical sciences (presence/lack of sensible qualities and quantities). Albert draws this connection straightforwardly, while Aquinas employs it in his discussion of the principle and the end of knowledge.

On the other hand, two peculiarities of Aquinas’ discussion are noteworthy. First, he underscores the fact that all human knowledge originates from the apprehension of senses, which must be kept in mind in the cases of mathematics and metaphysics. Their objects as such are not sensible, but purely imaginable or intelligible; yet they come to be known starting from sensation.

Second, Aquinas makes an interesting point about mathematical judgements. He does not simply state that mathematical entities as such are imaginable, but also argues that this is relevant for locating the truth of mathematical judgements – and thus the end of mathematical knowledge – in imagination. Sometimes, Aquinas says, the judgement on the mathematical line, which is purely imaginable, is different from the judgement on the sensible line: for example, it is true that the mathematical line may touch a sphere in one point, while the sensible line cannot¹⁷⁰. The same point is made also by Albert in *De Anima* 1.1.6 and is a consequence of the doctrine of *minima naturalia* and, more generally, an instance of mathematical properties being hindered by physical qualities. This phenomenon is remarkable inasmuch as mathematical entities are supposed to have no extra-mental existence except in conjunction with sensible qualities: it therefore raises the question of the status of mathematics as a “real” science and of its applicability to the physical realm. I shall discuss these matters further from Albert’s point of view in chapter VI.

For the time being, I would just close this section mentioning two points which would require further research. First, I cannot say whether the definite connection between the psychological faculties of sense, imagination, and intellect, on one hand, and the three theoretical sciences, on the other, is stated by Albert for the first time or not. Plausibly, he derives from some source at least the

¹⁷⁰ Aquinas refers to Aristotle’s *De Anima* I 1 for the example of the straight line. The meaning of Aristotle’s text is actually quite different. *De Anima* I 1 403a12-16 (revised Oxford translation, ed. Barnes): “In the latter case, it will be like what is straight, which has many properties arising from the straightness in it, e. g. that of touching a bronze sphere at a point, though straightness divorced from the other constituents of the straight thing cannot touch it in this way; it cannot be so divorced at all, since it is always found in a body”.

connection between mathematics and imagination, which traces back to late antique commentators¹⁷¹. As for Aquinas, his account might well depend on Albert's, unless both depend on a common source¹⁷².

Second, it would be interesting to carry out a deeper examination of Albert's and Aquinas' connection between mathematics and imagination. Let us focus on Albert, who speaks of imagination in relation to mathematics in several contexts. As said above, mathematical objects as such are said to be imaginable because their definitions include quantity, which is imaginable. Even though they cannot exist except in conjunction with sensible qualities, they are nonetheless non-sensible in as far as they are abstracted from sensible qualities. So far imagination plays a merely passive role in mathematics: it receives the outcome of mathematical abstraction, namely mathematical objects as such. On the other hand, other passages point to a more active and essential role played by imagination with respect to mathematical knowledge. In *Physica* 3.2.17, for example, Albert explains how mathematicians can speak about the infinite, even though an infinite continuous quantity cannot exist:

[...] tamen non negamus, quin possit poni secundum imaginationem quantitas adeo magna, quantam volumus eam habere. Et hoc vocant infinitum mathematici, quia nulla adeo magna describitur linea, cui non accipiamus maiorem, si volumus eam habere ad demonstrandum aliquid. Mathematici enim non indigent in sua scientia magnitudine infinita secundum actum, quia non accipiunt quantitatem secundum esse, sed secundum imaginationem, et procedunt secundum potestatem imaginationis componentis figuras et angulos et non secundum potestatem rei imaginatae; multae enim figurae geometrorum nullo modo sunt in corporibus naturalibus, et multae figurae naturales et praecipue animalium et plantarum non sunt determinabiles arte geometriae¹⁷³.

Mathematical infinite consists in the fact that, given any quantity, a larger quantity can be described in the imagination. In particular, Albert does not claim that larger and larger quantities may be abstracted from sensible realities; it is rather imagination which has the power to describe larger and larger quantities. Albert goes even further in saying that mathematicians proceed according to the power of imagination which composes figures and angles, and that several mathematical figures are never instantiated in natural bodies¹⁷⁴. It is not clear whether this active role of imagination in mathematics, as described by Albert, may be entirely compatible with a conception of mathematical objects as merely abstracted from sensible realities¹⁷⁵.

¹⁷¹ See [Mueller 1990], in particular his discussion of Syrianus, Proclus, and Simplicius.

¹⁷² As said, the composition of Albert's *Physica* was plausibly started in 1251-52 in Cologne. Aquinas, on the other hand, was in Cologne with Albert until late 1251 – early 1252, when he left and went to Paris. It is therefore possible that Aquinas was acquainted with Albert's positions as held in the prologue of the *Physica*. It should be added that the prologue of Albert's *Physica* and Aquinas' *Super De Trinitate* qq. 5-6 have also other similar traits, which might speak in favour of a dependence of Aquinas on Albert.

¹⁷³ *Physica* 3.2.17 p. 197 ll. 37-51.

¹⁷⁴ Cf. *Metaphysica* 9.4.5 for the active role of imagination in mathematical demonstrations.

¹⁷⁵ In this respect, different conceptions of mathematical objects trace back to late antique philosophy. In particular, see the distinction between “abstractionism” and “projectionism” drawn in [Mueller 1990]. For a “compatibilist” reading of Albert's account, see [Da Silva 2017]. For an introduction to Albert's views on mathematics, see [Lo Bello 2013].

II – Subject and unity of metaphysics according to Albert

In this chapter, I shall take into consideration Albert's position on the subject and unity of metaphysics. In particular, we shall see how Albert identifies being *qua* being as the subject of metaphysics, and try to understand the reasons why, in his view, certain realities – for example separate substances or certain attributes – should fall within metaphysical consideration.

The chapter will be divided into four sections. In the first two sections, I shall provide an account of the main pieces of evidence for Albert's views on the subject of metaphysics, namely his *Physica* 1.3.18 and *Metaphysica* 1.1.2. In the third section, I shall discuss Albert's own statements on the unity of metaphysics. In the last section, I shall focus on the question how God would fall within metaphysical consideration according to Albert.

1. *Physica* 1.3.18: Avicenna vs. Averroes on the subject of metaphysics

Physica 1.3.18 is Albert's commentary on the last part of *Physics* A 9. In the corresponding section of Averroes' *Long Commentary on the Physics* (L. 1 t. 83), one finds the well-known criticism of Avicenna's view that metaphysics ought to demonstrate the existence of God:

Et ideo consideratio de formis est duarum scientiarum, quarum una, scilicet naturalis, considerat de formis materialibus, secunda autem de formis simplicibus abstractis a materia; et est illa scientia, quae considerat de ente simpliciter. Sed notandum est, quod istud genus entium, esse scilicet separatum a materia, non declaratur nisi in hac scientia naturali. Et qui dicit, quod prima philosophia nititur declarare entia separabilia esse, peccat. Haec enim entia sunt subiecta primae philosophiae. Et declaratum est in Posterioribus Analecticis, quod impossibile est aliquam scientiam declarare suum subiectum esse, sed concedit ipsum esse, aut quia manifestum per se, aut quia est demonstratum in alia scientia. Unde Avicenna peccavit maxime, cum dixit, quod primus philosophus demonstrat primum principium esse. Et processit in hoc suo libro De scientia divina per viam, quam existimavit esse necessariam et essentialem in illa scientia. Et peccavit peccato manifesto. Certior enim illorum sermonum, quibus usus est in hoc non pertransit ordinem sermonum probabilium. Et iam causam innuimus huius alibi. Et peius est hoc, quod dicit, quod ista scientia accepit a primo philosopho corpora componi ex materia et forma¹⁷⁶.

In his commentary, Albert mentions Averroes' criticisms of Avicenna's view. First, he argues that Avicenna is right in maintaining that physics assumes the fact that bodies are composed of matter and form as something established in metaphysics. Thereafter, he argues that Avicenna is right in maintaining that separate beings cannot be the subject of metaphysics:

Est autem et alia reprehensio, qua reprehendit Averroes Avicennam, minus congrua. Dicit enim Avicenna verum, cum dicit non idem esse quaesitum in aliqua scientia et suppositum, deum autem et substantias sive formas separatas esse quaesitas in prima philosophia et ideo non vere suppositas in ipsa et ideo non esse subiectum primae philosophiae, quod nescio, quare Averroes reprehendit, cum ipsum sit necessarium, quod dixit Avicenna. Scimus enim, quoniam ens est subiectum primae philosophiae, et divisiones et passiones entis esse, quae in prima philosophia tractantur, scilicet per se et per accidens et per potentiam et per potentiam et actum et unum et multa et separatum et non-separatum. Et cum separatum sit differentia et passio entis, non potest esse subiectum. Et cum dicitur, quod metaphysicus est de separatis, non intelligitur de separatis hoc modo, sicut

¹⁷⁶ Averroes, *In I Phys.* t. 83.

intelligentiae sunt separatae, sed intelligitur de his quae separata sunt per diffinitionem et esse. Haec autem sunt, quae in quidditatibus simplicibus considerantur, sicut diximus in istius libri prooemio¹⁷⁷.

In rejecting Averroes' criticisms, Albert basically retraces Avicenna's argument to the effect that God cannot be the subject of metaphysics. A science must presuppose (the existence of) its subject; since the existence of God and separate substances is sought in metaphysics, they cannot be its subject. This argument of Avicenna's is said to be "*necessarium*", and Albert goes on to expound his own reasons for his defence of Avicenna's position. Some of Albert's pronouncements in this context are noteworthy both for Albert's conception of a science in general, and for his conception of metaphysics more specifically.

First, Albert explicitly declares that being (*ens*) is the subject of metaphysics. As a consequence of this first point, Albert states, second, that metaphysics should deal with the divisions (*divisiones*) and attributes (*passiones*) of being. This inference already suggests that Albert's general conception of science is governed by the triad "*subiectum, divisiones, passiones*". Third, Albert claims that *separatum* is a difference (*differentia*) and attribute (*passio*). Plausibly, the term *differentia* should be taken as synonymous with *divisio*: if this is the case, the passage also alerts us not to draw a too sharp distinction between *divisiones* and *passiones* of a given genus.

As far as metaphysics is concerned, Albert gives us examples of *divisiones* and *passiones* of being which metaphysics should take into consideration. Among these, one finds the division into separate and non-separate being. Albert thus draws the conclusion that the genus of separate beings cannot be the subject of metaphysics, *contra* Averroes, for "separate" is rather a division and attribute of the subject, which is being.

Two remarks on Albert's position are in order. First, Albert has a precise understanding of the reason why separate beings are sought in metaphysics: a science in general investigates divisions and attributes of its subject, and "separate" is just a division and attribute of the subject of metaphysics. We may suppose that, inasmuch as "separate" is a *passio*, metaphysics is supposed to demonstrate its inherence in being, namely its subject, and that the proof of the existence of separate beings is tantamount to that demonstration. In this respect, one should recall Avicenna's argument to the effect that the demonstration of the existence of the principles of being (and in particular of God) pertains to metaphysics inasmuch as "principle" is an attribute of being:

Potest autem quis dicere quod, postquam ens ponitur subiectum huius scientiae, tunc non potest esse ut ipsa stabiliat esse principia essendi. Inquisitio enim omnis scientiae non est de principiis, sed de consequentibus principiorum. Ad quod respondemus quod speculatio de principiis non est nisi inquisitio de consequentibus huius subiecti [...]¹⁷⁸

¹⁷⁷ *Physica* 1.3.18, p. 76 ll. 37-56.

¹⁷⁸ *Philosophia prima* I 2, p. 13 ll. 47-51.

The fact that Albert's statements are reminiscent of Avicenna's is plausibly no coincidence. In the text quoted, Albert is basically defending Avicenna's views against Averroes' criticisms: it is therefore likely that his own account should presuppose an accurate understanding and endorsement of Avicenna's views. The passage thus bears witness to a profoundly Avicennian stance on the epistemological structure of metaphysics: not only does Albert acknowledge "being" as the subject of science, but he also employs Avicenna's strategy of tracing back some objects of enquiry to attributes of the subject.

Having said this – and this is my second remark –, one should pay some caution not to take it for sure that the parallel with Avicenna may be pushed forward in every respect. In particular, there is one point on which Albert is not clear at all in the passage quoted: does metaphysics investigate into God, on one hand, and into other separate beings, on the other, for the very same reasons? Said otherwise: when Albert claims that "separate" is a division of being (and that separate beings are investigated in metaphysics exactly for this reason), does he mean to include God within the class of separate beings or not?

Were the answer "no", then the text would appear to be lacking in a relevant point, for it would tell us that God is *quaesitus* in metaphysics without specifying the reason why this should be the case. As a matter of fact, this is also the main argument in support of the answer "yes"¹⁷⁹.

On the other hand, Albert's vagueness on the exact status of God within metaphysical enquiry might well be the sign of a certain reluctance to include him into the class of separate beings. In this respect, one should notice that, while reporting Avicenna's views, Albert mentions God *in addition to* separate substances ("*deum autem et substantias sive formas separatas*"). By contrast, in explaining the sense in which "separate" is a division of being Albert only mentions separate substances, namely intelligences ("*sicut intelligentiae sunt separatae*"). While this fact is no conclusive evidence, it might nonetheless suggest that the division of being into separate and non-separate does not concern God in any case, and that God should fall outside the scope of the notion of being.

To sum up, in *Physica* 1.3.18 Albert sides with Avicenna on the question of the subject of metaphysics. In particular, Albert adopts Avicenna's argument that the subject of science must be presupposed by the science itself, concluding that the genus of separate beings cannot be the subject of metaphysics. As a matter of fact, Albert tells us, "separate" is a division and attribute of the subject of metaphysics, and this is the reason why the class of separate beings falls within metaphysical

¹⁷⁹ Possibly for this reason, for example, [Noone 2013] takes it for sure that Albert includes God within separate beings. See [Noone 2013], p. 548.

consideration. Albert’s statements also allow us to grasp something of his conception of the structure of a science in general: apparently, it is the triad “*subiectum, divisiones, passionēs*” which articulates scientific enquiry. The distinction between *divisiones* and *passiones* in this context is probably not too sharp: for example, “separate” is both an attribute which can be demonstrated of being and a division of being. Albert’s account also presents one unclear point: how is God investigated in metaphysics, and how does he relate to the subject of metaphysics? In particular, does God fall within the subject of metaphysics – being included in the division of separate beings – or not?

All the ingredients of Albert’s account in *Physica* 1.3.18 mentioned so far find a place and are further developed in his later *Metaphysica*. We shall therefore turn now to an analysis of *Metaphysica* 1.1.2, which is the chapter expressly devoted to the question of the subject of metaphysics.

2. *Metaphysica* 1.1.2

As its title reveals, *Metaphysica* 1.1.2 is a *digressio* on the subject of metaphysics, which includes a discussion of three different opinions held by philosophers on the topic¹⁸⁰. The structure of the chapter is as follows:

Introduction	p. 3 ll. 31-35
1. First position: first causes are the subject of metaphysics	p. 3 ll. 35-80
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Even the structure of the chapter is, in its essentials, Avicennian. In *Philosophia prima* I 1, Albert could read Avicenna’s critical discussion of two positions about the subject of metaphysics, namely its identification with God, on one hand, and the ultimates causes, on the other. Thereafter, in *Philosophia prima* I 2, Albert could find Avicenna’s arguments to the effect that being *qua* being is the subject of metaphysics, together with his conception of the structure of metaphysics. In *Metaphysica* 1.1.2 Albert basically discusses the same three positions as the ones expounded in

¹⁸⁰ *Metaphysica* 1.1.2, p. 3 ll. 27-30: “Et est digressio declarans, quid sit huius scientiae proprium subiectum; et est in eo disputatio de tribus opinionibus philosophorum, quae sunt de subiecto”.

Philosophia prima I 1-2, criticising the two positions Avicenna had rejected and defending the position Avicenna had eventually endorsed.

In addition to this structural similarity, Albert's account seems to depend on Avicenna also in a more specific aspect, namely in the way he rejects the two erroneous positions on the subject of metaphysics. These rejections also contain the essential elements of Albert's conception of a science in general, and of metaphysics in particular, and are therefore worth a closer scrutiny.

Rejection of the first position: causes are not the subject of metaphysics

The first position expounded and rejected by Albert is the view that the causes are the subject of metaphysics:

Sed quod errent, non difficile est ostendere, quoniam subiectum est in scientia, ad quod sicut ad commune praedicatum reducuntur partes et differentiae, quarum quaeruntur proprietates in ipsa, et ad quod consequuntur passiones, quae inesse subiecto demonstrantur. Certo autem certius est, quod substantia, quantitas, qualitas et huiusmodi non reducuntur ad causam sicut ad praedicatum commune, cum tamen de modis et proprietatibus talium omnium in hac scientiae determinetur. Similiter autem per se et per accidens, potentia et actus, unum et multum, idem et diversum, conveniens et contrarium, separatum et non-separatum et huiusmodi, quae sunt passiones, quae subiecto istius scientiae universaliter et ubique probantur inesse, non sequuntur causam, inquantum causa aut inquantum est prima. Et cum passio immediata sit subiecto in scientia omni, non potest esse causa subiectum scientiae istius¹⁸¹.

Albert's rejection is based on a precise characterisation of the subject of a science, which must have two features:

- 1) It must be the "common predicate" (*commune praedicatum*) of given things which are investigated in the science – said otherwise, such things should be the *partes et differentiae* of the subject;
- 2) It must be such that some attributes (*passiones*) follow upon it: the science must prove of it these attributes.

Albert's characterisation of the subject of science indicates again, just like the passage of *Physica* 1.3.18 had done, that his general conception of the structure of a science is governed by the triad "*subiectum, partes, passiones*"¹⁸². It must be observed that, according to the passage, the subject must have its own attributes, which are to be demonstrated; yet the science also carries out an enquiry into the parts of the subject, and the properties of the latter are sought in the science as well.

Now, Albert's strategy is to show that the causes do not have either of the two features which would be required of the subject of metaphysics. To this end, the argument assumes that metaphysics investigates into given parts and into given attributes: the parts in question are substance, quantity, quality, and so on (basically, the categories); the attributes are, for example, potency and act, one and

¹⁸¹ *Metaphysica* 1.1.2, p. 3 ll. 63-80.

¹⁸² "*Partes*" is equivalent to "*divisiones*", which is the term employed in *Physica* 1.3.18.

many, and so on. The parts investigated in metaphysics, however, are not parts of the causes; said otherwise, “cause” is not a predicate common to the categories. Similarly, the attributes investigated in metaphysics do not follow upon the causes inasmuch as they are causes or first causes. For both reasons, causes cannot be the subject of metaphysics: the first position on the subject of metaphysics is thus rejected.

Before turning to Albert’s criticism of the second position, I would make two final remarks on the passage. First, “separate” is definitely classified as a *passio* of the subject of metaphysics, since the list of *partes* seems to be restricted to a list of categories. By contrast, in *Physica* 1.3.18 “separate” was said to be both a *differentia* and a *passio*.

Second, it is essential to notice that Albert does not claim that the *passiones* investigated in metaphysics do not belong to causes at all. As a matter of fact, it is true the contrary: a cause can be in potency or in act, can be separate or not, and so on. Rather, Albert specifies that those attributes do not belong to causes *inasmuch as they are causes or first causes*. This is enough to rule out that the causes may be the subject of metaphysics, though, for the *passiones* do not only have to belong to the subject, but must also be “immediate” to the subject. Since metaphysical attributes do not belong to causes *inasmuch as they are causes*, but *inasmuch as they are something else* (i. e. inasmuch as they are beings), they cannot be said to be “immediate” to causes. Rather, they belong to causes *through the mediation* of something else (i. e. of being).

In order to achieve a deeper understanding of Albert’s argument it would be helpful to read it against the background of its direct source, namely Avicenna. In fact, both the points in Albert’s characterisation of the subject of science seem to depend on Avicenna’s *Philosophia prima* I 1-2.

As for the first point, a passage from *Philosophia prima* I 2 reveals Avicenna’s conception of the subject of a science as something *common* to all that is investigated in the science itself. Since only being is common to all categories, Avicenna argues, only being can be the subject of metaphysics:

Sed non potest poni eis subiectum commune, ut illorum omnium sint dispositiones et accidentalialia communia, nisi esse, Quaedam enim eorum sunt substantiae, et quaedam quantitates, et quaedam alia praedicamenta; quae non possunt habere commune intentionem qua certificentur nisi intentionem essendi¹⁸³.

It is clear that Albert follows Avicenna’s line of thought in his criticism against the view that the causes are the subject of metaphysics. Causes are not common to substance, quantities, and so on: accordingly, they cannot be the subject of metaphysics.

As for the second point, Albert’s dependence on Avicenna is even stronger. In the last section of *Philosophia prima* I 1, Avicenna criticises the view that the causes may be the subject of

¹⁸³ *Philosophia prima* I 2, p. 12 ll. 14-18.

metaphysics. To this end, he takes into consideration four different standpoints from which causes could be investigated as subject of metaphysics: inasmuch as they are causes, inasmuch as they belong to the four different genera of causes, inasmuch as they are a totality, and inasmuch as they are existent. Having rejected the first three possibilities, Avicenna takes into consideration the fourth:

Si autem consideratio de causis fuerit in quantum habent esse et de omni eo quod accidit eis secundum hunc modum, oportebit tunc ut ens, in quantum est ens, sit subiectum, quod est convenientius¹⁸⁴.

The words “*subiectum, quod est convenientius*” correspond to “first subject” in the original Arabic text. Avicenna is here claiming that, should metaphysics only investigate into the attributes of causes *qua* existent, then the *first* subject of these attributes – and, as a consequence, the subject of metaphysics – would be the existent, rather than the causes. The meaning of “*first* subject” in Avicenna’s account derives from Aristotle’s notion of “first” as clarified in *Posterior Analytics* A 4: just to give Aristotle’s example, having the angles equal to two right angles belongs to both the isosceles triangle and to the triangle, but only the triangle is the *first* to which that property belongs. Following Aristotle’s line of thought, Avicenna takes into consideration the attributes belonging to the causes *qua* existent: such attributes belong to both causes and to the existent, but only the existent is the *first* subject to which they belong. Avicenna’s argument also implicitly suggests the principle that the subject of science ought to be “first” with respect to the attributes investigated in that science.

Now, the structure of Albert’s argument is slightly different from Avicenna’s: Albert assumes that metaphysics should enquire into given attributes and concludes that causes cannot be the subject of metaphysics, because those attributes do not belong to causes *inasmuch as they are causes*. Yet the essential point of Albert’s and Avicenna’s arguments is the same: a science should investigate into the attributes which belong to its subject *as such*. Avicenna conveys this idea in the expression “first subject”, which ultimately derives from *Posterior Analytics* A 4; Albert, on the other hand, by stating that the attributes must be *immediate* to the subject. The correspondence between Albert’s and Avicenna’s formulations is confirmed by Albert himself in his commentary on *Posterior Analytics* A 4:

Universale autem tunc esse dicitur in demonstrativis secundum inductam determinationem, cum demonstratur esse in quolibet, hoc est, in qualibet parte subjecti: quia aliter non esset de omni: et monstratur primo, hoc est, immediate inesse cuilibet per subjectum primum. Et sic primum est quod inter ipsum et passionem aliud subjectum non intercidit [...] sed isosceles habet quidem fortasse duobus rectis aequales tres angulos, sed non habet tres primum sive primo vel primitus, hoc est, sicut immediatum subjectum ex quo tota illa fluit passio. [...] Primum autem dico: quia isosceles non est primum sive immediatum subjectum passionis secundum se totius [...]¹⁸⁵

The passage is certain evidence of the fact that Albert’s notion of “immediate attributes” is grounded, just like Avicenna’s notion of “first subject”, on Aristotle’s *Posterior Analytics* A 4. Moreover, the passage also implies the equivalence between the expressions “immediate subject” and

¹⁸⁴ *Philosophia prima* I 1, p. 8 ll. 49-52.

¹⁸⁵ *Analytica Posteriora* 1.2.12 (ed. Borgnet, p. 48).

“first subject” (*primum sive immediatum subiectum*). All this considered, Albert’s argument against the causes as subject of metaphysics seems to derive from Avicenna’s *Philosophia prima* I 1. Apparently, Albert has a deep understanding of Avicenna’s argument, including the connection with *Posterior Analytics* A 4, and reformulates it in terms of immediate attributes¹⁸⁶.

One final remark on Albert’s reception of Avicenna’s argument is in order. In the Latin version of Avicenna’s passage one finds a case of “double translations”¹⁸⁷: in the so called “texte ancien”, the words “first subject” are translated as “*subiectum, quod est convenientius*”¹⁸⁸; in the so called “texte revu”, they are correctly translated as “*subiectum primum*”. Now, the fact that Albert sees the connection between Avicenna’s argument and Aristotle’s *Posterior Analytics* A 4 would push us to assume that he could read the words “*subiectum primum*” in his copy of Avicenna’s text. By contrast, Albert seems to rely on the “texte ancien” for a quotation from *Philosophia prima* IV 2 in his *Metaphysica* 5.2.16¹⁸⁹. It is thus uncertain whether Albert could appreciate Avicenna’s use of the expression “first subject” in the argument quoted above¹⁹⁰. Examining other quotations of Avicenna’s *Philosophia prima* in Albert’s works, future research may be in a better position to evaluate that possibility.

Rejection of the second position: God and divina are not the subject of metaphysics

The second position expounded and rejected by Albert is the view that God and *divina* are the subject of metaphysics. The mention of “*divina separata*” – which marks a difference from Avicenna’s account in *Philosophia prima* I 1 – does not refer to the genus of separate substances, as one could expect in the light of Albert’s discussion in *Physica* 1.3.18; it rather refers to simple forms, “*prima causata et effluxiones divinae, sicut primum esse, primum subsistere, primum vivere, primum intelligere et huiusmodi*”¹⁹¹. The rejection of the position runs as follows:

Quod autem erronea sit haec opinio, constat per hoc quod nihil idem quaesitum est et subiectum in scientia aliqua; deus autem et divina separata quaeruntur in scientia ista, subiecta igitur esse non possunt. Amplius, partes, de quibus multa demonstrantur in scientia hac, non reducuntur ad deum sicut ad commune praedicatum de ipsis, sive communitas generis sive analogiae accipitur. Adhuc

¹⁸⁶ Albert’s terminology is to some extent problematic. Aristotle’s notion of “first” in *Posterior Analytics* A 4 is intended to characterise the subject of an attribute which is demonstrated; on the other hand, from his point of view “immediate” propositions are indemonstrable premisses. Albert employs the adjective “immediate” in both cases; see *Analytica Posteriora* 1.2.2.

¹⁸⁷ For an introduction to the Latin translation and to the phenomenon of double translations, see S. Van Riet’s introduction to Avicenna Latinus, *Liber de philosophia prima sive scientia divina, I-IV*, pp. 123*-128*. For a detailed analysis of the phenomenon of double translations, see [Arnzen 2017]. In Arnzen’s words, the present case would qualify as “false double translations”. See [Quartucci 2017], pp. 448-449.

¹⁸⁸ This is probably due to a misreading of the *rasm* of the Arabic word (or possibly to a variant reading in an Arabic antigraph of the translation): the “texte ancien” seems to presuppose *al-mawḏū’ al-awlā* in place of *al-mawḏū’ al-awwal*.

¹⁸⁹ This has been shown in [Bertolacci 1998], pp. 305-308.

¹⁹⁰ Albert’s quotation from the “texte ancien” in *Metaphysica* 5.2.16 does not prove that he could not read the “texte revu” at all. In general, establishing in a definitive way that an author could read only one text to the exclusion of the other is perhaps impossible. This is not only due to the possible possession of two manuscripts witnessing competing translations, but also to the possibility for a single manuscript to bear competing translations.

¹⁹¹ Cf. [Aertsen 2012], p. 198.

passiones in hac scientia consideratae, quae supra inductae sunt, non consequuntur immediate deum et divina; igitur subiectum non potest deus huius esse scientiae¹⁹².

Albert's rejection is made of three arguments. The first argument is the one employed already in *Physica* 1.3.18 and deriving directly from Avicenna's *Philosophia prima* I 1. The subject must be presupposed, rather than sought, in the science: since God is sought in metaphysics, he cannot be its subject.

The second and third arguments against the second position are the same as the two arguments put forward against the first position. By now we know that these arguments derive from *Philosophia prima* I 1-2; neither was intended by Avicenna as a criticism of the theological stance on the subject of metaphysics, though. It is thus Albert who applies two Avicennian ideas on the subject of science to a criticism of the view that God is the subject of metaphysics. First, God is not the common predicate of the *partes* investigated in metaphysics, which we already know to be the categories. Second, the *passiones* investigated in metaphysics do not follow upon God "immediately". Accordingly, God cannot be the subject of metaphysics.

Endorsement of the third position: being qua being is the subject of metaphysics

Having criticised the first two positions on the subject of metaphysics, Albert expounds and endorses a third position:

Ideo cum omnibus Peripateticis vera dicentibus dicendum videtur, quod ens est subiectum in quantum ens et ea quae sequuntur ens, in quantum est ens et non in quantum hoc ens, sunt passionibus eius, sicut est causa <et> causatum, substantia et accidens, separatum et non-separatum, potentia et actus et huiusmodi. Cum enim sit prima inter omnes scientia, oportet, quod ipsa sit de primo, hoc autem est ens, et <cum> stabiliat omnium particularium principia tam complexa quam incompleta, nec stabiliri possint nisi per ea quae sunt ipsis priora, et non sint eis aliqua priora nisi ens et entis, secundum quod ens, principia [...] oportet, quod omnium principia per istam scientiam stabiliantur per hoc quod ipsa est de ente, quod est primum omnium fundamentum in nullo penitus ante se fundatum¹⁹³.

The third position is said to be the Peripatetic view on the subject of metaphysics¹⁹⁴: being *qua* being is the subject of metaphysics. The *passiones* of being, which metaphysics is thus asked to investigate, are those things which follow upon being just inasmuch as it is being, without

¹⁹² *Metaphysica* 1.1.2, p. 4 ll. 38-50.

¹⁹³ *Metaphysica* 1.1.2, p. 4 ll. 51-68.

¹⁹⁴ The qualification "*vera dicentibus*" may be interpreted in two different ways: either (i) as a qualification of the whole class of Peripatetic philosophers, or (ii) as a restriction of the class of Peripatetic philosophers. Interpretation (ii) would be in agreement with Albert's criticism of Averroes in *Physica* 1.3.18, which highlights the existence of "Peripatetic philosophers saying the false". This notwithstanding, I would follow [Bertolacci 2011b], pp. 274-275, in reading the passage according to interpretation (i). In particular, I believe that Albert's aim is not to oppose a true Peripatetic position to a false Peripatetic position, but to oppose the position of *all Peripatetics* to the second of the three positions expounded in *Metaphysica* 1.1.2, which is associated with the Platonic tradition. See *Metaphysica* 1.1.2 p. 4 ll. 12-23: "Et cum ista scientia sit de existentium omnium primis fundamentis, erit ista scientia de deo et divinis supradicto modo dictis, quae Dionysius vocat processiones divinas [...] Platoni autem hi consentire videntur, qui talia vocat formas [...] Secutus est enim dogma Socratis, qui hoc a Trismegisto Hermete, primo huius dogmatis auctore, suscepit". The fact that Albert does not highlight the divergence of Averroes' views from the "official Peripatetic position" might be sign of his will to "conceal the dissent" between Avicenna and Averroes. On this attitude of Albert's in his *Metaphysica*, see [Bertolacci 2011b] and [Bertolacci 2014].

presupposing any specification. Among these *passiones* Albert includes again “separate and non-separate”, but also – strangely enough – “substance and accident”.

Albert gives two interrelated reasons for his endorsement of the Peripatetic position on the subject of metaphysics. First, metaphysics is supposed to be the first science: accordingly, it must be the science of what is first, which is being¹⁹⁵. Second, metaphysics is supposed to prove the principles of particular sciences, which entails that metaphysics must deal with what is prior to the principles of particular sciences. Since nothing is prior to them except being and the principles of being *qua* being, the fact that metaphysics demonstrates the principles of particular sciences presupposes that being is the subject of metaphysics.

The rest of the chapter contains a new refutation of the first and second positions on the subject of metaphysics, the answer to two arguments against the third position, and a criticism of the position of some Latin authors. Without going into the details of Albert’s exposition, I shall restrict myself to mentioning a couple of interesting points.

First, Albert makes it clear that causes are indeed investigated in metaphysics; yet they do not play the role of subject, but of a *differentia* of the subject, for they follow upon (i. e. they are *consequentia*) being *qua* being. Similarly, Albert clarifies that the *divina* of the second position are indeed investigated in metaphysics, but only inasmuch as they can be traced back to the simple nature of being *qua* being. Accordingly, they are not the subject of metaphysics as a whole: only being is the subject, while the other “simple forms” are divisions and attributes of being¹⁹⁶.

Second, Albert takes care of explaining how it is possible for metaphysics to prove *passiones* of its subject, given that nothing is external to being *qua* being. This is a problem typical of the medieval doctrines of transcendentals, which Albert solves by resorting to the idea of an *additio* to being which does not presuppose real diversity¹⁹⁷. In addition to this, Albert gives an alternative answer to the problem which is interesting for present purposes: even if metaphysics could not prove any attribute of being in its full scope, it would still prove attributes of the parts of being. Albert claims that this is sufficient for something to be the subject of a science:

Huius tamen et alia est solutio, quoniam etsi daremus, quod enti secundum se nihil possit probari inesse, tamen partibus entis, quae secundum se sunt partes ipsius, multa possunt probari inesse. Et hoc sufficit ad hoc quod aliquid sit subiectum scientiae¹⁹⁸.

We may reformulate Albert’s statements as follows: the task of a science consists in demonstrating some *attributes of its subject and/or of the parts of its subject*. Again, the triad

¹⁹⁵ Cf. [Aertsen 2012], p. 199.

¹⁹⁶ The second position is also wrong, Albert maintains, in its understanding of these simple forms: they do not enjoy separate existence, as Plato would have them.

¹⁹⁷ For Albert’s explicit accounts of the doctrine of transcendentals, including the problem of the *additio* to being, see [Aertsen 2012], pp. 192-196. For the passage under consideration, see [Aertsen 2012], p. 199.

¹⁹⁸ *Metaphysica* 1.1.2, p. 5 ll. 6-11.

“*subiectum, partes, passiones*” seems to convey the fundamental articulation of a science in general, with the following clarification: the *passiones* at stake may belong to the subject as well as to the parts of the subject. In the following section, I shall therefore focus on the triad “*subiectum, partes, passiones*” and highlight its relevance to Albert’s account of the unity of metaphysics.

3. *Subiectum, partes, passiones* and the unity of metaphysics

Both in *Physica* 1.3.18 and in *Metaphysica* 1.1.2 the triad “*subiectum, partes, passiones*” has proved to play a central role in Albert’s epistemological thought, and in the determination of the structure of metaphysics more specifically. As a matter of fact, Albert’s conception of the structure of a science in general derives directly from Aristotle’s *Posterior Analytics* A 28:

A science is one if it is concerned with one genus – with whatever items come from the first things and are parts or attributes of them in themselves¹⁹⁹.

This passage is well-known for stating Aristotle’s requirement for a science to be one: it must deal with a single genus. Without going into the details of the text and its possible interpretations, let us notice that the term “genus” is then specified as to include all that “comes from the first things”, which is further identified with the parts (of the genus) and the *per se* attributes of these parts. In other words, in Aristotle’s description of the unity of science we find the triad “genus, parts, attributes”, which is the direct source of Albert’s “*subiectum, partes, passiones*” given the derivation of the epistemological use of the term “*subiectum*” from Aristotle’s “γένος ὑποκείμενον”.

Turning to Albert’s *Analytica Posteriora* – and in particular to the commentary on the text quoted above –, we find Albert underscoring the presence of the three elements *subiectum, partes, passiones*. Yet such elements are not listed as a triad, but are accompanied by a fourth element: the *principia* (Aristotle’s “first things”), apparently meant as the undemonstrable principles of demonstrations²⁰⁰. All the four elements are strongly connected to the question of the unity of a science:

Dicitur enim scientia una quae est unius generis, hoc est, subjecti. Genus enim est primum subjectum in quolibet ad quod referuntur differentiae et species, sicut ad subjectum primum. Sic ergo ab unitate subjecti dicitur una scientia quae est unius generis, quaecumque ex primis immediatis scilicet principiis componitur, quae principia ad illud unum subjectum referuntur. Et partes etiam subjectivas et integrales sive essentialia habet, ad quae illa principia referuntur, aut etiam referuntur ad passiones horum quaecumque sunt per se passiones subjecti, aut partium ejus subjectivarum, vel essentialium, sive integralium. Ad unitatem ergo scientiae exigitur unitas subjecti in genere; et quod principia ipsius sint ad unitatem et proprietatem subjecti unificata; et tertio exigitur quod habeat partes unificatas subjecto, ita quod sint subjectae ei, vel integrantes, vel

¹⁹⁹ *An. Post.* A 28 (tr. Barnes, slightly modified). *An. Post.* 87a 38-39: “Μία δ’ ἐπιστήμη ἐστὶν ἡ ἐνὸς γένους, ὅσα ἐκ τῶν πρώτων σύγκειται καὶ μέρη ἐστὶν ἢ πάθη τούτων καθ’ αὐτά”.

²⁰⁰ Albert calls them “*prima immediata scilicet principia*” and seems to refer “*quaecumque*” to the science (while ὅσα in Aristotle’s text clearly cannot be referred to ἐπιστήμη).

essentiales ipsi; et quarto, quod passiones quae probantur de ipso subjecto vel partibus ejus, sint per se subjecto et partibus ejus inhaerentes. Ista quatuor requiruntur ad unitatem scientiae²⁰¹.

The first half of the text is Albert's paraphrase of Aristotle's passage. In the second half, Albert draws a conclusion concerning the unity of a science. Four things are required for a science to be one:

1. Generic unity of the subject;
2. Unified principles;
3. Unified parts;
4. Attributes belonging *per se* to the subject or to its parts.

The unification which is at stake in (2) and (3) involves a reference to the one subject of science. In particular, the parts are unified inasmuch as they are parts of the subject – whether they are subjective, integral, or essential parts. Similarly, (4) clarifies that some attributes fall within the consideration of one single science only inasmuch as they belong *per se* to the subject or to its parts. Ultimately, all that falls within the consideration of a single science must be traced back to the subject (possibly not immediately: e. g. the attributes of its parts), which in turn must enjoy a generic unity.

Along these lines we may read again *Metaphysica* 1.1.2, in particular the rejection of the two views that the causes or God are the subject of metaphysics. Albert's criticism was based on a double characterisation of the subject of science: it must be the common predicate of the parts investigated in the science; it must be such that some attributes follow upon it. These two features ascribed to the subject of science correspond precisely to requirements (3) and (4). In other words, Albert's characterisation of the subject of science in *Metaphysica* 1.1.2 can be reformulated as follows: the subject of a science must be able to unify all parts and attributes which the science is supposed to investigate. The unification at stake is necessary for a science to be one, and metaphysics is supposed to be one science. Accordingly, since neither causes nor God can unify the categories (parts) and the metaphysical attributes, neither causes nor God can be the subject of metaphysics.

To sum up, Albert's criticism of the view that causes or God are the subject of metaphysics is grounded on a definite conception of the unity of a science, which ultimately derives from Aristotle's *Posterior Analytics* A 28. On the other hand, it has also been noticed that Albert's arguments derive from Avicenna's *Philosophia prima* I 1-2. Apparently, Albert finds in Avicenna an example of application to metaphysics of Aristotle's views on the unity of a science.

Even more, however, Albert seems to follow Avicenna in specifying at least one aspect of the unity of the scientific consideration of the attributes of a given subject. In *Posterior Analytics* A 28, Aristotle speaks of attributes belonging *per se* to the parts (of the genus). Similarly, in his commentary

²⁰¹ *Analytica Posteriora* 1.5.6 (ed. Borgnet, p. 140, punctuation slightly modified).

on Aristotle's text, Albert states that the attributes which are proved of the subject or of its parts must inhere *per se* to the subject or to its parts, respectively. Whichever notion of inherence *per se* Albert may be implying in this claim, it is noteworthy that in *Metaphysica* 1.1.2 he would employ a different technical term: an attribute must be *immediate* to the subject of science. Speaking of *immediacy*, as already said, has a definite meaning, which traces back to Aristotle's notion of "first" in *Posterior Analytics* A 4. In *Metaphysica* 1.1.2 Albert has thus in mind a connection between the notion of "first" in *Posterior Analytics* A 4 and the conception of the unity of science found in *Posterior Analytics* A 28. Plausibly, such connection is just prompted by Avicenna's *Philosophia prima* I 1²⁰².

Thus far we have read again the *pars destruens* of *Metaphysica* 1.1.2 and observed that it is ultimately grounded on a given conception of the unity of a science in general. In the *pars construens* of *Metaphysica* 1.1.2, Albert expounds and endorses the view that being *qua* being is the subject of metaphysics. Yet it is *Metaphysica* 1.1.3 which establishes that being *qua* being, unlike causes or God, does indeed meet requirements (3) and (4). Said otherwise, *Metaphysica* 1.1.3 is meant to show that the "Peripatetic position" on the subject of metaphysics safeguards the unity of science – in this respect, its title is telling: "*Et est digressio declarans, qua unitate et qualiter sit haec scientia una*". The chapter basically falls into two parts, corresponding to requirements (3) and (4): the first part is devoted to the unity of *subiectum* and *partes*; the second one is devoted to the unity of *subiectum* and *passiones*:

Haec etiam scientia una est, quoniam licet sit de multis, de omnibus tamen illis est, prout reducta sunt in ens ut partes et prout sunt ens consequentia in eo quod est ens. Et ideo ens in omnibus his unitatem habet analogiae, quae unitas non aequivoci omnino, sed est multorum ad unum respicientium, non quidem quod per unam rationem est in illis nec etiam quod per diversam rationem est in eis, sicut quidam male dicunt, sed potius sic, quod illa diversa aliquo modo sunt unius, et ille modus quo sunt unius, est diversus in diversis. Sed quilibet diversorum modorum est eius quod simpliciter unum est, sicut ens simpliciter substantia est et aliquid illius et eiusdem entis est quantitas et aliquid eiusdem qualitas, et sic de aliis, et hac unitate unitur subiectum huius scientiae cum his quae sunt partes eius. Alia autem unitate unitur ad passiones, et haec est immediatio substanti passionibus, quae insunt ei, sicut quaelibet unitur scientia, et tantum extenditur illa unitas, quantum extenditur immediatio subiecti ad quascumque passiones. Omnes enim illae per principia illius et eiusdem scientiae probantur inesse eidem absque mutatione generis subiecti, nec demonstratio mutatur de genere in genus alterum. Et haec est unitas propria scientiae, secundum quod est demonstrativa vel doctrinalis, quia sic cognitio accidentium inesse subiecto maxime confert ad sciendum quod quid est²⁰³.

We may reformulate the first half of the chapter thus: being is indeed a *commune praedicatum* of all *partes* which are investigated in metaphysics, in particular of the categories. In explaining this point, Albert specifies that being is not univocal, but has a unity of analogy, inasmuch as all that falls under it relates to one thing, namely substance. This is the unity, Albert concludes, by which the subject of metaphysics is joint with its *partes*.

²⁰² See the previous section, in particular the connection between Albert's rejection of the view that the causes may be the subject of metaphysics and Avicenna's argument to the effect that the causes *qua* existent cannot be the subject of metaphysics.

²⁰³ *Metaphysica* 1.1.3, p. 5 ll. 61-88.

A different unity, as the second half of the chapter indicates, grounds the conjunction of the subject of metaphysics with its attributes: this unity is described as the *immediatio substandi passionibus*. Said otherwise, Albert is claiming that metaphysical attributes are indeed immediate to being *qua* being – using Aristotle’s terminology in *Posterior Analytics* A 4, being *qua* being is indeed the “first” thing of which metaphysical attributes are proved. The outcome of *Metaphysica* 1.1.3 is that being *qua* being can grant the unity of metaphysics, both as far as the *partes* and as far as the *passiones* are concerned.

Before closing this section, I would make two final remarks on the text just quoted. First, I would notice again the general purport of Albert’s claim about the *immediatio substandi passionibus*: the subject of any science should be immediate with respect to the attributes which are demonstrated. In making this claim, Albert states *explicitly* an epistemological principle which is only *implicitly* suggested by Avicenna’s *Ilāhiyyāt* I 1-2: the subject of science must be the “first” of which given attributes can be demonstrated. This epistemological principle will be stated explicitly again by Scotus in his clarification of the notion of “first subject” of science. In this respect, we may rightfully speak of the introduction of a new epistemological principle, extraneous to Aristotle’s *Posterior Analytics* (though grounded on Aristotelian notions), in the medieval doctrine of science. The introduction of the principle is due to Avicenna, while its first explicit statement is provided by Albert.

Second, in the first half of the passage Albert claims that the several things investigated in metaphysics can be traced back to being “*prout reducta sunt in ens ut partes et prout sunt ens consequentia in eo quod est ens*”. The mention of *partes* and *consequentia* poses a problem which I cannot answer in a conclusive way: which kind of unification does Albert ascribe to the *consequentia*? On one hand, the structure of the chapter suggests that the *consequentia* are not to be identified with the *passiones* mentioned later on, and that their unification in metaphysics – just like the unification of *partes* – is due to the *unitas analogiae* of being, rather than to its *immediatio substandi passionibus*. On the other, the *consequentia* are not mentioned in the final sentence of the first half of the passage (“*et hac unitate unitur subiectum huius scientiae cum his quae sunt partes eius*”); moreover, they are likely to have the status of attributes of being.

I am inclined to believe that the role played by the *consequentia* is similar to the one played by the *partes* and different from the role played by the *passiones*. In particular, I think that Albert might be opposing the term “*passiones*”, which refers to what is demonstrated of something else (i. e. the predicate of the conclusion), to the pair “*partes/consequentia* of being”, which would indicate what metaphysical demonstrations are about (i. e. the subjects of their conclusions). The fact that the *consequentia* have the status of accidents should not disturb us: some divisions of being are just brought about by accidents, such as the division into separate and non-separate being. In this respect, something might even be both a *passio* demonstrated of being and a division of being, of which

further *passiones* are demonstrated: for example, metaphysics might have to demonstrate “separate” of being before moving to the investigation into the class of separate beings. This could explain, for example, why Albert calls “separate” both a *passio* and a *differentia* of being in *Physica* 1.3.18. A wider analysis of Albert’s use of the terms *divisiones*, *differentiae*, *partes*, *passiones*, and *consequentia* would be required to evaluate the hypothesis just expounded.

4. God in metaphysics

Albert’s conception of the unity of a science, being based on the triad “*subiectum*, *partes*, *passiones*”, poses a problem about the claim that God is investigated in metaphysics²⁰⁴. How does God relate to being *qua* being? Apparently, he must fall somehow within the scope of being *qua* being, for otherwise he could not be either a part or an attribute of being and metaphysics could not be a unified science. In fact, there is plenty of evidence to the contrary. Just to give an example, Albert draws a strong connection between the notion of being which is the subject of metaphysics and the *esse primum creatum* of the *Liber de Causis*²⁰⁵. Albert specifies that the subject of metaphysics is “first” because it does not presuppose anything in the domain of intrinsic causation; nonetheless, it presupposes the first cause, from which it stems by creation²⁰⁶. From this one should draw the conclusion that God cannot fall within the scope of being *qua* being, which in turn entails that God cannot be either a *pars* or a *passio* of being. It is therefore unclear why he should fall within metaphysical consideration.

Actually, it has also been suggested that some other statements of Albert’s presuppose the view that God does fall in a division of being *qua* being. In particular, let us return to Albert’s criticism of Averroes’ position in *Physica* 1.3.18. On that occasion, Albert maintains that it is not possible for God and separate substances to be the subject of metaphysics, and this is because they are actually sought in metaphysics. He also claims that being is the subject of metaphysics, and that “separate” is a *differentia* and *passio* of being. Accordingly, “separate” is a *differentia* and *passio* of the subject of metaphysics, rather than the subject itself. Now, it would be quite natural to assume that Albert’s whole discussion should concern both God and separate substances, as they are mentioned at its beginning. As a matter of fact, Albert’s passage has been read as implying that God falls within the scope of “separate being”, which is said to be a division of being²⁰⁷. Were this the case, *Physica*

²⁰⁴ Cf. [Zimmermann 1998], pp. 194-195.

²⁰⁵ For the reception of the notion of *esse primum creatum* in Albert, see [Sweeney 1980b]. I am not going to analyse in detail Albert’s notion of being, which has been the object of several studies. See [Ducharme 1957], [Wieland 1972], [Sweeney 1980a], [Vargas 2013].

²⁰⁶ See [Aertsen 2012], pp. 202-203. For other pieces of evidence concerning the exclusion of God from the scope of being *qua* being, see [Zimmermann 1998], pp. 193-198; [Aertsen 2012], pp. 200-204; [Noone 2013], pp. 549-552.

²⁰⁷ [Noone 2013], pp. 547-548.

1.3.18 would presuppose a notion of being different from “*esse primum creatum*”, which Albert embraces elsewhere. Should this make us think of an evolution in Albert’s notion of being?

That would be difficult to maintain. For one thing, Albert continues to claim that “separate/non-separate” is a *passio* of being in his later *Metaphysica*, where he also clearly endorses a conception of being as created. Accordingly, in the *Metaphysica* the division of separate beings is likely to include only created separate substances. On the other hand, even *Physica* 1.3.18 does not explicitly include God within the scope of being *qua* being. In this respect, it has already been underscored that Albert does not explicitly mention God along with Intelligences in clarifying one of the meanings of “separate”; more generally, his reticence about the exact role of God could be the sign of a reluctance to include God within the division of separate beings.

There is at least one passage of the *Metaphysica* in which Albert claims that God is investigated in metaphysics inasmuch as he is a principle:

Illa vero quam divinam vocamus, est communis omnium, quia licet sit de deo et divinis, est tamen de his, secundum quod illa sunt principia universi esse per hoc quod sunt principia entis vere, secundum quod est ens, et hoc est substantia non nisi ex principiis substantiae, in quantum substantia est, composita²⁰⁸.

On the basis of this passage, and more generally on the basis of Albert’s conception of being as created, Albert’s view on the relation between God and the subject of metaphysics has been maintained to be similar to Aquinas’, which we are going to take into consideration in the next chapter. As we shall see, Aquinas explicitly maintains that a science should investigate into the causes of its subject. Albert, however, does not. The following problem thus remains: how can Albert’s claim on the metaphysical investigation of God as cause of substance harmonise with his insistence on the triad “*subiectum, partes, passionem*” as the ground of the unity of science²⁰⁹?

²⁰⁸ *Metaphysica* 6.1.3, p. 305 l. 75 – p. 306 l. 5.

²⁰⁹ Cf. [Zimmermann 1998], pp. 193-197.

III – Subject and unity of metaphysics according to Aquinas

In this chapter, I shall take into consideration Aquinas' position on the subject and unity of metaphysics. In particular, we shall see how Aquinas identifies being *qua* being as the subject of metaphysics, and try to understand the reasons why, in his view, certain realities – for example separate substances – should fall within metaphysical consideration.

The chapter will be divided into five sections. In the first two sections, I shall outline Aquinas' most relevant texts for the topic, namely *Super De Trinitate* q. 5 a. 4 and the prologue of the *Commentary on the Metaphysics*. In the third section, I shall provide a brief comparison between the essential points of Avicenna's and Aquinas' conceptions of metaphysics, with a particular focus on the place ascribed to God within metaphysical consideration. The fourth section takes into account the place Aquinas ascribes to separate substances in metaphysics. Finally, in the fifth section I will discuss the epistemological grounds of Aquinas' inclusion of God and separate substances within metaphysical consideration.

1. *Super De Trinitate* q. 5 a. 4

In *Super De Trinitate* q. 5 a. 1, Aquinas had included the *theologia* – mentioned by Boethius in *De Trinitate* c. 2 – in a division of theoretical philosophy, identifying it with metaphysics. In *Super De Trinitate* q. 5 a. 4, which is meant to determine whether theology concerns what is without matter and motion, the unqualified identification between theology and metaphysics is missing. Rather, by the end of the article Aquinas draws a distinction between two “theologies”: philosophical theology, on one hand, which is indeed identified with metaphysics, and the *theologia Sacrae Scripturae*, on the other.

The *solutio* of the article is opened by the claim that any science, in as far as it investigates into a given genus as its subject (*genus subiectum*), should also investigate into the principles of that genus:

Sciendum siquidem est quod quecumque scientia considerat aliquod genus subiectum, oportet quod consideret principia illius generis, cum scientia non perficiatur nisi per cognitionem principiorum, ut patet per Philosophum in principio Phisicorum²¹⁰.

The reference to the *genus subiectum* recalls the *Posterior Analytics*, which stand out as the background of Aquinas' conception of science. Yet the statement according to which a science must investigate into the principles of its subject is extraneous to the doctrine of the *Posterior Analytics*. Aquinas substantiates this claim by a reference to the *Physics*; we shall come back to this in the fifth section of this chapter.

²¹⁰ *Super De Trinitate* q. 5 a. 4, p. 153 ll. 82-87.

The *solutio* goes on with a distinction between two kinds of principles: some principles are themselves complete realities (for example celestial bodies, which are among the principles of sublunar bodies); others are not (for example the matter and the form of a material substance). Principles of the second kind can only be investigated inasmuch as they are principles: they are therefore investigated only by the science having their effects as *genus subiectum* (for example, form and matter of material substances are only investigated in the science of material substances). By contrast, principles of the first kind can be investigated both inasmuch as they are principles and in themselves. They can therefore be investigated by two sciences: in the science of their effects, on one hand, and in a science in which they are the *genus subiectum*, on the other.

Next, Aquinas claims that there are principles common to all beings. In particular, resuming an Avicennian distinction between two senses of “common”, Aquinas makes it clear that all beings have principles which are common *per causalitatem*, meaning that a numerically one thing is a principle of all beings²¹¹. Such principles of all beings, Aquinas continues, must be themselves complete realities. Moreover, they must be in act at the highest degree, which entails that they must be immaterial: for these reasons, Aquinas identifies them with the *res divinae*.

Now, the *res divinae* are principles, on one hand, and complete realities, on the other: accordingly, they can be investigated by two distinct sciences. Only one of these sciences, however, can be philosophical: recalling Aristotle’s similitude of the bat in *Metaph. α 1*, Aquinas claims that natural reason cannot reach the *res divinae* except starting from their effects. Accordingly, Aquinas concludes, philosophers cannot enquire into the *res divinae* except in the science of all beings, whose subject is being *qua* being:

[...] unde et huiusmodi res divine non tractantur a philosophis nisi prout sunt rerum omnium principia, et ideo pertractantur in illa doctrina in qua ponuntur ea que sunt communia omnibus entibus, que habet subiectum ens in quantum est ens. Et hec scientia apud eos scientia divina dicitur²¹².

As for the science of the *res divinae* in themselves, it is only possible inasmuch as the *res divinae* reveal themselves. The outcome of the *solutio* is a distinction between two sciences which may be called *theologia* or *scientia divina*:

Sic ergo theologia sive scientia divina est duplex: una in qua considerantur res divine non tamquam subiectum scientiae, set tamquam principia subiecti, et talis est theologia quam philosophi prosequuntur, que alio nomine metaphisica dicitur; alia vero que ipsas res divinas considerat propter se ipsas ut subiectum scientie, et hec est theologia que in sacra Scriptura traditur. Utraque autem est de his que sunt separata a materia et motu secundum esse, set diversimode, secundum quod dupliciter potest esse aliquid a materia et motu separatim secundum esse: uno modo sic quod de ratione ipsius rei que separata dicitur sit quod nullo modo in materia et motu esse possit, sicut Deus et angeli dicuntur a materia et motu separati; alio modo sic quod non sit de ratione eius quod sit in materia et motu, set possit esse sine materia et motu quamvis quandoque inveniatur in materia et motu, et sic ens et substantia et potentia et actus sunt separata a materia et motu, quia secundum

²¹¹ Aquinas distinguishes between principles common *per praedicationem* and principles common *per causalitatem*. His source is Avicenna’s *Liber primus naturalium* I 2.

²¹² *Super De Trinitate* q. 5 a. 4, p. 154 ll. 157-163.

esse a materia et motu non dependent [...]. Theologia ergo philosophica determinat de separatis secundo modo sicut de subiectis, de separatis autem primo modo sicut de principiis subiecti; theologia vero sacre Scripture tractat de separatis primo modo sicut de subiectis [...]²¹³

Philosophical theology is about *res divinae* inasmuch as they are principles of its subject; the theology of the Holy Scripture is about *res divinae* inasmuch as they are its subject. In arguing that both sciences concern what is separated from matter (which is the real goal of the article), Aquinas recalls and elaborates on Avicenna's distinction between two classes of immaterial realities, which scholars of Aquinas have labelled "positively immaterial" and "negatively immaterial"²¹⁴:

- Positively immaterial: realities which cannot exist in matter (e. g. God and angels)
- Negatively immaterial: realities which can exist without matter (e. g. being, substance, etc.)

Positively immaterial realities are said to be the subject of the theology of the Holy Scripture and principles of the subject of metaphysics. On the other hand, negatively immaterial realities would be the subject of metaphysics. This closes Aquinas' *solutio*, giving a positive answer to the question whether divine science concerns what is separated from matter (in both senses of "divine science").

Some aspects of the texts just examined are worth mentioning. First, we find a clear pronouncement on the identity of the subject of metaphysics, which is said to be being *qua* being. By the end of the article, Aquinas says more generally that negatively immaterial realities are subjects of metaphysics. This last statement should plausibly be taken as inaccurate with respect to the identification of being *qua* being – which falls within negatively immaterial realities – as subject of metaphysics. Yet such inaccuracy might be no coincidence. As a matter of fact, Aquinas would maintain that all negatively immaterial realities fall within metaphysical consideration, and the inaccuracy at stake might be due to the attempt to make all negatively immaterial realities fit within the pair "subject-principles". This pair proves to be inadequate to describe the epistemological structure of a science, though. If being *qua* being is indeed the only subject of metaphysics, then one should try to understand how substance, potency, and act fall within metaphysical consideration. As we shall see, a partial answer is explicitly given in the prologue of the *Commentary on the Metaphysics*.

Second, the identification of the whole class of positively immaterial realities as subject of the "theology of the Holy Scripture" is likewise inaccurate. As a matter of fact, in one of the answers to

²¹³ *Super De Trinitate* q. 5 a. 4, p. 154 ll. 175-203.

²¹⁴ This terminology traces back to [Wippel 1984c]. See also [Wippel 2000]. As shown above, Aquinas' distinction between two classes of immaterial realities depends on Avicenna's *Logica* I 1.

the arguments *quod non* Aquinas makes it clear that angels are not the subject of this theology, implying that only God is²¹⁵.

By contrast, in the same answer Aquinas confirms that the whole class of *res divinae*, including angels – or, in a more philosophical vein, “separate substances” or “intelligences” – play the role of principles of the subject of metaphysics:

Set in scientia divina quam philosophi tradunt consideratur de angelis quos intelligentias vocant, eadem ratione qua et de prima causa, que Deus est, in quantum ipsi etiam sunt rerum principia secunda, saltem per motum orbium²¹⁶.

The fact that Aquinas considers separate substances, in addition to God, to be principles of the subject of metaphysics, namely of being *qua* being, is not straightforward. Moreover, as already said, the claim itself that a science should enquire into the principles of its subject is problematic. Before having a closer look at these matters, we shall turn to Aquinas’ later account of the status of metaphysics in the prologue of his *Commentary on the Metaphysics*.

2. The prologue of the *Commentary on the Metaphysics*

In the prologue of the *Commentary on the Metaphysics*, Aquinas observes that wisdom must be the most intellectual science, which in turn must be the science of what is intelligible at the highest degree. He goes on to determine what is intelligible at the highest degrees. On the basis of three different criteria of intelligibility, Aquinas identifies three classes of *maxime intelligibilia*:

<i>Criterion</i>	<i>Maxime intelligibilia</i>
1 Ex ordine intelligendi	Primae causae
2 Ex comparatione intellectus ad sensum	Principia maxime universalialia (ens et ea quae consequuntur ens)
3 Ex ipsa cognitione intellectus	Maxime a materia separata (Deus et intelligentiae)

Aquinas then claims that the three classes of *maxime intelligibilia* must fall within the consideration of one single science:

Haec autem triplex consideratio, non diversis, sed uni scientiae attribui debet. Nam praedictae substantiae separatae sunt universales et primae causae essendi. Eiusdem autem scientiae est considerare causas proprias alicuius generis et genus ipsum: sicut naturalis considerat principia corporis naturalis. Unde oportet quod ad eandem scientiam pertineat considerare substantias separatas, et ens commune, quod est genus, cuius sunt praedictae substantiae communes et universales causae. Ex quo apparet, quod quamvis ista scientia praedicta tria consideret, non tamen considerat quodlibet eorum ut subiectum, sed ipsum solum ens commune. Hoc enim est subiectum in scientia, cuius causas et passiones quaerimus, non autem ipsae causae alicuius generis quaesiti. Nam cognitio causarum alicuius generis, est finis ad quem consideratio scientiae pertingit²¹⁷.

²¹⁵ *Super De Trinitate* q. 5 a. 4 ad 3, p. 155 ll. 239-244: “Ad tertium dicendum, quod scientia divina que est per inspirationem divinam accepta non est de angelis sicut de subiecto, set solum sicut de his que assumuntur ad manifestationem subiecti: sic enim in sacra Scriptura agitur de angelis sicut et de ceteris creaturis”.

²¹⁶ *Super De Trinitate* q. 5 a. 4 ad 3, p. 155 ll. 244-249.

²¹⁷ *In Metaph.*, prooemium.

First, separate realities are said to be the first causes of being – in other words, classes [1] and [3] coincide. Second, Aquinas states that one and the same science should investigate into a given genus and into the principles of that genus: accordingly, the same science should investigate into *ens commune* – which belongs to class [2] – and its principles – classes [1]-[3].

Yet *ens commune* and the first causes are not investigated in the same way by wisdom; in particular, Aquinas states explicitly that only *ens commune* is the subject of wisdom. In so doing, he also states the feature which is supposed to characterise the subject of a science: the subject is the item whose causes and attributes are sought in the science itself²¹⁸. In particular, the causes are not themselves the subject of science; they are rather the goal of the science.

The prologue is closed with two remarks. First, Aquinas underscores the fact that wisdom in its entirety is the science of what is separated from matter, for its subject – *ens commune* – is “negatively immaterial”. Second, he argues that wisdom is given three names – theology, metaphysics, first philosophy – on the basis of the three classes of *maxime intelligibilia* which it investigates:

Dicitur enim scientia divina sive theologia, in quantum praedictas substantias considerat. Metaphysica, in quantum considerat ens et ea quae consequuntur ipsum. Haec enim transphysica inveniuntur in via resolutionis, sicut magis communia post minus communia. Dicitur autem prima philosophia in quantum primas rerum causas considerat²¹⁹.

Aquinas’ account of metaphysics in the prologue of his *Commentary on the Metaphysics* is thus quite similar to his account in *Super De Trinitate* q. 5 a. 4. In both texts, he resorts to “negative immateriality” in order to argue that metaphysics concerns what is separated from matter. In both texts, he claims that a science should investigate into the principles of its subject; on this basis, he argues that separate substances fall within the consideration of metaphysics even though they are not its subject. The subject of metaphysics is said to be being *qua* being in *Super De Trinitate* q. 5 a. 4, *ens commune* in the prologue of the *Commentary*.

In addition to these similarities, some slight changes may be highlighted. First, in the prologue of the *Commentary* any inaccuracy concerning the subject of science is avoided: Aquinas is careful to pose one single “genus” – *ens commune* – as the subject of metaphysics. Which role is then played by the rest of class [2] of *maxime intelligibilia*, namely *ea quae consequuntur ens*? Incidentally, such things are also among the “negatively immaterial” realities which had been called “subjects” of metaphysics in *Super De Trinitate* q. 5 a. 4.

Of course, *ea quae consequuntur ens* cannot fall within metaphysical consideration as causes of *ens commune*. It has rather been shown that they are to be identified with its attributes. In this respect, Aquinas is explicit in describing the task of a science: a science ought to investigate into the

²¹⁸ On the triad *subiectum, passiones, principia* in the *Commentary on the Metaphysics*, see [Galluzzo 2004].

²¹⁹ In *Metaph.*, prooemium.

causes and the attributes of its subject. Accordingly, *ea quae consequuntur ens* fall with good reason within metaphysical consideration as attributes of the subject of science²²⁰.

The view that a science should investigate into the attributes of its subject is quite unproblematic: according to the *Posterior Analytics*, the aim of a scientific demonstration consists exactly in proving the attributes of a given genus. By contrast, the view that a science should investigate into the causes of its subject is more of a problem: I shall therefore focus on this view in the fifth section.

One last remark on Aquinas' identification of the three classes of *maxime intelligibilia* is in order. Of course, the choice of the three classes is no coincidence: being *qua* being, first causes, and separate realities are the objects traditionally associated with metaphysical investigation. The origins of this association lie in Aristotle's pronouncements in several passages of the *Metaphysics* (in particular books A, Γ, and E). Yet it is also interesting to observe that Aquinas could find a similar list of objects – more precisely: God, first causes, being *qua* being – in one single place and in an ordered fashion: in Avicenna's *Philosophia prima* I 1-2, where God, first causes, and being *qua* being are taken into account as possible candidates to the role of subject of metaphysics. It is thus possible that Avicenna's chapters on the subject of metaphysics had a direct influence on Aquinas' composition of the prologue of his *Commentary on the Metaphysics*.

3. God and being: a brief comparison with Avicenna

Both in *Super De Trinitate* q. 5 a. 4 and in the prologue of the *Commentary on the Metaphysics*, Aquinas claims that separate realities, including both God and separate substances, are causes of the subject of metaphysics. Let us first focus on the case of God. In this respect, a comparison with Avicenna's account is instructive. The following table shows Aquinas' fundamental dependence on the Avicennian conception of metaphysics, together with the peculiarities of Aquinas' account²²¹:

	Avicenna	Aquinas
a.	The subject of metaphysics is being <i>qua</i> being	
a'.	Being <i>qua</i> being includes God	Being <i>qua</i> being does not include God
b.	God cannot be the subject of metaphysics	
b'.	Because no science demonstrates the existence of its own subject	Because God cannot be the subject of a philosophical science

²²⁰ Aquinas' idea of a metaphysical investigation of the attributes of being has been studied in detail in [Aertsen 1996] in relation to the doctrine of transcendentals.

²²¹ For a summary of Aquinas' dependence on Avicenna on the points mentioned in the table, see also [Wippel 2007a], pp. 33-39.

c.	God's existence is demonstrated in metaphysics	
c'.	Because "principle" is a proper accident of being – and a science investigates into the accidents of its subject	Because God is a principle of being – and a science investigates into the principles of its subject

[a] Aquinas definitely adopts the Avicennian ontological stance on the subject of metaphysics. Yet the claim that being *qua* being is the subject of metaphysics has a different value for the two authors as far as God is concerned. In Avicenna's view, being *qua* being includes God, the necessary existent, within its scope. As for Aquinas, there is no definite statement in this respect in the texts examined so far. In other places of his works, however, Aquinas unambiguously maintains that God does not fall within the scope of *ens commune*, which only extends to finite beings²²².

[b] Both authors exclude in a categorical way that God may be the subject of metaphysics, yet for slightly different reasons. Avicenna's argument is based on the view that a science cannot demonstrate the existence of its own subject: metaphysics must demonstrate the existence of God for no other science does – accordingly, God cannot be its subject. By contrast, Aquinas' argument – which concerns not only God, but separate realities more generally – is based on the limits of human cognitive capacities:

Quia autem huiusmodi prima principia quamvis sint in se maxime nota, tamen intellectus noster se habet ad ea ut oculus noctue ad lucem solis, ut dicitur in II Metaphisice, per lumen naturalis rationis pervenire non possumus in ea nisi secundum quod per effectus in ea ducimur. [...] unde et huiusmodi res divine non tractantur a philosophis nisi prout sunt rerum omnium principia [...]

Plausibly, Aquinas has indeed in mind the requirement that a science must presuppose its own subject. Yet he makes the general claim that, since human intellects cannot know separate beings except in so far as they are principles of things, philosophical sciences cannot take them into consideration except in so far as they are causes of a given subject. In particular, separate beings cannot be the subject of any philosophical science.

[c] According to both authors, God's existence is demonstrated in metaphysics starting from his effects, inasmuch as God is principle of something else. Yet in *Philosophia prima* I 2 Avicenna claims that the demonstration of something being a principle – which must be taken to be nothing else than a demonstration of God's existence – is part of the investigation into the proper accidents of the subject of metaphysics. Accordingly, the presence of a demonstration of God's existence in metaphysics is justified on the basis of the requirement that a science demonstrate the proper accidents of its subject. By contrast, Aquinas draws a distinction between two tasks of a science: on one hand,

²²² For passages in which Aquinas states in a clear way that God does not fall within *ens commune*, see [Zimmermann 1998], pp. 216-222, and [Doolan 2011], pp. 358-361. Doolan also reports passages in which Aquinas actually maintains that God does not belong to any genus – in particular, he does not belong to the genus "substance". Avicenna would agree that God does not belong to any genus (*Philosophia prima* VIII 4); yet this would not entail, in his view, that God falls outside the scope of being *qua* being.

a science ought to investigate into the attributes of its subject; on the other, it ought to investigate into its causes. The demonstration of God's existence is thus part of the latter, rather than the former, investigation. It must be underscored that, in any case, Aquinas' conception of God as external to the subject of metaphysics would be incompatible with the Avicennian justification of the metaphysical demonstration of God.

One last remark on [c'] is in order. It is true that Avicenna explicitly includes the investigation of the principles of being into the investigation of the attributes of being. Yet in another passage of *Philosophia prima* I 2 he seems to endorse a different view of the structure of metaphysics, which happens to be closer to Aquinas'. We shall come back to this in the fifth section.

4. Separate substances

Aquinas' conception of the position of God in metaphysical enquiry has turned out to be quite clear: God does not fall within the subject of metaphysics and is rather its cause. Moving to the case of separate substances, Aquinas' position is less clear and apparently problematic. On one hand, separate substances are said to be causes of the subject of metaphysics. On the other, they must fall within the subject of metaphysics – suffice it to notice that otherwise being *qua* being could not be said to be “negatively immaterial”.

The apparent incoherence of Aquinas' statements has been noticed and examined in depth in [Doolan 2011]. Doolan has convincingly argued that separate substances fall within metaphysical consideration for two different reasons, and are investigated in different ways accordingly²²³:

1. because they fall within the scope of the subject of metaphysics; in this respect, metaphysics only enquires into separate substances *inasmuch as they are substances*;
2. because they are causes of *ens commune*; only in this respect can they be investigated *inasmuch as they are separate substances*.

As for their being causes, Doolan has also shown that separate substances cannot be said to be causes of the *ens commune* in the same way as God is. In particular, only God can be said to be the cause of *ens commune* in an absolute way (which basically means that God only is a creative cause); separate substances are causes of *ens commune* only in a qualified sense. Yet they are not simply *causae fiendi*, which would make them objects of a physical examination. They are rather *causae essendi* properly speaking. One of the ways – possibly not the only one – in which their causal

²²³ See [Doolan 2011], pp. 362-363.

activity is carried out is by means of celestial movements, as Aquinas states in *Super De Trinitate* q. 5 a. 4: “*sunt rerum principia secunda, saltem per motum orbium*”²²⁴.

5. On the claim that a science investigates into the causes of its subject

Separate realities, including both God and separate substances, are thus investigated by metaphysics inasmuch as they are causes of its subject. In this respect, we have noticed that Aquinas explicitly claims that a science ought to investigate into the causes/principles of its subject: in particular, the triad *subiectum, passiones, principia* seems to describe the articulation of a science in general in the prologue of Aquinas’ *Commentary on the Metaphysics*.

As a matter of fact, the principles are an essential element of scientific demonstrations according to Aristotle’s *Posterior Analytics*. Yet by “principles” Aristotle refers to the principles of demonstrations, namely propositional principles; of these principles, the demonstration ought to assume “that they are”, namely that they are true²²⁵. In one passage, Aristotle even mentions (at least some of) these principles as one of the three elements of scientific demonstrations, along with attributes and subject (genus):

Omnis enim demonstrativa scientia circa tria est, et quecumque esse ponuntur (hec autem sunt genus, cuius per se passionum speculativa est), et que communes dicuntur dignitates, ex quibus primis demonstrant, et tertium passiones, quarum quid significet unaqueque accipit²²⁶.

The triad *subiectum, passiones, principia* thus seems to originate from Aristotle’s *Posterior Analytics*. However, in the prologue of the *Commentary on the Metaphysics* Aquinas refers to the ontological principles of the subject of science, rather than to the principles of demonstration. In this case, the fact “that the principles are” is no longer something the science ought to assume: it is rather something the science ought to investigate.

The “improper use” Aquinas makes of the scheme “subject, attributes, principles” has been noticed and examined in [Galluzzo 2004]. First, Galluzzo has pointed to the fact that Aquinas is well acquainted with the epistemological scheme in question, and that he also makes use of it in a “proper way” in his understanding of the structure of *Metaphysics* Γ, where the role of “principles” is played by propositions such as the principle of non-contradiction²²⁷. Second, Galluzzo has argued that the original model “subject, attributes, principles” of the *Posterior Analytics* and Aquinas’ “improper use” of the same are in fact interconnected. Without going into details, the connection would lie in the fact – implied by *Posterior Analytics* B 11 – that causes figure as middle terms in demonstrations

²²⁴ Aquinas’ statement is based on the view that celestial bodies can be *causae essendi* of the forms of sensible bodies. See [Doolan 2011], pp. 365-380. For an examination of Aquinas’ views on the ways in which a creature can be *causa essendi*, see [Wippel 2007b].

²²⁵ See for example *An. Post.* A 10 76 a31-36.

²²⁶ *An. Post.* A 10 76 b11-16 (tr. Iac. Ven.).

²²⁷ See [Galluzzo 2004], p. 359. For the structure of *Met.* Γ according to Aquinas, see [Aertsen 1996], pp. 136-141.

and are thus what accounts for the inherence of a *per se* attribute in a given subject. Galluzzo draws the conclusion that a science can be described in two ways. On one hand, from the point of view of its deductive structure, a science consists of a subject, of attributes which are proved of the subject, and of *propositional principles* from which demonstrations start. On the other hand, from the point of view of the conceptual content conveyed by demonstrations, a science would consist of subject, attributes, and *ontological principles*, in virtue of which the inherence of attributes is demonstrated²²⁸.

Galluzzo's explanation of Aquinas' "improper use" of the triad "subject, attributes, and principles" is extremely interesting. Yet it must be noticed that, whether such explanation grasps the main reason of Aquinas' choice or not, a perfect correspondence between the roles of propositional principles and of ontological principles in scientific enquiries is to be restricted to demonstrations *propter quid*. Only in this case do ontological principles figure as middle terms within the propositional principles of demonstrations. By contrast, in the case of demonstrations *quia* the effects, rather than the causes, would be middle terms in the premises. Now, it is quite clear that the investigation into first causes which Aquinas ascribes to metaphysics is an investigation which starts from the effects in order to achieve knowledge of the causes, and not vice versa. This is expressly stated in *Super De Trinitate* q. 5 a. 4; in the prologue of the *Commentary on the Metaphysics* Aquinas even claims that the knowledge of first causes is the ultimate goal of metaphysics. This being the case, it would be impossible for Aquinas to argue that first causes fall within metaphysical consideration inasmuch as they figure as middle terms in demonstrations – for the good reason that they do not. In other words, if Aquinas really has in mind a connection between propositional principles and ontological principles, its application to the case of metaphysics is not at all straightforward; in fact, it seems to me that it is ultimately problematic.

Regardless of the significance and doctrinal motivation of Aquinas' claim that a science ought to investigate the causes of its subject, I would also like to take into consideration briefly some possible sources thereof. To begin with, Aristotle definitely plays a prominent role in this respect. For one thing, Aquinas only ever mentions Aristotle in support of his claim in *Super De Trinitate* q. 5 a. 4: more precisely, he refers to *Physics* I 1 in order to state that a science only reaches its completion by means of the knowledge of principles. As for the specific case of metaphysics, Aquinas could also rely on several Aristotelian statements in the *Metaphysics*: suffice it to mention the reference to the investigation into the first causes of being in *Metaphysics* Γ 1.

In addition to Aristotle, and possibly in a more direct and explicit way, some statements of Avicenna's might have exercised decisive influence on Aquinas' views. Let us first consider the following passage:

²²⁸ See [Galluzzo 2004], pp. 360-362.

Potest autem quis dicere quod, postquam ens ponitur subiectum huius scientiae, tunc non potest esse ut ipsa stabiliat esse principia essendi. Inquisitio enim omnis scientiae non est de principiis, sed de consequentibus principiorum. Ad quod respondemus quod speculatio de principiis non est nisi inquisitio de consequentibus huius subiecti [...] ²²⁹

In the original Arabic passage, Avicenna puts forward an objection to his own view that being *qua* being is the subject of metaphysics: in that case, metaphysics would not investigate into the principles of being, for in general a science does not enquire into the principles, but into the attributes of its subject. The passage also reveals that Avicenna would endorse the last point; he would thus make a claim just opposite to Aquinas': a science does not investigate into the principles of its subject. The Latin translation, however, makes Avicenna's point less explicit: the claim that a science enquires into the attributes of the subject is replaced by the phrase "*sed de consequentibus principiorum*".

On the other hand, in the very same chapter Avicenna outlines the structure of metaphysics in the following terms:

Sequitur ergo necessario ut haec scientia dividatur in partes, quarum quaedam inquirunt causas ultimas, in quantum sunt causae omnis esse causati in quantum est esse; et aliae inquirunt causam primam ex qua fluit omne esse causatum in quantum est esse causatum, non in quantum est esse mobile vel quantitativum; et quaedam aliae inquirunt dispositiones quae accidunt esse; et quaedam inquirunt principia scientiarum particularium [...] Igitur quaestiones huius scientiae quaedam sunt causae esse, in quantum est esse causatum, et quaedam sunt accidentalia esse, et quaedam sunt principia scientiarum singularum ²³⁰.

In the passage, Avicenna draws a clear-cut distinction between the parts of metaphysics which would enquire into the first causes and into the absolutely first cause, namely God, and the parts of metaphysics which would enquire into the accidents of being. The passage also suggests that the first causes should be investigated in metaphysics because they are causes of all caused being *qua* caused being.

Leaving aside the parts of metaphysics concerned with the foundation of particular sciences, Aquinas could thus read Avicenna's *Philosophia prima* I 2 as ascribing two distinct tasks to metaphysics: an investigation of causes and an investigation of attributes. Aquinas could also interpret Avicenna's statements as an instance of a general epistemological rule, according to which a science should investigate into the attributes and causes of its subject – especially since Aquinas' subject of metaphysics, namely *ens commune*, may be easily identified with Avicenna's *esse causatum* ²³¹.

Finally, Averroes' claim that the existence of separate substances is demonstrated in physics – as it is expressed in the *Long Commentary on the Physics*, I c. 83 – may suggest that physics, and a science in general, can demonstrate the existence of the principles of its subject. Actually, Averroes states this point explicitly in the *Long Commentary on the Posterior Analytics*, I c. 22, where he maintains that a science can demonstrate the existence of the principles of its subject through a

²²⁹ *Philosophia prima* I 2, p. 13 ll. 47-51.

²³⁰ *Philosophia prima* I 2, p. 14 l. 68 – p. 15 l. 88.

²³¹ As already mentioned, in Aquinas' view God falls outside the subject of metaphysics.

demonstration *quia*²³²; yet the Latin translation of this work was not available to Aquinas²³³. All in all, it seems difficult to include Averroes among the main sources of Aquinas' view.

To sum up, Aquinas' claim that a science ought to take into consideration the principles of its subject definitely relies on Aristotle's statements, and possibly on a passage in Avicenna's *Philosophia prima*. From the point of view of doctrine, it might have been motivated by a connection between propositional principles, on one hand, and ontological principles playing the role of middle terms, on the other. In this case, however, the application of the claim to the case of metaphysics is ultimately problematic, for separate substances certainly do not play the role of middle terms in metaphysical demonstrations.

²³² On these and other relevant passages of Averroes' see [Bertolacci 2007].

²³³ For the Latin translations of the *Posterior Analytics* available in the 13th-century, including a translation from Arabic, see [Brams 2005], pp. 32-34.

IV – Aquinas’ distinction between *abstractio* and *separatio* in *Super De Trinitate* q. 5 a. 3

1. Introduction

In *Super De Trinitate* q. 5 a. 3, Aquinas establishes a distinction between two ways in which the intellect can abstract one thing from another and calls them *abstractio* and *separatio*, respectively. After having distinguished, in turn, two kinds of *abstractio*, at the end of the article Aquinas draws a connection between the two kinds of *abstractio* and *separatio*, on one hand, and the theoretical sciences, on the other. The reasons behind this connection have been the object of much debate in the scholarship, especially as far as *separatio* is concerned. As a matter of fact, Aquinas does not explicitly explain the connection himself; as for *separatio*, he simply states that it belongs to metaphysics, without clarifying the role, if any, it would play within this science or, more generally, in connection with it. The speculation about this in the scholarship, on the other hand, may be traced back, in its general terms, to the discussion about one main point, alternatively maintained and rejected, in different variants, by scholars, namely that *separatio* should be deemed as the operation by means of which the subject of metaphysics is first discovered. Since the subject of a science must be assumed, rather than investigated, in that science, this entails that *separatio* would be the operation which makes metaphysics possible as a philosophical science in the first place. Containing such an important piece of evidence concerning Aquinas’ views on the possibility of metaphysics, *Super De Trinitate* q. 5 a. 3 has deserved more and more attention, especially in discussions about the epistemological status and the foundation of metaphysics – albeit it was admittedly intended by its author to solve an issue concerning mathematics.

In what follows, I would like to discuss about the question of *separatio* and its connection with metaphysics in the context of a thorough analysis of *Super De Trinitate* q. 5 a. 3. First, I shall outline the scholarly debate on the role of *separatio* in metaphysics. I shall then provide a commentary upon the whole text of Aquinas’ *solutio* of q. 5 a. 3. Before drawing some conclusions from the commentary, I shall also tackle some side questions concerning the development of the article and the source of the distinction between *abstractio* and *separatio*, and discuss a philological problem arising from a reading found in Aquinas’ autograph of the text.

2. *Status quaestionis*

The debate about *separatio*, as already said, moves around the thesis that *separatio* plays a foundational role for metaphysics, inasmuch as it is needed in order to discover its subject. According

to whether this thesis is maintained or rejected, scholars who have dealt with the problem of *separatio* can be divided into two groups.

According to the first group, the discovery of the subject of metaphysics would be related to its immateriality: they maintain that the notion of being *qua* being is the outcome of the negative judgement by which being is said not to be material and, as a consequence, the existence of a science beyond physics is established. Why a negative judgement would be needed in order to grasp being *qua* being is a matter which has been explained in different ways by the scholars belonging to this group. Another point of disagreement concerns the ground on which, according to Aquinas, *separatio* would be possible; in particular, whether *separatio* presupposes the discovery of an immaterial being such as God or an immaterial substance, or not. These are the main questions which will be taken into account in the analysis provided below.

According to the other group, by contrast, *separatio* would not be related to the discovery of the subject of metaphysics, thus playing no foundational role. Since Aquinas expressly attributes *separatio* to metaphysics, scholars belonging to this group ought to provide another explanation for this connection.

The debate originated with an article by L.-B. Geiger²³⁴, the first to maintain the thesis of the first group. Some points characterising Geiger's approach need to be highlighted in greater detail here. First, according to Geiger, in q. 5 a. 3 Aquinas would deal with the "subjective aspect"²³⁵ of the division of sciences, after having already analysed it, following Boethius' text, from an objective point of view in q. 5 a. 1. Second, Geiger connects the subjective and the objective points of view maintaining that *separatio* is the subjective act through which the immateriality of being, the object of metaphysics, is established. *Separatio* is thus expressly linked to being²³⁶ and consists in denying that it depends on matter in existence. Third, this negative judgement is essential, according to Geiger, to begin metaphysics, insofar as metaphysics exists as a science higher than physics exactly because of the existence of immaterial beings. Fourth, Geiger maintains that, in order to state, by means of a *separatio*, the immateriality of being, some objective ground is needed. Geiger mentions some texts from Aquinas' *Commentary on the Metaphysics* to support this claim²³⁷; without going into detail, Geiger's point is that, in order to state that being is not material, one must have already established the existence of immaterial beings in physics. Fifth, the main reason why a negative judgement, rather than simple abstraction, would be needed in order to attain the subject of metaphysics is, according to Geiger, that only in virtue of a judgement the immateriality of being may be properly

²³⁴ The article was published in 1947. I quote it from the reprint [Geiger 2000].

²³⁵ Geiger employs the term "subject" in its modern meaning; by contrast, he refers to being as to the object, rather than the subject, of metaphysics.

²³⁶ Even though not exclusively; see [Geiger 2000], p. 152: "[...] la possibilité pour l'être ou la substance ou toute autre notion de ce genre d'être sans matière corporelle".

²³⁷ See [Geiger 2000], pp. 163-164.

comprehended²³⁸. Moreover, Geiger maintains that the transcendental character of being prevents the notion of “being” from being attained through abstraction, insofar as this notion should abstract from both material and immaterial realities, which are beings themselves.

Other scholars belonging to the first group have developed Geiger’s explanations (and provided new ones) of the reason why *separatio*, rather than abstraction, would be needed to grasp being *qua* being²³⁹. This needs not concern us now; among the scholars belonging to this group, I shall only outline Wippel’s position in some detail. Before doing this, however, I would focus on the fourth point mentioned above, namely Geiger’s view that *separatio* presupposes the existence of positively immaterial beings. Since Geiger also maintains that *separatio* is needed to establish the subject of metaphysics, he must conclude that the existence of immaterial beings must be presupposed by metaphysics, as something demonstrated before the properly metaphysical enquiry begins²⁴⁰. Now, this view has been criticised by both Wippel and Aertsen on a common basis, but with different conclusions.

The common basis is the observation that immaterial beings are, for Aquinas, the principles of the subject of metaphysics²⁴¹. Aquinas states this several times in his works, both in passages where he is commenting Aristotle and in more personal passages. Aquinas also maintains that every science investigates the principles of its subject. Therefore, as both Wippel and Aertsen observe, immaterial beings are expressly the goal of metaphysical enterprise according to Aquinas and, accordingly, cannot be its starting-point. Geiger’s view on *separatio*, in other words, reverses the order of scientific enquiry in metaphysics²⁴².

²³⁸ Geiger contrasts “*concevoir l’immatérialité négative de l’être*” with “*concevoir immatériellement l’être*” and maintains that simple abstraction can attain only the latter. I am not entirely sure I can understand Geiger’s point here, but I think he is pointing to a difference between comprehending the fact that being is immaterial, on one hand, and comprehending being without comprehending matter, on the other. See [Geiger 2000], p. 163 and p. 168.

²³⁹ Oeing-Hanhoff, for example, maintains that the concept of being achieved by means of abstraction is not the subject of metaphysics, but of dialectics, and that *separatio* permits the transition from the subject of dialectics to the subject of metaphysics. He also maintains that it is not absolutely certain, before *separatio* takes place, that being is common beyond the physical realm. See [Oeing Hanhoff 1963]. Owens, by contrast, maintains that *separatio* is necessary inasmuch as only a judgement allows one to know something as being. He also states that Conceptualisation can know something until the category of substance; going beyond this requires a judgement. See [Owens 1972]. In his comprehensive study on the subject of metaphysics in the Middle Ages, Zimmermann also embraces the idea that metaphysics is based on *separatio*, but does not provide any reason why this should be so. See [Zimmermann 1998].

²⁴⁰ In particular, demonstrated in physics. As Wippel observes, this would make metaphysics dependent on physics in a stronger sense than the one implied by Aquinas’ usual explanations concerning the order of learning. See [Wippel 1984], pp. 95-102.

²⁴¹ See especially *Super De Trinitate* q. 5 a. 4; *In Metaph.*, prooemium. Aquinas states that not only God, but also separate substances are principles of the subject of metaphysics. For an explanation of how separate substances can be principles of the subject of metaphysics, even though they must fall within its scope, see [Doolan 2011].

²⁴² See [Wippel 1984], pp. 82-102; [Aertsen 1994], pp. 231-232. See Wippel, in particular, for a comprehensive analysis of the evidence in Aquinas’ texts; as for the texts Geiger quotes in support of his thesis, Wippel observes that there Aquinas is writing as a commentator of Aristotle and therefore he is not necessarily expressing his own views ([Wippel 1984], pp.83-88). Moreover, Wippel takes into account, as a possible solution to the problem at stake, the possibility of distinguishing the “First Mover” demonstrated by physics from the “First Cause” demonstrated by metaphysics. Metaphysics would thus presuppose the existence of the former, the existence of the latter being its goal. Wippel denies that this suggestion would work, since he identifies the “First Mover” of physics with an immanent, self-moving mover, which would be of no use to ground *separatio* ([Wippel 1984], pp.94-95). However, this identification is not necessary and Wippel’s suggestion would indeed be a possible solution to the problem he deals with. In particular, physics might

The conclusions Wippel and Aertsen draw from this are very different. From among the premises of Geiger's argument, Wippel drops the view that *separatio* presupposes the existence of positively immaterial beings, while Aertsen drops the thesis that *separatio* is needed in order to discover the subject of metaphysics. Resorting to the division of scholarship into two groups: Wippel still belongs to the first group, while Aertsen belongs to the second.

Wippel thus maintains that *separatio* is needed in order to discover the subject of metaphysics, being as being. Before this discovery, the comprehension one can have of being has not yet been freed from the restriction to matter and motion; it is therefore not possible to undertake the investigation proper to the science of what is not dependent on matter and motion. Wippel also develops one of Geiger's points about why *separatio*, rather than abstraction, should be the operation through which being *qua* being is discovered. According to Wippel, were the concept of being *qua* being reached by a process of abstraction, some unhappy consequences would follow. He states, in particular, that one should abstract from existence itself, which must be retained in the notion of being, "that which is"; moreover, one should abstract from individuating differences, from specific differences and from the differences between categories, relegating them to the realm of non-being, while they ought to be included in the notion of being. In other words, the reasons Wippel adduces lie, on one hand, on the fact that the term "being" derives from *esse*; on the other, on the fact that being is a transcendental notion²⁴³. I shall come back also to this in the conclusion; the point which is most important here – and the one which marks a clear-cut difference between Geiger's and Wippel's approaches – is, however, Wippel's view that *separatio* does not presuppose the knowledge of the existence of a positively immaterial being. Wippel reasons from Aquinas' statement that *separatio* obtains even in cases when something can exist without something else, drawing the conclusion that such a judgement would consist in distinguishing between two different "intelligible contents": that by reason of which something enjoys being, on one hand, and that by reason of which something enjoys a given kind of being, namely material being, on the other²⁴⁴. It should also be mentioned that Wippel takes into account an objection to his approach²⁴⁵, which asks whether mere possibility (of being separated) is sufficient to ground the science of metaphysics. His answer seems to be that, as far as one can distinguish the two "intelligible contents" mentioned above, even the same material being can be studied in two different respects (namely insofar as it is a material being and insofar as it is just a being) and therefore in two sciences²⁴⁶.

well demonstrate the existence of a separate substance as a principle of motion; the task of metaphysics would still be to demonstrate the existence of a principle of being, regardless of whether it is identical with the principle of motion demonstrated in physics or not.

²⁴³ See [Wippel 2000], pp. 48-49.

²⁴⁴ See [Wippel 1984], pp. 102-104, and, for a more extensive and in-depth treatment, [Wippel 2000], pp. 51-62.

²⁴⁵ The objection is by Weisheipl; see [Wippel 2000], p. 60 n. 114.

²⁴⁶ [Wippel 2000], pp. 60-61.

By contrast, Aertsen recognises that *separatio* would presuppose the existence of immaterial beings²⁴⁷. As a consequence, since immaterial beings are the goal of metaphysics, the subject of metaphysics cannot be grounded on *separatio*. It is rather founded, according to Aertsen, by the “reflexive analysis” Aquinas names *resolutio secundum rationem*, which moves from effects to intrinsic causes and eventually reaches being²⁴⁸. Aertsen also distinguishes between two different conceptions of first philosophy to be found in Aquinas, namely the “theologische Synthese” and the “metaphysische Synthese”, the former based on transmateriality, the latter on transcendentality. The theological conception would be, according to Aertsen, a secondary conception for Aquinas, formulated following Boethius and Aristotle, and opposed to his main conception, namely the metaphysical one; Aquinas’ treatment of *separatio* would then belong to the secondary, theological conception. One remark made by Aertsen about this treatment is worth mentioning here. More explicitly than Geiger, Aertsen highlights the strong connection between the division of the objects of theoretical enquiry in q. 5 a. 1, on one hand, and the distinction of different intellectual acts in q. 5 a. 3, on the other. In particular, Aertsen expressly points to the fact that Aquinas’ distinction between *abstractio* and *separatio* exactly corresponds to the bipartition of *speculabilia* in q. 5 a. 1: some objects of theoretical enquiry depend on matter *secundum esse*; other objects do not. To the former, Aertsen goes on, abstraction applies; to the latter it does not, since they are separated²⁴⁹.

I would conclude this survey of scholarship by mentioning another scholar belonging to the second group, namely Porro. Porro’s stated aim is to call into question the significance of the doctrine of *separatio* within Aquinas’ metaphysical project. He believes the act Aquinas calls *separatio* to be adequate only as far as the class of positively immaterial beings is concerned; as for the other class of immaterial realities, namely the class of what is neutrally immaterial, Porro states that abstraction is more suitable than separation, insofar as their immateriality would consist, according to him, in the fact that matter does not belong to their definition or, stated otherwise, in the fact that they do not have an essential dependence on matter²⁵⁰. Porro hypothesises that Aquinas needs *separatio* not in order to define the subject of metaphysics, but rather in order to define the subject of a new science, namely the “theology of Sacred Scripture”, and that he eventually applies to metaphysics as a whole what was originally destined only for its theological part²⁵¹. The reason for this ambiguity lies, according to Porro, in the conflict between Aquinas’ will to distinguish two different divine

²⁴⁷ At least in [Aertsen 1994], p. 231 and 236.

²⁴⁸ See [Aertsen 1994], pp. 233-236; [Aertsen 1996], pp. 130-136. For *resolutio* see also [Aertsen 1989]. Oeing-Hanhoff maintains that it is the subject of dialectics, rather than metaphysics, that is reached at the end of the process of *resolutio secundum rationem*, which consists, according to him, in nothing more than a conceptual analysis. Accordingly, he maintains that *separatio* is needed in order to move to the subject of metaphysics. See Aertsen’s works mentioned above for a critique of these statements (in particular, *resolutio secundum rationem* is not a conceptual analysis and it does indeed reach the subject of metaphysics).

²⁴⁹ See [Aertsen 1994], p. 230.

²⁵⁰ See [Porro 2011], pp. 284-286.

²⁵¹ See [Porro 2011], p. 301.

sciences²⁵², on one hand, and some theses he receives from the tradition, such as the connection of separation to immateriality and the distinction of two kinds of immateriality. As far as the tradition is concerned, Porro also interestingly suggests Avicenna as the source of Aquinas' distinction between *abstractio* and *separatio*²⁵³.

I believe that Aertsen is completely right in maintaining that the distinction between *abstractio* and *separatio* perfectly mirrors the distinction between what is dependent on matter *secundum esse* and what is not; this, I think, emerges more and more clearly as Aquinas' text goes on and is, ultimately, the only way to understand it correctly in its entirety. I also believe Aertsen is right in maintaining that the process Aquinas calls *resolutio* is the one through which human intellects reach the subject of metaphysics. The significance and the role played by *resolutio*, however, as well as the relation between commonness and immateriality, are questions lying beyond the scope of this chapter.

In what follows, I will focus on the problems concerning *separatio* emerged in this *status quaestionis* and, more generally, on Aquinas' distinction between *abstractio* and *separatio* in *Super De Trinitate* q. 5 a. 3. I shall try to touch upon all the questions mentioned so far and to provide a ground for answering them while commenting upon the whole solution of Aquinas' article.

3. The *solutio* of the article: a commentary

Aquinas' answer to the question raised in q. 5 a. 3 can hardly be divided into clearly distinct sections; it is rather a continuous argument examining more and more in depth how the intellect can distinguish one thing from another. The following *divisio textus* is therefore in a way arbitrary; nonetheless it mirrors quite faithfully the structure of Aquinas' argument and is useful to highlight its main steps.

0	Introduction	ll. 86 – 89
1	Possibility of abstraction according to the operations of the intellect	ll. 89 – 158
1.a	Two operations and their objects	ll. 89 – 105
1.b	Abstraction requirement for the second operation	ll. 105 – 118
1.c	Abstraction requirement for the first operation	ll. 118 – 158
2	<i>Abstractio</i> and <i>separatio</i>	ll. 159 – 274
2.a	Distinction between <i>abstractio</i> and <i>separatio</i>	ll. 159 – 173
2.b	<i>Abstractio</i>	ll. 173 – 274
2.b.1	Two kinds of abstraction	ll. 173 – 179
2.b.2	<i>Formae a materia</i>	ll. 180 – 202

²⁵² Namely metaphysics and revealed theology.

²⁵³ See [Porro 2011], pp. 288-299.

2.b.3	<i>Totius a partibus</i>	ll. 203 – 238
2.b.4	Exhaustiveness of the division of abstraction	ll. 239 – 274
3	Conclusion	ll. 275 – 290

The following commentary is structured according to this *divisio textus*. Aquinas' text is quoted in its entirety.

Section "0 – Introduction"

Responsio. Dicendum, quod ad evidentiam huius quaestionis oportet videre qualiter intellectus secundum suam operationem abstraere possit.

Starting his *solutio*, Aquinas states explicitly what has to be clarified in order to answer the question raised in q. 5 a. 3 (namely whether mathematics investigates things which are in matter without taking into account motion and matter). To that end it is necessary, according to him, to see in which ways the intellect can abstract one thing from another. It is worth remarking that here Thomas is employing the verb *abstraere* to convey a most general meaning²⁵⁴: in this first sense, the term “abstraction” can refer to any act of the intellect by means of which the intellect is able to distinguish one thing from another.

Section 1 – “Possibility of abstraction”

(1.a) Two operations and their objects

Sciendum est igitur quod secundum Philosophum in III De anima duplex est operatio intellectus: una quae dicitur intelligentia indivisibilium, qua cognoscit de unoquoque quid est, alia vero qua componit et dividit, scilicet enuntiationem affirmativam vel negativam formando. Et hee quidem due operationes duobus que sunt in rebus respondent. Prima quidem operatio respicit ipsam naturam rei, secundum quam res intellecta aliquem gradum in entibus obtinet, sive sit res completa, ut totum aliquod, sive res incompleta, ut pars vel accidens. Secunda vero operatio respicit ipsum esse rei, quod quidem resultat ex congregatione principiorum rei in compositis, vel ipsam simplicem naturam rei concomitatur, ut in substantiis simplicibus.

In order to see in which ways the intellect can abstract, Aquinas recalls immediately the fundamental distinction, hinted at by Aristotle in *De Anima* Γ 6²⁵⁵, between two operations of the intellect. Following Aristotle, these operations are described by Aquinas as *intelligentia indivisibilium* and the operation by means of which the intellect composes and divides, respectively. The first operation is further characterised as the one through which the intellect knows, about anything, what it is, while the other operation is said to compose and divide by forming affirmative and negative judgements, respectively.

The next step of Aquinas' argument introduces a distinctive feature of his, connecting the distinction between two operations with another distinction, extraneous to Aristotle's *De Anima* and

²⁵⁴ Cf. [Wippel 2000], pp. 23-24.

²⁵⁵ Aristotle does not speak about two operations of the intellect, but distinguishes between that in which the intellection of indivisibles takes place and that in which a composition occurs.

ultimately deriving from Avicenna, namely the distinction between essence and existence²⁵⁶. As Aquinas states, the first operation of the intellect (henceforth: Conceptualisation) refers (*respicit*) to the nature, or essence, of things (*ipsam naturam rei*), while its second operation (henceforth: Judgement) refers to their being (*ipsum esse rei*). I shall take it for granted that, employing the term *esse*, Aquinas is here referring to a thing's actual existence²⁵⁷. For reasons which will become clear, I would say that, in drawing the connection between the two operations of the intellect, on the one hand, and the essence/existence pair, on the other, Aquinas means precisely the following: while Conceptualisation performs its function taking into account only the essence of things, Judgement must factor in how things are in their actual existence²⁵⁸. In other words, a concept/definition can be said to correspond to something if it grasps the essence of that thing successfully, while a judgement is true if it mirrors how things actually are.

This is the ground for all the following discussion and will already play a decisive role in sections (1.b) and (1.c)²⁵⁹, where the requirements are clarified which must be fulfilled for one thing to be abstracted from another.

(1.b) Abstraction requirement for the second operation

Et quia veritas intellectus est ex hoc quod conformatur rei, patet quod secundum hanc secundam operationem intellectus non potest vere abstraere quod secundum rem coniunctum est; quia in abstrahendo significaretur esse separatio secundum ipsum esse rei, sicut si abstrao hominem ab albedine dicendo 'homo non est albus', significo esse separationem in re, unde si secundum rem homo et albedo non sint separata, erit intellectus falsus. Hac ergo operatione intellectus vere abstraere non potest nisi ea que sunt secundum rem separata, ut cum dicitur 'homo non est asinus'.

²⁵⁶ As far as I know, the connection between the two operations of the intellect and the Avicennian pair essence/existence is not itself Avicennian, as stated in [Geiger 2000].

²⁵⁷ Wippel provides an analysis of this point based on other texts where Aquinas distinguishes different meanings of *esse* and argues that in this passage *esse* must mean the actual existence of a thing. See [Wippel 2000], pp. 24-25. Wippel mentions as a possible objection the fact that Aquinas shortly after states that this *esse* results, in compounds, from the joining together of their principles. In order to resolve this problem, Wippel takes this to mean that the *esse* of compounds is specified by their essence. Were this the case, however, Aquinas could have stated the same for separate substances, which he does not (he states that, in the case of separate substances, *esse* accompanies the simple nature of the thing). I think Aquinas simply means that a material thing exists in act only as far as its matter has received a substantial form. For Wippel's solution, see [Wippel 2000], pp. 29-31 See also pp. 27-30 for other texts where Aquinas connects Conceptualisation with essence and Judgement with *esse*.

²⁵⁸ I do not believe, as Wippel does, that here Aquinas is hinting at a role played by Judgement in discovering being as real in order to achieve a pre-metaphysical comprehension of being. Cf. [Wippel 2000], pp. 35-44, for a reconstruction by Wippel of how this pre-metaphysical comprehension should be achieved. More generally, I am not sure about the thesis, maintained by Wippel and several other scholars, that the connection between Judgement and *esse* should be meant as implying that it is through Judgement that the intellect grasps the existence of things. This topic lies beyond the scope of this work and I shall not deal with it; for an in-depth discussion, see [Wippel 2000], pp. 24-35. I restrict myself to saying that, in my opinion, none of the texts Wippel quotes forces upon us the interpretation according to which Judgement grasps existence.

²⁵⁹ For this reason, I think it should be rejected as harmful to the comprehension of Aquinas' article in its entirety Wippel's view that Aquinas is here speaking of a given kind of judgment, namely a positive judgement grasping existence, as opposed to the negative judgement he will call *separatio*. See [Wippel 2000], pp. 46-47: "If he has described judgement as being directed towards a thing's *esse* at the very beginning of this article, he now seems to be thinking of a different kind of judgement. In his earlier reference to judgement and *esse* he seemed to have in mind a positive or affirmative judgement, and one which is best illustrated by judgements of existence when it comes to our discovery of being as real or as existing". Rather, Aquinas' mention of judgement and *esse* is meant to highlight a feature of every judgement, namely its being directed towards *esse*, even of the judgement Aquinas will call *separatio*. In fact, the significance of *separatio* cannot be properly appreciated but against the background of the connection between judgement and *esse*.

The distinction between the two operations of the intellect is essential to Aquinas' overall argument, insofar as different "abstraction requirements" correspond to them. The abstraction requirement for Judgement is outlined by Aquinas first and quite quickly (18 lines in the critical edition), compared to his treatment of the abstraction requirement for Conceptualisation (41 lines). Even though these data are not vital to the interpretation maintained here, they strongly suggest that Aquinas deals with the abstraction requirement for Judgement only to exhibit a contrast between Judgement and Conceptualisation, which is his main concern here. This approach will come to light again, and even more clearly, in section (2).

Aquinas states the following requirement for abstraction according to Judgement: "according to this second operation the intellect cannot abstract truthfully that which is conjoined in reality (*quod secundum rem coniunctum est*)". This is so because the truth of the intellect consists in its conforming to the thing; therefore, the intellect would not be truthful if it abstracted according to its second operation that which is united *secundum rem*. This, in turn, is due to the fact that Judgement aims at the very being of things (their actual existence), so that its abstraction, which indicates a separation in being, can only hold true if the abstracted thing actually exists²⁶⁰ without that from which it is abstracted.

Aquinas provides two examples to illustrate the possibility of abstraction according to Judgement (in particular, one case in which abstraction is possible and one in which it is not). From a pedagogical point of view, these are very helpful to grasp Aquinas' point concerning the abstraction requirement for Judgement; however, they also turn out to be quite misleading in the overall theoretical framework of Aquinas' article and therefore deserve some attention.

The first example consists in the abstraction of man from white, which is expressed in the judgement "man is not white": Aquinas explains that this abstraction is not correct if man and whiteness are not separated in reality. The fact that Aquinas specifies a condition under which the judgement "man is not white" is false – and both the condition itself and the way Aquinas puts it forth linguistically suggest that it might not be fulfilled – seems to suggest that the very same judgement could be true, namely in the case man and whiteness are separated.

On the contrary, no condition is imposed on the judgement in the second example and it is straightforward to understand why it is so. The example consists in the abstraction of man from donkey, which is expressed in the judgement "man is not donkey". This judgement is of course true, since man and donkey are separated in reality, and the abstraction in this case is therefore correct. Moreover, there is no condition to fulfil for the judgement to be true, since man and donkey are necessarily separated.

²⁶⁰ With hindsight, it would be better to say: "can actually exist".

At first glance, the two examples together might suggest that abstraction according to Judgement is correct only when the abstracted thing and that from which it is abstracted are necessarily separated in reality, so that the abstraction of man from donkey is correct, while the abstraction of man from white is not. However, this interpretation is not only contradicted by the following sections of Aquinas' text, but it is also at odds with the very fact that Aquinas specifies a condition for the judgement "man is not white" to be false²⁶¹. This being the case, two questions are to be answered in order to prevent any possible misunderstanding.

The first one is the following: why does Aquinas exemplify the correctness of abstraction according to Judgement with a judgement concerning a pair of necessarily separated things if (as we shall see) being necessarily separated is not the requirement for two things to fulfil in order to make the abstraction correct? This is not a real problem, after all: although two things being necessarily separated is not a necessary condition, it is of course a sufficient condition for the correctness of abstraction according to Judgement. However, if there is a reason – and there does not have to be – behind Aquinas' choice of necessarily separated things, it might be the following: here, at the beginning of his article, he tries to give an example in which, even from a naive perspective and without any further assumptions, abstraction is unequivocally correct and unobjectionable.

The second question concerns the other example and is more of a problem than the first one, so it requires a satisfactory answer to fit in with the overall theory of abstraction Aquinas is going to develop in the article. The question is: what does it mean that the abstraction expressed in the judgement "man is not white" is not correct under a given condition, namely if man and whiteness are united in reality? Of course, a judgement is true under the condition that it conforms to reality; however, it is possible to ask: given the state of affairs obtaining when Aquinas was writing this article, was the judgement "man is not white" true or false? From the way Aquinas puts it, it seems to me that there is no answer to this question, and that the very reason why Aquinas expresses a condition for the judgement to be false is that the truth value of the judgement depends on the particular man who is taken into account. I am therefore inclined to deem Aquinas' example as involving an individual judgement, as if the two terms of the abstraction properly were "*this* man" and "white". The importance of establishing this point will become clear only later on, as Aquinas' article is eventually to imply that the abstraction according to Judgement of "man" from "white" is, generally speaking, correct.

(1.c) Abstraction requirement for the first operation

Set secundum primam operationem potest abstraere ea que secundum rem separata non sunt, non tamen omnia, set aliqua. Cum enim unaqueque res sit intelligibilis secundum quod est in actu, ut dicitur in IX Metaphisicæ, oportet quod ipsa natura sive quidditas rei intelligatur vel secundum quod

²⁶¹ This plain contradiction may be avoided, though, by adopting the view according to which "man is not white" is employed by Aquinas as an individual judgement: see the second question below.

est actus quidam, sicut accidit de ipsis formis et substantiis simplicibus, vel secundum id quod est actus eius, sicut substantie composite per suas formas, vel secundum id quod est ei loco actus, sicut materia prima per habitudinem ad formam et vacuum per privationem locati; et hoc est illud ex quo unaqueque natura suam rationem sortitur. Quando ergo secundum hoc per quod constituitur ratio nature et per quod ipsa natura intelligitur, natura ipsa habet ordinem et dependentiam ad aliquid aliud, tunc constat quod natura illa sine illo alio intelligi non potest, sive sint coniuncta coniunctione illa qua pars coniungitur toti, sicut pes non potest intelligi sine intellectu animalis, quia illud a quo pes habet rationem pedis dependet ab eo a quo animal est animal; sive sint coniuncta per modum quo forma coniungitur materie, ut pars comparti vel accidens subiecto, sicut simum non potest intelligi sine naso; sive etiam sint secundum rem separata, sicut pater non potest intelligi sine intellectu filii, quamvis iste relationes inveniantur in diversis rebus. Si vero unum ab altero non dependeat secundum id quod constituit rationem nature, tunc unum potest ab altero abstrahi per intellectum ut sine eo intelligatur non solum si sint separata secundum rem, sicut homo et lapis, set etiam si secundum rem coniuncta sint, sive ea coniunctione qua pars et totum coniunguntur, sicut littera potest intelligi sine sillaba set non e converso, et animal sine pede set non e converso; sive etiam sint coniuncta per modum quo forma coniungitur materie et accidens subiecto, sicut albedo potest intelligi sine homine et e converso.

Aquinas begins his discussion of abstraction according to Conceptualisation stating immediately that this is not subject to the constraints imposed on abstraction according to Judgement: unlike Judgement, Conceptualisation can abstract one thing from another even when they are not separated in reality. In the very same sentence, however, Aquinas makes clear that some constraint is imposed on abstraction according to Conceptualisation as well: “*non tamen omnia, set aliqua*”.

Such constraint is specified shortly after: when a quiddity/nature/essence depends on something else from the point of view of that through which the “notion of the nature” (*ratio nature*) is constituted and the nature itself is grasped by the intellect, then the former cannot be comprehended without the latter. In other words, the necessary condition for a thing to be abstracted from another according to Conceptualisation is that the former should not depend on the latter essentially, where “essentially” is meant to point to the kind of dependence described by Aquinas. This necessary condition might indeed not be fulfilled; moreover, this can happen regardless which relationship obtains between the two things in their actual existence. In particular, Aquinas distinguishes three cases²⁶² and gives an example of impossibility of abstraction for each of them:

- A. The two things are conjoined in the way a part is conjoined to the whole; for example, “foot” cannot be comprehended without the notion of “animal”;
- B. The two things are conjoined in the way form is conjoined to matter (which is the kind of conjunction between a part and another part and between an accident to its subject); for example, “snub” cannot be comprehended without “nose”;
- C. The two things are separated in reality; for example, “father” cannot be comprehended without “son”, even though such relatives exist in different things.

On the other hand, when one thing does not depend on another essentially, the former can be abstracted from the latter: in other words, one thing not depending on another is also a sufficient

²⁶² It seems that Aquinas deems this tripartition exhaustive.

condition for the possibility of abstraction according to Conceptualisation. Again, Aquinas gives examples of the possibility of abstraction for each of the three possible relationships of two things in their existence:

- C. The two things are separated in reality; for example, “man” and “stone”²⁶³;
- A. The two things are conjoined in the way a part is conjoined to the whole; for example, “letter” can be comprehended without “syllable” (but not vice versa) and “animal” can be comprehended without “foot” (but not vice versa);
- B. The two things are conjoined in the way form is conjoined to matter; for example, “whiteness” can be comprehended without “man” (and vice versa).

As for case (C), it would seem obvious that two things existing independently of each other can also be thought of independently of each other, if Aquinas had not already given an example of things separated in reality, namely “father” and “son”, which cannot. However, relative terms should be considered the exception rather than the rule and are probably the only case of essential dependence between things distinct in reality.

Two examples are given of the possibility of abstraction in case (A): in the first one, a part can be abstracted from its whole, while the latter cannot be abstracted from the former; in the second one, it is the other way round, with the whole being apt to be abstracted from the part and the latter depending on the former essentially²⁶⁴. This is the only point so far in which it comes to light clearly that the relation of essential dependence is not symmetric²⁶⁵. Another fact worth noticing is that different <part, whole> pairs behave differently with respect to the relation of essential dependence: in some of them, it is the part which depends on the whole, while in others the whole depends on the part. This difference with respect to essential dependence will turn out to be a systematic one, which Aquinas will explain by referring to a traditional, Aristotelian distinction between two kinds of parts.

As for case (B), Aquinas illustrates both the possibility and the impossibility of abstraction through <accident, subject> pairs, so we shall focus on these for now. Aquinas gives an example of accident and subject such that each one of them can be comprehended without the other; moreover, he had previously given an example of accident which cannot be comprehended without its subject. Aquinas will not state explicitly how abstraction works in the case of accident and subject, but it is reasonable to assume that the subject never depends on any of its accidents essentially, so that it must always be apt to be abstracted from all of its accidents. As for the abstraction of an accident from its

²⁶³ Aquinas does not specify that one of the two things can be comprehended without the other, but of course he has in mind that both “man” can be comprehended without stone and the other way round.

²⁶⁴ Indeed, Aquinas had already employed the same pair (foot, animal) to exemplify the impossibility of abstraction (foot cannot be abstracted from animal).

²⁶⁵ In fact, it will turn out later that, given a part and its whole, exactly one of the following holds true: either the part depends on the whole or the whole depends on the part essentially.

subject, it may be interesting to notice that the accidents which cannot be abstracted can be precisely isolated from the others resorting to Aristotelian terminology: they are the accidents belonging *per se* to their subject according to the second meaning of *per se* which is found in *An. Post. A 4*²⁶⁶.

Before moving to section (2), one more remark concerning section (1) in its entirety is in order. The distinction between abstraction according to Judgement and abstraction according to Conceptualisation which Aquinas develops in section (1) rests solely on the operation by which the act of abstracting, namely distinguishing one thing from another, is performed. Accordingly, one thing (let it be X) might well be abstracted from another (let it be Y) both according to Judgement and according to Conceptualisation²⁶⁷. The meaning of one kind of abstraction would of course be very different from the meaning of the other²⁶⁸; however, it must be stressed that, as they are defined in section (1), their ranges of application are not mutually exclusive.

This being the case, it is sensible, given two terms X and Y, to compare the possibility of abstraction according to Conceptualisation with the possibility of abstraction according to Judgement. Leaving aside the case of relative terms, which display an essential dependence on each other in spite of their being separated in reality, it can be noticed that abstraction according to Conceptualisation is viable whenever abstraction according to Judgement is²⁶⁹. In other words, things existing independently of each other can also be thought of independently of each other (or, equivalently, one thing depending on another essentially must exist in conjunction with it). On the other hand, there are cases in which Conceptualisation can abstract while Judgement cannot, namely when one thing does not depend on another essentially albeit it is conjoined with the latter in reality. Consequently, for any two terms X and Y, one of the following three must obtain: both Conceptualisation and Judgement can abstract X from Y; only Conceptualisation can abstract X from Y; neither Conceptualisation nor Judgement can abstract X from Y.

I believe the case of relative terms could be accommodated in this frame as well, maintaining that the relevant judgement through which abstraction according to Judgement should be accomplished is not “X is not Y”, but rather “X is without Y”²⁷⁰. I am not sure Aquinas would opt

²⁶⁶ See also *Metaphysics Z 5*, where this meaning of *per se* is explicitly recalled and Aristotle’s examples are the same as the ones Aquinas employs in this section, namely “snub” as a *per se* accident of “nose” and “white” as an accident of “man” which is not *per se*.

²⁶⁷ For example, let X be “man” and Y be “stone”.

²⁶⁸ In the first case (Judgement), the distinction would amount to the statement “X is not Y”, while in the second case (Conceptualisation) it would amount to comprehending X without comprehending Y.

²⁶⁹ Here I am assuming that all possible examples of impossibility of abstraction according to Conceptualisation concerning things separated in reality are examples of relatives, just like “father” and “son”.

²⁷⁰ In the “father-son” example, it would be “The father is without a son” or something similar (“The father does not have a son”, “The father is not [father] of a son”). This is not an *ad hoc* solution to prevent relative terms, separated in reality, from being abstracted from each other by Judgement; rather, the negative Judgement “X is not Y” is not even adequate to explain why certain things conjoined in reality cannot be abstracted from each other (to use one of Aquinas’ examples, let X be animal and Y be foot).

for this solution; in fact, there are reasons to suspect he would not²⁷¹. I am quite sure, however, that the idea of a definite order between abstraction according to Conceptualisation and abstraction according to Judgement lies behind Aquinas' argument in this article. From the ontological point of view, this order between the two abstractions is due to the order between, as it were, an essential and an existential level: things must exist necessarily according to their essence, even though, in their actual existence, they can display features not explicitly included in their essence.

Section 2 – “Abstractio and separatio”

(2.a) Distinction between abstractio and separatio

Sic ergo intellectus distinguit unum ab altero aliter et aliter secundum diversas operationes: quia secundum operationem qua componit et dividit distinguit unum ab alio per hoc quod intelligit unum alii non inesse, in operatione vero qua intelligit quid est unumquodque, distinguit unum ab alio dum intelligit quid est hoc, nichil intelligendo de alio, neque quod sit cum eo, neque quod sit ab eo separatum; unde ista distinctio non proprie habet nomen separationis, set prima tantum. Hec autem distinctio recte dicitur abstractio, set tunc tantum quando ea quorum unum sine altero intelligitur sunt simul secundum rem: non enim dicitur animal a lapide abstrai si animal absque intellectu lapidis intelligatur.

The beginning of (2.a) is actually a summary of the findings of section (1) and a conclusion thereof. However, an important development is introduced in the close of (2.a) which is of great relevance to interpreting what follows. For present purposes it is therefore appropriate to deem it as the beginning of section (2).

The first part of (2.a), namely the conclusion drawn from section (1), is interesting because it expresses explicitly some central points of section (1). Firstly, Aquinas states that the intellect distinguishes one thing from another in different ways according to its different operations. Secondly, he clarifies the distinctions accomplished by the two operations: according to Judgement, the intellect distinguishes two things by understanding that the one is not in the other (*unum alii non inesse*); according to Conceptualisation, it distinguishes one thing from another by comprehending what the former is without any comprehension of the latter. In particular, through this kind of distinction the intellect does not understand that the former exists with the latter, nor does it understand that the former exists separated from the latter. This is why abstraction according to Conceptualisation cannot be properly named *separatio*, but only abstraction according to Judgement can.

Having given a proper name to abstraction according to Judgement, Aquinas indicates also how abstraction according to Conceptualisation should be called. However, while doing so, he also states a condition for the name to be fitting: the distinction performed by Conceptualisation is to be called *abstractio*, but only in the case the two things one of which is comprehended without the other

²⁷¹ I will come back to this later.

are unite in reality. Aquinas gives an example to illustrate his point: “animal” is not said to be abstracted from “stone” when it is comprehended without the notion of “stone”.

The remaining part of section (2) is entirely devoted to analysing *abstractio*. The other kind of intellectual distinction, namely *separatio*, is not examined further by Aquinas in its own right; rather, it is taken into account again, together with *abstractio*, only in the conclusion of the article, namely section (3). Admittedly, Aquinas mentions *separatio* twice in section (2.b.4), but it must be stressed that, in so doing, he actually aims at making a point about *abstractio*. Again, all of this is further evidence of the fact that Aquinas’ real focus in this article is *abstractio*, rather than *separatio*.

Before moving to Aquinas’ treatment of *abstractio* in section (2.b), it might be helpful to highlight some aspects of Aquinas’ account in (2.a). The main point to be noticed is that, unlike the distinction between abstraction according to Judgement and abstraction according to Conceptualisation drawn in section (1), the distinction between the proper meanings of *separatio* and *abstractio* in (2.a) does not rest solely on the distinction between the two operations of the intellect and the different significance of their respective ways of distinguishing one thing from another. In particular, it factors in a further element, namely the range of application of the acts in question: *separatio* is abstraction according to Judgement, while *abstractio* is abstraction according to Conceptualisation *when* this is applied to things which are unite in reality.

Aquinas’ point is quite straightforward and could be explained thus: in order to speak sensibly of a thing actually being abstracted from another, it is required that the two things be grasped together in the first place. However, Aquinas’ statement that *abstractio* concerns only things which are unite in reality leaves room for the same ambiguity as the one which was highlighted in section (1): is Aquinas referring to necessarily conjoined things or, more generally, also to things which only happen to be conjoined? The example of “animal” and “stone” would seem to suggest the latter by implying that *abstractio* is not suitable just in the case of necessarily separated things²⁷².

Indeed, it is not at all unconceivable that Aquinas could be isolating a meaning of *abstractio* according to which *abstractio* can apply whenever two things are not necessarily separated; in section (2.b.4) one even finds a clue of the fact that Aquinas might have had this meaning in mind as a weak sense of *abstractio*. The very same passage, however, leaves no doubt about the fact that the most proper meaning of *abstractio* in q. 5 a. 3 – that in which Aquinas is eventually most interested – is the one which restricts its application to necessarily conjoined things. *Separatio* and *abstractio* turn out unambiguously to have mutually exclusive ranges of application: *separatio* applies to things which are not unite in reality, *abstractio* to things which are. The notion of “being unite in reality”

²⁷² Again, this is not conclusive evidence, since the example only shows that being necessarily separated is a sufficient reason, not also a necessary reason, for the abstraction not to take place.

which is relevant here, as will become clear, is not as obvious as one would expect and needs clarifying further: speaking about “things unite in reality” or “(necessarily) conjoined things” will eventually turn out to be even inaccurate, since the relation “X is conjoined with Y” will prove not to be symmetric.

(2.b) Abstractio

(2.b.1) Two kinds of abstraction

Unde cum abstractio non possit esse proprie loquendo nisi coniunctorum in esse, secundum duos modos coniunctionis predictos, scilicet quo pars et totum uniuntur, vel forma et materia, duplex est abstractio: una qua forma abstrahitur a materia, alia qua totum abstrahitur a partibus.

Since Aquinas, as already emerged in section (1), in this article classifies the relationships between things unite in reality under two general ways of conjunction, namely the conjunction between part and whole and the conjunction between matter and form, and since he has just stated²⁷³ that *abstractio* concerns only what is unite in reality, he draws the conclusion that there are only two abstractions²⁷⁴: the abstraction of form from matter and the abstraction of the whole from its parts, whose significance will be explained in sections (2.b.2) and (2.b.3), respectively.

Actually, the conclusion does not follow from the premises and Aquinas is here implicitly assuming that there is no abstraction of a part from its whole or of matter from form. The proof of this will be given in section (2.b.4), which I labelled “exhaustiveness of the division of abstraction”. This label does not mean that section (2.b.4) is concerned with the division of abstraction into two general kinds (namely those corresponding to matter-form conjunction and part-whole conjunction), the exhaustiveness of this being already clear by the beginning of section (2.b). Rather, the aim of section (2.b.4) is to prove that, *within* each of the two general kinds, there is no possible abstraction but in the ways specified in sections (2.b.2) and (2.b.3).

(2.b.2) Formae a materia

Forma autem illa potest a materia aliqua abstrahi, cuius ratio essentie non dependet a tali materia, ab illa autem materia non potest forma abstrahi per intellectum a qua secundum sue essentie rationem dependet; unde cum omnia accidentia comparentur ad substantiam subiectam sicut forma ad materiam, et cuiuslibet accidentis ratio dependeat ad substantiam, impossibile est aliquam talem formam a substantia separari. Set accidentia superveniunt substantie quodam ordine: nam primo advenit ei quantitas, deinde qualitas, deinde passiones et motus. Unde quantitas potest intelligi in materia subiecta antequam intelligantur in ea qualitates sensibiles, a quibus dicitur materia sensibilis; et sic secundum rationem sue substantie non dependet quantitas a materia sensibili, set solum a materia intelligibili: substantia enim remotis accidentibus non manet nisi intellectu comprehensibilis, eo quod sensitive potentie non pertingunt usque ad substantie comprehensionem. Et de huiusmodi abstractis est mathematica, que considerat quantitates et ea que quantitates consequuntur, ut figuras et huiusmodi.

²⁷³ End of section (2.a).

²⁷⁴ Unless otherwise specified, I will henceforth employ the English term “abstraction” to refer to Aquinas’ *abstractio* as opposed to *separatio*.

The first sentence of this section is nothing more than the statement of a particular instance of the abstraction requirement for Conceptualisation: a form can be abstracted from a matter when the notion of its essence does not depend on that matter; by contrast, it cannot be abstracted from the matter on which it depends essentially.

Against this principle Aquinas evaluates a first candidate of form-matter pair: accidents and the substance which is their subject, because accidents are to substance as form is to matter. However, since the notion of any accident depends on substance, it is impossible to abstract²⁷⁵ the accident from the substance. It is not clear what Aquinas means exactly by this, whether that every accident must be thought as belonging to a substance in general or as belonging to a given kind of substance. It is possible that Aquinas' focus here is just on the first claim; however, as already indicated in section (1.c), it seems safe to state that an accident cannot be abstracted, more in general, by the substance to which it belongs *per se* in the second meaning of *per se* of *An. Post.* I 4.

Having ruled out the possibility of abstracting an accident from substance, Aquinas states that accidents occur to substance in a certain order²⁷⁶: the first is quantity, then quality, and finally

²⁷⁵ Aquinas actually employs the term “*separari*”, which would seem to refer to *separatio* rather than *abstractio*; however, I think there cannot be any doubt about the fact that Aquinas is here referring to the impossibility of abstraction.

²⁷⁶ The idea of an essential order among accidents (and in particular the idea of the priority of quantity over sensible qualities) is found in earlier and later texts by Aquinas. For an earlier text, dealing with a problem concerning Eucharist, see *In IV Sent.* d. 12 q. 1 a. 1 qc. 3: “[...] Et praeterea quantitas non respicit formam nisi ratione materiae; unde formae immateriales dimensionibus carent; et ideo, cum alia accidentia mediante quantitate referantur ad substantiam, non poterit forma existens sine materia, accidentium sensibilibus subjectum esse. [...] Et ideo dicendum est, quod accidentia sunt ibi sine subjecto; non enim potest dici, quod sint in corpore Christi sicut in subjecto. Sciendum autem, quod substantia corporalis habet quod sit subjectum accidentium ex materia sua, cui primo inest subjici alteri. Prima autem dispositio materiae est quantitas; quia secundum ipsam attenditur divisio ejus et indivisio, et ita unitas et multitudo, quae sunt prima consequentia ens; et propter hoc sunt dispositiones totius materiae, non hujus aut illius tantum. Unde omnia alia accidentia mediante quantitate in substantia fundantur, et quantitas est prior eis naturaliter; et ideo non claudit materiam sensibilem in ratione sua, quamvis claudit materiam intelligibilem, ut dicitur in 7 Metaph. Unde ex hoc quidam decepti fuerunt, ut crederent dimensiones esse substantiam rerum sensibilibus; quia remotis qualitatibus nihil sensibile remanere videbant nisi quantitatem, quae tamen secundum esse suum dependet a substantia, sicut et alia accidentia. Virtute autem divina confertur dimensionibus quae fuerunt panis, ut sine subjecto subsistant in hoc sacramento, quod est prima proprietas substantiae; et per consequens datur eis ut sustineant alia accidentia, sicut et sustinebant quando substantia eis suberat; et sic alia accidentia sunt in dimensionibus sicut in subjecto, ipsae vero dimensiones non sunt in subjecto”. *Ibid.* ad 1: “Ad primum ergo dicendum, quod prima accidentia consequentia substantiam sunt quantitas et qualitas; et haec duo proportionantur duobus principiis essentialibus substantiae, scilicet formae et materiae (unde magnum et parvum Plato posuit differentias materiae); sed qualitas ex parte formae. Et quia materia est subjectum primum quod non est in alio, forma autem est in alio, scilicet materia; ideo magis appropinquat ad hoc quod est non esse in alio, quantitas quam qualitas, et per consequens quam alia accidentia”. *Ibid.* ad 2: “Ad secundum dicendum, quod quantitas dimensioniva secundum suam rationem non dependet a materia sensibili, quamvis dependeat secundum suum esse [...]”. This text is particularly interesting because here Aquinas provides a justification for the priority of quantity based on its connection with one of the two components of material substances, namely matter. For a later text expressly dealing with the nature of mathematical and physical realities, see *In III De Anima* c. 2: “Considerandum est etiam quod non solum naturalia habent speciem in materia, set etiam mathematica: est enim duplex materia, scilicet sensibilis, a qua abstrahunt mathematica et concernunt eam naturalia, et intelligibilis, quam etiam mathematica concernunt. Quod quidem sic intelligendum est: manifestum est enim quod quantitas immediate inheret substantiae; qualitates autem sensibiles in quantitate fundantur, ut album et nigrum, calidum et frigidum; remoto autem posteriori, remanet prius; unde, remotis qualitatibus sensibilibus secundum intellectum, adhuc remanet quantitas continua in intellectu; sunt ergo quaedam forme que requirunt materiam sub determinata dispositione sensibilibus qualitatibus, et huiusmodi sunt omnes forme naturales et ideo naturalia concernunt materiam sensibilem; quaedam vero forme sunt que non exigunt materiam sub determinata dispositione sensibilibus qualitatibus, tamen requirunt materiam sub quantitate existentem, sicut triangulus et quadratum et huiusmodi, et hec dicuntur mathematica et abstrahunt a materia sensibili, set non a materia intelligibili, in quantum in intellectu remanet continua quantitas abstracta a sensibili qualitate”.

affections and motions²⁷⁷. Of course, Aquinas is not here referring to a temporal order, but to an essential one: accordingly, he goes on stating that quantity can be comprehended as inhering in a matter before sensible qualities, according to which that matter is called “sensible matter”, are comprehended as inhering in it. Therefore quantity does not depend on sensible matter essentially, but only on the substance in which it inheres, which Aquinas names “intelligible matter” inasmuch as it is the subject of quantity not yet determined by sensible qualities²⁷⁸.

Aquinas concludes this section quite sharply, stating that mathematics, which is concerned with quantities and what follows upon quantities (such as figures), deals with abstracted things of this kind (*de huiusmodi abstractis*). Even though Aquinas has not spoken at all about abstracting quantities from something else, but only about the relations of essential dependence between quantity and other categories, it is straightforward to understand that the abstracted things Aquinas is speaking about are the outcome of the abstraction of form from matter; this abstraction consists in abstracting substance determined by quantity (and by the qualities which belong to quantity *qua* quantity, such as figures) from all the other accidents, in particular sensible qualities²⁷⁹.

In *Super De Trinitate* q. 5 a. 1 Aquinas had described mathematical entities as not depending on sensible matter *secundum intellectum*. In q. 5 a. 3 the very same point is made, maintaining that quantities do not depend essentially on sensible qualities and, accordingly, granting the possibility of abstraction of quantities from sensible qualities. On the other hand, in q. 5 a. 1 mathematical entities were described as depending on sensible matter *secundum esse*. In the terms of q. 5 a. 3, this implies that quantities, although not depending on sensible qualities essentially, are conjoined with them in reality. This means, more precisely, that sensible qualities attach to a substance whenever quantities do. Such necessary conjunction of sensible qualities with respect to quantity in actual existence is the reason why Aquinas does not hesitate to charge *abstractio* in its most proper sense with the task of distinguishing quantities from sensible qualities. The relevant point here is not the fact that the triangle is conjoined to bronze, for it exists of course also independently of bronze, namely in wood. However, the triangle cannot exist independently of any sensible quality, even though it is

²⁷⁷ It is possible that this list is meant to be continued. However, it is also possible that only these four categories are mentioned because they can be totally ordered – while this could have been impossible if another category such as “where” had been added. Another possibility is that Aquinas only takes into account categories which refer to something inhering in the subject, whether *per se* or *secundum aliquid*; see Aquinas’ derivation of the categories in *In V Metaph.* l. 9 (where, however, also relatives are said to be in the subject, even if not *absolute*). For a study of Aquinas’ derivation of the categories see [Wippel 1987].

²⁷⁸ Aquinas is here employing Aristotle’s distinction between sensible and intelligible matter; see, for example, *Metaph.* Z 10. I shall leave aside the problem of the interpretation of the distinction in Aristotle. As for Aquinas, Geiger notices an ambiguity in his usage of the label “intelligible matter”: in this text, it means the substance as far as it is the subject of quantity; in other places it means quantity itself. See [Geiger 2000], p 178.

²⁷⁹ In the abstraction of form from matter, therefore, quantified substance plays the role of form, while sensible qualities play the role of matter. Notice the ambiguity in Aquinas’ use of the labels “form” and “matter” in this section: substance had previously played the role of matter in virtue of its being the subject of accidental forms; by contrast, the subject of sensible qualities plays the role of form because sensible qualities are responsible for the matter being sensible.

conceptualised disregarding sensible qualities at all. As a consequence, the act which distinguishes the triangle from all sensible qualities is *abstractio* in its most proper sense.

(2.b.3) Totius a partibus

Totum etiam non a quibuslibet partibus abstrahi potest. Sunt enim quedam partes ex quibus ratio totius dependet, quando scilicet hoc est esse tali toti quod ex talibus partibus componi, sicut se habet sillaba ad litteras, et mixtum ad elementa; et tales partes dicuntur partes speciei et forme, sine quibus totum intelligi non potest, cum ponantur in eius diffinitione. Quedam vero partes sunt que accidunt toti in quantum huiusmodi, sicut semicirculus se habet ad circulum: accidit enim circulo quod sumantur per divisionem due eius partes equales vel inequales, vel etiam plures, non autem accidit triangulo quod in eo designentur tres linee, quia ex hoc triangulus est triangulus. Similiter etiam per se competit homini quod inveniatur in eo anima rationalis et corpus compositum ex quatuor elementis, unde sine his partibus homo intelligi non potest, set hec oportet poni in diffinitione eius, unde sunt partes speciei et forme; set digitus, pes, et manus, et alie huiusmodi partes sunt post intellectum hominis, unde ex eis ratio essentialis hominis non dependet, et ideo sine his intelligi potest (sive enim habeat pedes sive non, dummodo ponatur coniunctum ex anima rationali et corpore mixto ex elementis propria mixtione quam requirit talis forma, erit homo): et hee partes dicuntur partes materie, que non ponuntur in diffinitione totius, set magis e converso. Et hoc modo se habent ad hominem omnes partes signate, sicut hec anima, et hoc corpus, et hic unguis, et hoc os, et huiusmodi: hee enim partes sunt quidem partes essentie Sortis et Platonis, non autem hominis in quantum homo, et ideo potest homo abstrahi per intellectum ab istis partibus. Et talis abstractio est universalis a particulari²⁸⁰.

Aquinas' presentation of the abstraction of the whole from its parts begins with a statement of the fact that, just as in the case of form-matter abstraction, abstraction is not possible with all whole-parts pairs. Of course, also in this case the constraints imposed on abstraction are due to the application of the general requirement for the possibility of abstraction, namely the lack of essential dependence.

Now, there are some parts, called "parts of the form"²⁸¹, on which the notion of the whole depends, inasmuch as the essence of the whole consists in being composed of such parts: for example, letters are formal parts of the syllable and the elements of a mixture are formal parts of the mixture itself. Accordingly, the whole cannot be comprehended without such parts and therefore cannot be abstracted from them.

Other parts, Aquinas goes on, occur to the whole as such (*accidunt toti in quantum huiusmodi*). This expression employed by Aquinas must be analysed according to its two halves. Firstly, Aquinas describes these parts as occurring to the whole by using the term "*accidunt*": this must mean that, unlike formal parts, they are external to the essence of the whole. Secondly, Aquinas states that these parts occur to the whole *as such* (*in quantum huiusmodi*): in other words, these parts attach to the whole in virtue of its being what it is, and not because it is determined as something else. This being

²⁸⁰ Punctuation slightly modified. I report the modified sentence as it appears in the Leonine edition: "[...] set digitus, pes, et manus, et alie huiusmodi partes sunt post intellectum hominis, unde ex eis ratio essentialis hominis non dependet, et ideo sine his intelligi potest: sive enim habeat pedes sive non, dummodo ponatur coniunctum ex anima rationali et corpore mixto ex elementis propria mixtione quam requirit talis forma, erit homo. Et hee partes dicuntur partes materie, que non ponuntur in diffinitione totius, set magis e converso; et hoc modo se habent ad hominem omnes partes signate [...]".

²⁸¹ Henceforth "formal parts". Aquinas is here developing Aristotle's distinction in *Metaphysics* Z 10-11 between formal and material parts.

the case, it follows that the whole is necessarily conjoined to these parts even though they are external to its essence. Such parts are called “parts of the matter”²⁸²; unlike formal parts, material parts are not included in the definition of the whole, but rather the whole is included in their definition.

Aquinas gives two examples of material parts and contrasts them with examples of formal parts:

- i. The semicircle is a material part of the circle, while the three sides of the triangle are formal parts of the triangle;
- ii. The rational soul and a body made of the four elements are formal parts of the man, while the finger, the foot, the hand are among his material parts.

It already came to light in section (1.c) that a whole does not always depend on a part essentially. The differences among <whole, part> pairs in this respect are explained in section (2.b.3) by means of the distinction between formal and material parts. A whole depends on its formal parts, but not on its material parts. On the other hand, material parts depend on the whole, while formal parts, at least in general, do not. As a consequence, Conceptualisation can abstract the whole from its material parts, but not from its formal parts; moreover, it can abstract formal parts, but not material parts, from the whole. For example, the circle can be abstracted from the semicircle, insofar as the notion of the circle does not refer to the semicircle; the semicircle, by contrast, cannot be thought of independently of the circle, insofar as it can only be defined referring to the division of the circle into two equal parts. The triangle, on the other hand, cannot be abstracted from its three sides, because a triangle is a triangle just in virtue of its three sides.

Having established from which parts a whole can be abstracted, in the last sentences of section (2.b.3) Aquinas presents a specific case of abstraction of the whole from its material parts, which is actually the main goal of this section, the very reason why he has analysed the abstraction of whole from parts in the first place. With respect to “man”, Aquinas maintains, all the “*partes signate*” are material parts. From Aquinas’ examples of “*partes signate*”, to which I will come back later, it is clear that he is referring to individual parts of individual men. Such parts, as Aquinas’ exposition goes on, are formal parts²⁸³ of individual men, like Socrates and Plato; they are not, however, formal parts of a man *qua* man, so that “man” can be abstracted by the intellect from these parts. This abstraction, Aquinas concludes, is the abstraction of the universal from the particular.

As already said, Aquinas’ presentation of the abstraction of whole from parts rests on the assumption, to be validated in section (2.b.4), that there is no abstraction of a part from its whole: Aquinas’ argument in section (2.b.3) is meant to clarify on which parts the whole does not depend

²⁸² Henceforth “material parts”.

²⁸³ Aquinas employs here the expression “*partes essentie*” to refer to the parts he had previously labelled as “*partes speciei et formae*”.

essentially. In the analysis of Aquinas' argument, however, I also mentioned the fact that formal parts do not depend on their whole essentially. As a consequence, abstraction according to Conceptualisation should be possible in two cases: the whole can be abstracted from its material parts and a formal part can be abstracted from the whole. Even though this will become completely clear only in section (2.b.4), I would like to say in advance that Aquinas' sole focus on the abstraction of the whole from its material parts is due to his understanding of *abstractio* in its most proper sense, namely as a distinction of a thing from another with which it is necessarily conjoined. In other words, the abstraction of a whole from its material parts is named *abstractio* properly just because the whole is necessarily conjoined in reality with its material parts.

The abstraction of the universal from the particular turns out to be, according to Aquinas, nothing more than the abstraction of a particular kind of whole from its material parts. The whole in question is what Aquinas usually calls *totum universale*²⁸⁴; its parts are the individuals of which it is predicated²⁸⁵. These are material parts of the universal insofar as they are not included in its nature; rather, the universal is included in theirs. Moreover, the universal whole is necessarily conjoined to such parts in reality. The relevant point here is not the fact that the universal man is conjoined to Socrates, for it exists of course also independently of Socrates, namely in Plato. However, the universal man cannot exist independently of any individual man, even though it is conceptualised disregarding individuality at all. As a consequence, the act which distinguishes the universal man from individual men and makes it apt to be predicated of all men is *abstractio* in its most proper sense.

(2.b.4) Exhaustiveness of the division of abstraction

Et ita sunt due abstractiones intellectus: una que respondet unioni forme et materie vel accidentis et subiecti, et hec est abstractio forme a materia sensibili; alia que respondet unioni totius et partis, et huic respondet abstractio universalis a particulari, que est abstractio totius in quo consideratur absolute natura aliqua secundum suam rationem essentialem, ab omnibus partibus que non sunt partes speciei set sunt partes accidentales. Non autem inveniuntur abstractiones eis opposite, quibus pars abstraatur a toto vel materia a forma; quia pars vel non potest abstrai a toto per intellectum si sit de partibus materie in quarum diffinitione ponitur totum, vel potest etiam sine toto esse si sit de partibus speciei, sicut linea sine triangulo, vel littera sine sillaba, vel elementum sine mixto. In his autem quae secundum esse possunt esse divisa magis habet locum separatio quam abstractio. Similiter autem cum dicimus formam abstrai a materia non intelligitur de forma substantiali, quia forma substantialis et materia sibi correspondens dependent ad invicem, ut unum sine alio non possit intelligi, eo quod proprius actus in propria materia fit; set intelligitur de forma accidentali, que est quantitas et figura, a qua quidem materia sensibilis per intellectum abstrai non potest, cum qualitates sensibiles non possint intelligi non preintellecta quantitate, sicut patet in superficie et colore; nec etiam potest intelligi esse subiectum motus quod non intelligitur quantum. Substantia autem, que est materia intelligibilis quantitatis, potest esse sine quantitate; unde considerare substantiam sine quantitate magis pertinet ad genus separationis quam abstractionis.

²⁸⁴ By contrast, in his general presentation of the abstraction of the whole from its parts Aquinas had given examples involving what he usually calls *totum integrale*.

²⁸⁵ As examples of material parts of the universal "man" Aquinas actually does not mention individual men, but parts of individual men. However, the parts Aquinas mentions are said to be formal parts of individual men: as a consequence, if something is abstracted from them, it is also necessarily abstracted from individual men.

The first sentence of this section summarises the outcomes of sections (2.b.2) and (2.b.3): there are two intellectual abstractions, one of them corresponding to form-matter or subject-accident conjunction (the abstraction of form from sensible matter), the other corresponding to whole-part conjunction. The aim of section (2.b.4) is to prove that no other abstraction is possible. In order to do so, Aquinas argues that (i) no abstraction is possible as far as whole-part conjunction is concerned other than the abstraction of a whole from its material parts, and that (ii) no abstraction is possible as far as form-matter conjunction is concerned other than the abstraction of form from sensible matter²⁸⁶.

(i) The first part of the argument is found in ll. 250-258. In section (2.b.3) it was established that the whole can be abstracted from its material parts and that, by contrast, it cannot be abstracted from its formal parts. In ll. 250-258 Aquinas denies that either material parts or formal parts may be abstracted (in the most proper sense of *abstractio*) from the whole. As for material parts, this is due to the fact that the whole is included in their definition, so that they depend on it essentially. Formal parts, on the other hand, do not depend essentially on the whole and can accordingly be thought of independently of the whole. However, they can also exist independently of the whole²⁸⁷. At this point of the argument Aquinas' view on the most proper sense of *abstractio* we have been presupposing so far comes into play explicitly: "But in the case of things that can exist separately, *abstractio* rather than *separatio* obtains"²⁸⁸. We shall come back to this statement later, after having examined part (ii) of the argument. Suffice it to notice now that on this ground *abstractio* of a formal part from its whole is ruled out, the lack of essential dependence notwithstanding, because considering a formal part in isolation from its whole pertains more properly to *separatio*.

(ii) The second part of the argument is found in ll. 258-274. First of all, Aquinas rules out the possibility of abstraction in the case of substantial form and the matter in which it exists: a substantial form and its proper matter depend on each other essentially, so that abstraction is not possible in either direction. Indeed – here Aquinas recalls what he had already stated in section (2.b.2) – the abstraction of form from matter must be meant as referring to an accidental form and what follows upon it, namely quantity and figure. In section (2.b.2) Aquinas has established that quantity and figure cannot be abstracted from the "matter" in which they exist, namely substance (the "intelligible

²⁸⁶ Actually, in introducing his argument Aquinas only claims that there are no abstractions opposite to the abstractions he has dealt with. However, it becomes immediately evident, starting from the very next statement, that Aquinas' argument has a broader scope. He does not only rule out the possibilities that material parts are abstracted from the whole and that sensible qualities are abstracted from quantity; rather, he means to prove that no part (be it material or formal) may be abstracted from the whole and that no matter (be it substantial, sensible, or intelligible) may be abstracted from form. If one factors in also some points already established in sections (2.b.2) and (2.b.3), namely that there is no abstraction of the whole from its formal parts and that there is no abstraction of quantity from its intelligible matter, Aquinas' argument in (2.b.4) yields indeed the conclusions (i) and (ii).

²⁸⁷ Aquinas' examples are the line existing without the triangle, the letter without the syllable, and the element without the mixture.

²⁸⁸ Transl. Maurer. In the critical edition of the text, this statement opens a new paragraph. However, this is misleading: the preference of *separatio* over *abstractio* is expressed in close connection with the statement that formal parts can exist without their wholes.

matter”²⁸⁹), while they can be abstracted from sensible matter inasmuch as they do not depend essentially from sensible qualities. Here he proceeds to deny that either substance or sensible qualities can be abstracted from quantity in the most proper sense of *abstractio*. As for sensible qualities, this is because they depend on quantity essentially: for example, “colour” cannot be comprehended without comprehending “surface”²⁹⁰. Substance, on the other hand, does not depend on quantity essentially and therefore can be thought of independently of quantity. However, substance can also exist independently of quantity. As in part (i), here again Aquinas draws the conclusion that the consideration of substance without quantity pertains to *separatio* rather than *abstractio*.

Leaving aside some details concerning part (ii) of the argument, it is worth paying attention to the close parallel between the main steps of part (i) and part (ii). Firstly, the relationship between material parts and the whole corresponds to the relationship between sensible qualities and quantity: in both cases, the possibility of *abstractio* is denied because of the definite essential order within each pair, which allows the abstraction of the prior from the posterior, but not vice versa. Secondly, the relationship between formal parts and the whole corresponds to the relationship between substance and quantity: in both cases, even the possibility of *abstractio* of the prior from the posterior is denied, because the prior within these pairs can also *exist* without the posterior. Accordingly, Aquinas draws the conclusion that *separatio* is more appropriate than *abstractio*.

The reason why Aquinas denies that *abstractio* should be applied to distinguish formal parts from their wholes and to distinguish substance from quantity makes it explicit that he intends to restrict the application of *abstractio* to what is necessarily conjoined in existence. There cannot be any doubt about the presence of such a narrow meaning of *abstractio* in the text and about the fact that this meaning is Aquinas’ main concern here²⁹¹. However, it is also clear that the formulation of this meaning of *abstractio* as it has been given so far ought to be made more precise, inasmuch as a reference to necessarily conjoined things is not adequate. In particular, the relationship of “necessary conjunction in reality” which is relevant to *separatio* turns out not to be symmetric, so that it makes simply no sense to speak about two necessarily conjoined things. For example, the whole is necessarily conjoined in reality with its formal parts, while the latter are not conjoined with the former; similarly, quantity is necessarily conjoined with substance, while the converse does not hold. From now on, therefore, the only correct statements will be of the form “X is conjoined in reality

²⁸⁹ For the peculiarity of the meaning of “intelligible matter” in this passage, see [Geiger 2000], pp. 178-179.

²⁹⁰ The same holds true for the other accidents Aquinas had mentioned as posterior to quantity in section (2.b.2), namely affections and motions.

²⁹¹ This is true even though one must admit a certain amount of indefiniteness throughout Aquinas’ article and even in this very section. In particular, Aquinas employs twice the adverb *magis* to state that *separatio* is *more* adequate than *abstractio* as far as things which can exist independently of each other are concerned. He does not rule out *abstractio* sharply, as he had done as far as necessarily separated things were concerned.

with Y". This, of course, does not prevent two things from being mutually conjoined in reality: for example, the whole and its material parts, as well as quantity and sensible qualities.

Albeit perhaps trivial, one last remark is in order. Aquinas gives several examples of applicability of *separatio*, which are found both in part (i) and in part (ii) of his argument in section (2.b.4). While the example of part (ii), namely the distinction of substance from quantity, is often mentioned by scholarship, the examples given in part (i) are sometimes overlooked²⁹²: the line existing without the triangle, the letter without the syllable, the elements without the mixture. If one takes into account these examples, however, it becomes evident that the negative judgement Aquinas calls *separatio* is not immediately and by itself related to metaphysics and its subject: by means of this kind of judgement, in fact, the line is distinguished from the triangle, the letter from the syllable and the elements from the mixture. More generally, the *separatio* is a negative judgement and, as such, it involves two terms; however, it is not concerned with a given sort of terms specifically. It is rather concerned with a given relation possibly obtaining between any two terms, namely the fact that the former is not conjoined with the latter in its existence²⁹³. Aquinas' explicit attribution of *separatio* to metaphysics in section (3) needs to be explained against this background, in particular in accordance with the fact that *separatio* is not by itself related to metaphysics. As a consequence, the reason why *separatio* is attributed to metaphysics must just lie in the two terms to which *separatio* is applied and about which it states that the one is not conjoined with the other in its existence.

To conclude this section, it may be helpful to recapitulate the relations obtaining between a whole and its parts, on the one hand, and between quantity and matter, on the other, both from the point of view of the essential order and from the point of view of the existential one²⁹⁴:

Essential dependence				
A		B		C
Material parts	→	Whole	→	Formal parts
Sensible matter (sensible qualities)	→	Quantity	→	Intelligible matter (substance)
Existential dependence				
A		B		C
Material parts	↔	Whole	→	Formal parts
Sensible matter (sensible qualities)	↔	Quantity	→	Intelligible matter (substance)

²⁹² Not always, though; for a correct interpretation, see for example [Geiger 2000], pp. 148-149.

²⁹³ For example, as far as the *separatio* by means of which the line is distinguished from the triangle is concerned: the line is the first term, the triangle is the second term, and the *separatio* points to the fact that the former can exist without the latter.

²⁹⁴ By existential dependence in what follows I mean nothing more than the following: there is existential dependence of X on Y just in case X is necessarily conjoined with Y in reality.

In the upper half of the table, the relations of essential dependence are displayed. Within the same row, the item A depends on the item B, which in turns depends on the item in C. By contrast, C does not depend on B and B does not depend on A. Accordingly, Conceptualisation can abstract C from B and B from A (and therefore C from A as well), but not vice versa – where the “abstraction according to Conceptualisation” as outlined in section (1) is taken into account. As for *abstractio* in its most proper meaning, its possibility must be established factoring in both the relations of essential dependence and the relations of existential dependence. The latter are displayed in the lower half of the table. Within the same row, A and B depend on each other in their existence; moreover, B depends on C, but not vice versa (and therefore C does not depend on A either²⁹⁵). Accordingly, *separatio* can only distinguish C from B (and therefore C from A as well); it cannot distinguish either A from B or B from A, nor can it distinguish A/B from C. Finally, the table in its entirety reveals that *abstractio* in its most proper meaning is only viable to distinguish B from A, because B does not depend on A essentially but does depend on it existentially.

Section 3 – Conclusion

Sic ergo in operatione intellectus triplex distinctio invenitur: una secundum operationem intellectus componentis et dividensis, que separatio dicitur proprie, et hec competit scientie divine sive metaphisice; alia secundum operationem qua formantur quiditates rerum, que est abstractio forme a materia sensibili, et hec competit mathematice; tertia, secundum eandem operationem, universalis a particulari, et hec competit etiam phisice et est communis omnibus scientiis, quia in omni scientia pretermittitur quod per accidens est et accipitur quod per se est. Et quia quidam non intellexerunt differentiam duarum ultimarum a prima, inciderunt in errorem ut ponerent mathematica et universalialia a sensibilibus separata, ut Pittagoras et Platonici.

In the last section of his answer, Aquinas summarises the main outcome of the article, namely the identification of three different ways in which the intellect can distinguish one thing from another, and draws a connection between these three kinds of distinction and the theoretical sciences. The first kind of distinction listed here is performed by Judgement and is properly called *separatio*; Aquinas associates it with metaphysics. The other two kinds of intellectual distinction are performed by Conceptualisation. One of them is the abstraction of form from sensible matter, which pertains to mathematics. The other is the abstraction of the universal from the particular, which – Aquinas states – pertains *also* to physics and is common to all sciences, because every science neglects what is *per accidens* while considering what is *per se*.

The article is closed by observing that since some people – who are then exemplified with Pythagoras and Platonists – did not understand the difference between *separatio* and the two forms of *abstractio*, they mistakenly posed mathematical entities and universals to be separated from

²⁹⁵ If C depended on A, then it would also depend on B, since A depends on B.

sensible things²⁹⁶. This statement can be taken as an evidence of Aquinas' will to restrict *abstractio* to what is necessarily conjoined in reality, if the error of Pythagoras and Platonists he wants to refute is not the view that mathematical entities and universals *must* exist independently of sensible things, but rather the more basic assumption that they even *can* exist independently of sensible things. Insofar as this assumption is due to a confusion between *abstractio* and *separatio*, the latter must be thought of as an act aiming at something which just *can* exist independently of something else, and as opposed to the former, aiming at something which cannot. In any case, it is worth noticing that Aquinas' aim in the article is adequately revealed by his last statement: he means to point out that mathematical entities and universals can be abstracted from individual sensible things, without this meaning that they can exist apart from individual sensible things. Again, it is *abstractio* the act with which Aquinas is mainly concerned, and the main point in dealing with *separatio* is to warn against the possible confusion between *abstractio* and *separatio*²⁹⁷.

It is to be explained, however, the first part of the conclusion, in particular the connection Aquinas draws between the three kinds of intellectual distinction and the theoretical sciences. The first issue to be solved concerns how this connection should be understood in general: *separatio* and *abstractio* being acts of the intellect, which application do they have which is linked to the theoretical sciences? From the final reference to mathematical entities and universals (which must refer in particular to universal sensible things) it seems safe to conclude that the link between intellectual distinctions and theoretical sciences must lie in the objects falling within the consideration of the latter. In particular, it seems that the objects directly inquired into by the theoretical sciences are the outcome of an intellectual distinction: physics is not concerned with a particular body, but with body in general; mathematics is not concerned with a particular wooden line, but with line in general. It might be worth stressing that this reference to the objects considered by the theoretical sciences is not restricted to their subject strictly speaking, but extends to anything falling under their subject. For example, the abstraction of form from sensible matter does not only allow us to grasp quantity as such or whatever the subject of mathematics might be, but extends to triangles, quadrangles, etc.; similarly, the abstraction of the universal does not only allow us to grasp the subject of physics or of another science, but is also the means by which the universal notion of fire as employed in physics and the universal notion of triangle as employed in mathematics are achieved. We can expect, therefore, that the connection of *separatio* with metaphysics is not exclusively related to the subject

²⁹⁶ By "sensible things" here one should mean individual sensible things.

²⁹⁷ Geiger rightly recognises that the reason behind Aquinas' classification of intellectual distinctions is to avoid an extreme realism; see [Geiger 2000], p. 160. However, he also seems to maintain that, more than the problem of extreme realism, it is the problem of the possibility of knowing separate substances which motivated Aquinas' approach in q. 5 a. 3 (see [Geiger 2000], p. 162 n. 27). According to Geiger, Aquinas would have deemed impossible to apply simple abstraction to material things in order to found the immateriality of being and would have resorted to *separatio* accordingly. I do not think these thoughts were in the background of Aquinas' article.

of metaphysics, being *qua* being, but extends to anything falling within the consideration of metaphysics as well.

The second point to discuss concerns the particular connections drawn by Aquinas between theoretical sciences and *abstractio/separatio*. In this regard, one should also bear in mind that the things enquired into by the theoretical sciences were distinguished in *Super De Trinitate* q. 5 a. 1 according to their dependence on sensible matter in two different respects, namely *secundum intellectum* and *secundum esse*. It is by now clear that these two kinds of dependences are related to *abstractio* and *separatio*, respectively: dependence *secundum intellectum* prevents *abstractio*, while dependence *secundum esse* prevents *separatio*.

Now, abstraction of the universal is attributed to all sciences, because scientific knowledge does not concern individuals as such. The explicit mention of physics in this context should not be understood as referring to a closer connection between physics and this kind of abstraction²⁹⁸; rather, it simply indicates that the abstraction of universal pertains *even* to physics, while no other intellectual distinction does. This is consistent with the fact that the objects of enquiry of physics depend on sensible matter both *secundum esse* and *secundum intellectum*: they can only be abstracted from *materia signata*, not from *materia communis*²⁹⁹. Mathematical entities, on the other hand, depend on sensible matter only *secundum esse*, not *secundum intellectum*. As a consequence, an additional kind of abstraction pertains to mathematics, namely the abstraction of quantity from sensible matter.

It is not at all clear, however, how *separatio* should be related to metaphysics, for *separatio* can involve any two terms which are not unite in reality³⁰⁰. Therefore, even assuming the connection between *separatio* and metaphysics is due to the fact that things considered by metaphysics can be distinguished from something else through *separatio*, the question must still be answered: from what are they distinguished? Only one hint can be found in Aquinas' text about this in section (2.b.4), where Aquinas states that considering substance without quantity is the task of *separatio*.

²⁹⁸ As stated by some scholars; see for example [Geiger 2000], p. 170. At least, one cannot deny that the abstraction of the universal plays a significant role in mathematics, different from the role played by the abstraction of quantity from sensible matter. Indeed, mathematical entities are imagined without sensible matter, but still as individuals. See *Super De Trinitate* q. 5 a. 3 ad 3: "Ad tertium dicendum, quod materia non est principium diversitatis secundum numerum nisi secundum quod in multas partes divisa in singulis partibus formam recipiens, eiusdem rationis plura individua eiusdem speciei constituit. Materia autem dividi non potest nisi presupposita quantitate, qua remota omnis substantia indivisibilis remanet. Et sic prima ratio diversificandi ea que sunt unius speciei est penes quantitatem. Quod quidem quantitati competit in quantum in sui ratione situm quasi differentiam constitutivam habet, qui nichil est aliud quam ordo partium; unde etiam abstracta quantitate a materia sensibili per intellectum, adhuc contingit ymaginari diversa secundum numerum unius speciei, sicut plures triangulos aequilateros, et plures lineas rectas aequales".

²⁹⁹ Cf. *Super De Trinitate* q. 5 a. 2: "Et quia singularia includunt in sui ratione materiam signatam, unversalia vero materiam communem, ut dicitur in VII Metaphisice, ideo predicta abstractio non dicitur forme a materia absolute, set universalis a particulari".

³⁰⁰ By contrast, the terms involved in the two *abstractiones* are given by the two kinds of necessary conjunctions, namely the conjunction of material parts with their wholes and the conjunction of sensible qualities to quantities.

Substance is, of course, something enquired into by metaphysics and it can exist without quantity inasmuch as there are immaterial substances. By contrast, both mathematical and physical realities can only exist in conjunction with quantity, so that the attribution of *separatio* from quantity to metaphysics would indeed identify its proper objects of enquiry as opposed to them. However, there are at least two reasons to suspect Aquinas' real intention is to state the possibility of *separatio* in order to distinguish metaphysical realities from sensible qualities rather than from quantity, even though they are actually equivalent³⁰¹.

The first reason lies in the parallel between the notions of dependence *secundum esse* and *secundum intellectum*, on one hand, and *separatio* and *abstractio*, on the other. Just as the lack of dependence *secundum intellectum* of mathematical entities on sensible matter, as expressed in q. 5 a. 1, together with their dependence on it *secundum esse*, translates into the possibility of *abstractio* of mathematical entities from sensible qualities in q. 5 a. 3, so the lack of dependence *secundum esse* of metaphysical realities on sensible matter should be mirrored by the possibility of *separatio* from sensible qualities.

The second reason concerns the very meaning of the distinction between *abstractio* and *separatio* as a way to highlight the peculiar nature of mathematical entities as opposed to metaphysical ones. Had Aquinas intended to focus on the relationship between the objects of metaphysics and mathematics, on the one hand, and quantity, on the other, he would not have needed to resort to the distinction between the two operations of the intellect in order to express the difference between metaphysics and mathematics. Indeed, quantity enters the definition of the objects of mathematics, while it does not enter the definition of the objects of metaphysics. Accordingly, Conceptualisation can abstract metaphysical notions from quantity, which it cannot do with mathematical notions³⁰². When it comes to sensible qualities, however, a more complex mechanism

³⁰¹ Since quantity and sensible qualities are mutually conjoined in their existence, something can exist separated from quantity if and only if it can exist separated from sensible qualities.

³⁰² Indeed, in other texts Aquinas follows this path to distinguish mathematics from metaphysics. See *S.Th.* q. 85 a. 1 ad 2: "Ad secundum dicendum quod quidam putaverunt quod species rei naturalis sit forma solum, et quod materia non sit pars speciei. Sed secundum hoc, in definitionibus rerum naturalium non poneretur materia. Et ideo aliter dicendum est, quod materia est duplex, scilicet communis, et signata vel individualis, communis quidem, ut caro et os; individualis autem, ut hae carnes et haec ossa. Intellectus igitur abstrahit speciem rei naturalis a materia sensibili individuali, non autem a materia sensibili communi. Sicut speciem hominis abstrahit ab his carnibus et his ossibus, quae non sunt de ratione speciei, sed sunt partes individui, ut dicitur in VII Metaphys.; et ideo sine eis considerari potest. Sed species hominis non potest abstrahi per intellectum a carnibus et ossibus. Species autem mathematicae possunt abstrahi per intellectum a materia sensibili non solum individuali, sed etiam communi; non tamen a materia intelligibili communi, sed solum individuali. Materia enim sensibilis dicitur materia corporalis secundum quod subiacet qualitibus sensibilibus, scilicet calido et frigido, duro et molli, et huiusmodi. Materia vero intelligibilis dicitur substantia secundum quod subiacet quantitati. Manifestum est autem quod quantitas prius inest substantiae quam qualitates sensibiles. Unde quantitates, ut numeri et dimensiones et figurae, quae sunt terminationes quantitatum, possunt considerari absque qualitibus sensibilibus, quod est eas abstrahi a materia sensibili, non tamen possunt considerari sine intellectu substantiae quantitati subiectae, quod esset eas abstrahi a materia intelligibili communi. Possunt tamen considerari sine hac vel illa substantia; quod est eas abstrahi a materia intelligibili individuali. Quaedam vero sunt quae possunt abstrahi etiam a materia intelligibili communi, sicut ens, unum, potentia et actus, et alia huiusmodi, quae etiam esse possunt absque omni materia, ut patet in substantiis immaterialibus. Et quia Plato non consideravit quod dictum est de duplici modo abstractionis, omnia

is needed to single out the peculiar character of mathematics with respect to metaphysics. For both mathematical and metaphysical realities are defined without any reference to sensible qualities, so that Conceptualisation can indifferently abstract either from them. With respect to sensible qualities, the only real difference between metaphysical and mathematical objects lies in the fact that the former can *exist* without them, while the latter cannot. This difference is mirrored by the fact that, in the first case, *separatio* is viable, while in the second case *abstractio* in its most proper sense is: in both cases, what is at stake would be a distinction – albeit a very different one – from sensible qualities.

Before drawing some conclusions concerning the scholarly debate about the role played by *separatio* in metaphysics, I would like to expand on one general point which has been incidentally touched upon in the above commentary. As we have seen, there are definite conditions which must be fulfilled in order for the intellect to be able to abstract one thing from another according to its two operations. Now, these conditions could be described in terms of given kinds of predication between the two terms involved in the intellectual distinction at stake³⁰³. In particular, Conceptualisation cannot distinguish X from Y if and only if Y is a *per se* attribute of X in the first meaning of *per se* of *An. Post.* A 4. Judgement, on the other hand, cannot distinguish X from Y whenever Y is a necessary attribute of X. This can happen not only in the case Y is an essential attribute of X (*per se* attribute in the first meaning of *per se*), but also in case it is not. Even in this case, however, Aquinas would probably speak of *per se* predication: in particular, he seems to interpret Aristotle's *An. Post.* A 4 in such a way as to identify necessary attributes with the second and the fourth meanings of *per se* listed there³⁰⁴. Be this as it may, Aquinas would indeed grant that there are necessary, non-essential attributes of a given subject. As a consequence, *abstractio* in its most proper sense, which applies to what Conceptualisation can abstract while Judgement cannot, is the kind of intellectual distinction by which a subject can be distinguished from a predicate which is not part of the essence of the former, but still belongs to it necessarily. In other words, Aquinas' characterisation of *abstractio* in its proper sense only makes sense in virtue of the difference between essential and necessary attributes.

quae diximus abstrahi per intellectum, posuit abstracta esse secundum rem". I do not believe, as Geiger does, that the abstraction from intelligible matter of which Aquinas speaks here is anything more than an abstraction according to Conceptualisation. First of all, we are not allowed to suppose a shift in the meaning of *abstractio* within this text, where it is clear that different degrees of abstractions are distinguished solely on the basis of the second term of the abstraction, namely the term from which something else is abstracted. This supposes that the meaning of *abstractio* remains the same throughout the passage. Second, it seems to me that the phrase "*quae etiam esse possunt absque omni materia*" is meant to add something to the phrase "*quae possunt abstrahi etiam a materia intelligibili communi*", making a claim which is stronger than the possibility of abstraction. This implies, however, that the abstraction from intelligible matter is not itself meant as stating a lack of dependence in existence. For Geiger's view, see [Geiger 2000], p. 169 n. 35. In support of Geiger's interpretation, see also [Wippel 1984], p. 82 n. 35: "[...] there can be no doubt that he is referring to the intellect's judging operation"; [Wippel 2000], pp. 50-51.

³⁰³ In order for this to be as general as possible, let us assume that a part (in the sense of "being composed of that part") is a predicate of the whole.

³⁰⁴ *In An. Post.*, L. 1 l. 10.

It is interesting, in this regard, to look at other passages where Aquinas distinguishes between two kinds of intellectual distinctions, namely abstraction according to Conceptualisation and abstraction according to Judgement, as I have been calling them so far. Two of these passages concern the so called doctrine of transcendentals: both of them claim that Conceptualisation can abstract “being” from the other transcendentals, while Judgement cannot³⁰⁵. Even though the expressions *abstractio* and *separatio* are not employed, one can safely rephrase the main point of these texts as follows: it is possible – strictly speaking – an *abstractio* of “being” from the other transcendentals, because the former can be comprehended, but cannot exist, independently of the latter. If it is correct to maintain that the other transcendentals are *per se* accidents of “being”³⁰⁶, we are thereby provided with further evidence of the link between *abstractio* and necessary, non-essential attributes. More precisely: *abstractio* is only viable to distinguish something from its necessary, non-essential attributes.

4. The development of q. 5 a. 3

Part of Aquinas’ autograph of *Super De Trinitate* – including the text of q. 5 a. 3 – is extant, being preserved in ms. Vat. Lat. 9850 (=A)³⁰⁷. The text of q. 5 a. 3 as found in A is of great interest, for it witnesses to a gradual and somehow troubled development of the solution to the problem dealt with in the article. In particular, the manuscript reveals that Aquinas began and deleted his *solutio* more than once before writing down the “final redaction”. In this section such stratification of the text is taken into account in order to complete the analysis of the article and to achieve some additional insight into the final version of the text. Even though this material would deserve an in-depth examination, I shall restrict myself to some general remarks and to contrasting the final version of Aquinas’ article with its antecedents.

The autograph reveals three redactions of the solution prior to the final one. Aquinas interrupted and deleted each of these three redactions without completing it and started the solution

³⁰⁵ *De veritate* q. 1 a. 1 ad 3: “Ad tertium dicendum quod aliquid intelligi sine alio potest accipi dupliciter. Uno modo quod intelligatur aliquid altero non intellecto, et sic ea quae ratione differunt ita se habent quod uno sine altero intelligi potest. Alio modo potest accipi aliquid intelligi sine altero, quod intelligitur eo non existente, et sic ens non potest intelligi sine vero [...]”. The other text is more explicit in connecting different kinds of intellectual distinctions to the two operations of the intellect; see *De veritate* q. 21 a. 1 ad s.c. 2: “[...] dupliciter potest intelligi aliquid sine altero: uno modo per modum enuntiandi, dum scilicet intelligitur unum esse sine altero; et hoc modo quicquid intellectus potest intelligere sine altero Deus potest facere: sic autem ens non potest intelligi sine bono, ut scilicet intellectus intelligat aliquid esse ens et non esse bonum; alio modo potest intelligi aliquid sine altero per modum definiendi, ut scilicet intelligatur unum non cointellecto altero, sicut animal intelligitur sine homine et omnibus aliis speciebus; et sic ens potest intelligi sine bono. Nec tamen sequitur quod Deus possit facere ens sine bono, quia hoc ipsum quod est facere est producere aliquid in esse”.

³⁰⁶ See [Aertsen 1996], pp. 141-146, and [Aertsen 2012], pp. 235-236. I do believe, as Aertsen seemingly does, that the fact that transcendental notions do not add anything real to “being” contradicts, strictly speaking, their being *per se* accidents in the second meaning of *per se* of *An. Post.* I 4. They are not “extrinsic to being”, but this does not mean that they are included in the notion of being.

³⁰⁷ See P.-M. J. Gils, “Introduction”, in the Leonine edition.

anew accordingly. The third redaction was interrupted after just one sentence, which is, however, very similar to the first sentence of the fourth, final redaction³⁰⁸. The first and the second redactions, on the other hand, properly represent different stages of the development of Aquinas' solution.

A further stratification seems to be present within the first redaction itself. After having written (1) up to the end of (a), Aquinas must have deleted only (a) and replaced it with (b). Subsequently, he deleted (b) as well and replaced it with (c). When Aquinas interrupted (c), however, he decided to start the solution anew and therefore deleted (1) from its very beginning.

- 1) Responsio. Dicendum quod operatio intellectus completur secundum hoc quod intellectus conformatur intelligibili. Unde dicit Algazel quod scientia est assimilatio scientis ad rem scitam et Philosophus in XI Metaphisice quod intellectus intelligit secundum transumptionem intelligibilis. Contingit autem alicui aliquid assimilari non totaliter set in parte, sicut melli assimilatur fel in rubedine non in dulcedine. Et inde est quod ea que inveniuntur secundum rem coniuncta dividuntur quandoque per operationem intellectus. Unde Boetius in libro De Epd.: 'Multa sunt que cum separari actu non possunt, animo tamen separantur et cogitatione'.
- a. Sunt tamen quedam que nec intellectu ab invicem separari possunt. Quod contingit propter ordinem quem habent ad invicem in intelligendo. Quedam enim sunt que simul intelligenda occurrunt vel quia sunt penitus idem, ut homo et animal rationale, vel quia unum est de intellectu alterius, sicut que ad invicem essentialiter referuntur ut utrumque ab altero dependeat, sicut pater et filius. Quedam vero sunt quorum unum occurrit prius intelligendum quam aliud. Et tunc primum potest intelligi sine priori, posterius vero sine priori numquam. Cum autem omne quod cognoscitur cognoscatur per formam per quam est in actu (in intelligendo forma primum est), forma autem duplex est, scilicet forma totius que est ipsa quiditas vel essentia rei et forma partis que est pars compositi
 - b. Non tamen omnia que sunt coniuncta secundum rem possunt separari per intellectum. Quod contingit et ex parte rei intellecte et ex parte intellectus. Ex parte quidem rei, quando duo talia proponuntur, quorum unum in alio includitur, sicut animal includitur in homine et ideo quicumque intelligit hominem intelligit animal, set non e converso. Ex parte autem intellectus, quando intellectus non habet viam ad intelligendum aliquid duorum nisi per hoc quod alterum intelligat; et sic cognitio unius dependet a cognitione alterius, quamvis unum in altero non includatur, sicut substantia non includitur in essentia accidentis, et tamen accidens non potest cognosci nisi cognoscatur substantia, et hoc est in omnibus illis
 - c. Non tamen intellectus potest inter quelibet duo separare. Quod contingit ex hoc quod unum eorum secundum hoc quod intellectui subiacet ad alterum dependet. Unumquodque autem per essentiam suam sub intellectu cadit, quia obiectum intellectus est quid, ut dicitur in tertio De Anima. Et ideo quicquid dependet ab altero secundum suam essentiam non potest sine illo intelligi. Et inde est quod homo non potest intelligi sine animali, quia animal est essentia hominis, nec pater sine filio, quia essentia relativi est quod referatur ad aliud, et sic in omnibus aliis est videre. Essentia autem est essendi principium, unde secundum quod aliquid sine altero esse potest vel non potest sic secundum suam essentiam et per consequens secundum intellectum dependet ab illo vel non dependet. Et ideo quod potest inveniri sine aliquo potest intelligi sine illo quod autem non potest sine aliquo inveniri nec sine illo intelligi potest, dummodo hoc sit ei per se quod sine illo inveniri non possit et non per accidens sicut solis natura in isto sole

³⁰⁸ The only apparently relevant difference between the two sentences lies in the fact that in the fourth redaction Aquinas explicitly mentions the "operation" of the intellect and so precludes the distinction between abstraction according to Conceptualisation and abstraction according to Judgement. In the third redaction, by contrast, Aquinas simply refers to the ways in which the intellect abstracts: one could therefore imagine that the distinction between these ways would not be based on the distinction between Conceptualisation and Judgement. However, a reference to the two operations of the intellect was already present in the second redaction: this prevents us from supposing a substantial change from the third to the fourth redaction.

The first part of (1) sets the general framework of the first redaction of the solution and is common to the three alternative second parts, namely (a), (b), and (c). Aquinas' starting-point is his general understanding of truth; more precisely, here he states that the operation of the intellect is accomplished when the intellect is assimilated to the intelligible. Now, Aquinas goes on to maintain that not only total assimilation, but also partial assimilation is possible, just as any two things can be similar in one respect but nonetheless different in another. As a consequence, it is possible for the intellect to be only partially assimilated to the intelligible, so as to divide what in reality is unite. The second part of (1), in its three variants (a), (b), and (c), is meant to clarify the conditions under which the intellect can divide what is unite in reality³⁰⁹. Before looking more closely at these three variants, it is important to highlight a feature which remains unchanged through the different stages of (1), namely the absence of the distinction between the two operations of the intellect to ground the possibility of abstracting what is unite in reality. Rather, Aquinas speaks here of partial assimilation of the intellect and of the extent to which this is acceptable. No partial assimilation, by contrast, would be allowed in the final redaction of the text: both Judgement and Conceptualisation must assimilate to reality totally – the former, however, to the existential order, while the latter to the essential one³¹⁰.

a. Aquinas' first attempt to clarify the possibility of abstraction is based on the order of things *in intelligendo*. Two possible situations are distinguished: two things can be either simultaneous or in a relation of priority-posteriority. The former can occur in two cases: either the two things are exactly the same³¹¹, or they are relatives; in each case, the two things cannot be comprehended independently of each other. When, on the other hand, one thing is prior to the other, the former can be comprehended without the latter, but not vice versa. The last sentence of (a) is not complete and lacks a main clause; the subordinate clauses Aquinas wrote before deleting (a) state two points: first, everything is known by means of the form through which it is in act, and second, there are two kinds of form, the *forma totius* and the *forma partis*. I suppose that Aquinas was thus carrying on the discussion of the second situation (prior and posterior things) and wanted to maintain that the form is prior to that of which it is form, so that it can be abstracted from the latter, but not vice versa. Moreover, I believe the distinction between *forma totius* and *forma partis* would have been used to ground a distinction between two kinds of abstractions: the abstraction of the universal from the particular (*forma totius*) and the abstraction of quantities from sensible matter (*forma partis*)³¹².

³⁰⁹ In the final redaction, this task is taken on by section (1.c), namely the section concerning the abstraction requirement for Conceptualisation.

³¹⁰ *Super De Trinitate* q. 5 a. 3: “[...] et sic non est dissonantia inter intellectum et rem, quia etiam secundum rem id quod est de natura linee non dependet ab eo quod facit materiam esse sensibilem, set magis e converso”.

³¹¹ Aquinas exemplifies this case with a term and its definition.

³¹² Geiger seems to maintain that, in variant (a), Aquinas was trying to ground a tripartite division of abstraction in virtue of the trio *simul, prius, posterius*. See Geiger's remarks in [Geiger 2000], pp. 154-155, in his commentary on variant (b). I believe this interpretation to be wrong; rather, it seems to me quite plain that the only abstraction allowed is the abstraction of the prior from the posterior. Moreover, I believe Aquinas is not looking for a tripartition, but for a bipartition of abstraction.

b. Aquinas' second attempt to clarify why abstraction is not possible in some cases is grounded on a distinction which was not in (a) and will disappear after (b). The distinction concerns the reasons why abstraction might be impossible: this can happen either *ex parte rei intellecte* or *ex parte intellectus*³¹³. The first case occurs when the notion of something is included in the notion of something else³¹⁴; for example, animal is included in man. The second case is exemplified by substance and accident: even though the former is not included in the essence of the latter, the intellect cannot know accidents without knowing substance. It is difficult to figure out how Aquinas would have employed this distinction³¹⁵, especially because it was just outlined in (b) and immediately abandoned. In fact, it seems that Aquinas deemed the distinction as meaningless and implicitly rejected it already in (c); in any case, neither the final redaction nor any of the other passages points to a distinction between, as it were, a real and an epistemological dependence.

c. From the beginning of (c), it would seem that Aquinas forsakes the bipartition introduced in (b) to restrict himself to only one of the two alternatives, namely the second one (*ex parte intellectus*). Indeed, he states that the impossibility of abstraction is due to the dependence of one thing on another *secundum quod intellectui subiacet*. However, as the argument goes on, it becomes clear that Aquinas actually means to overcome the bipartition in (b), unifying the two alternatives: the dependence of one thing on another in the intellect is traced back to the dependence of the essence of the former on the essence of the latter. This is the first time in the development of the article that Aquinas speaks of essential dependence explicitly and connects it with dependence *secundum intellectum*; this point will be retained up to the final version of the article. At this stage Aquinas also introduces the notion which I have previously called "existential dependence"; this is all the more interesting in view of the fact that, unlike in the final version of the text, here Aquinas explicitly draws a connection between essential and existential dependence, based on the principle "*essentia est essendi principium*". In particular, Aquinas maintains here that the relations of essential dependence and of existential dependence hold in exactly the same cases: if X can exist without Y, then X can be comprehended without Y; on the other hand, if X can be comprehended without Y, then X can exist without Y. It may also happen that X is comprehended without Y while X cannot exist but in Y; however, this can only be the case when being conjoined to Y belongs to X *per accidens*, not *per se* (for example, it belongs *per accidens* to the nature of the sun that it cannot exist but in the only

³¹³ Geiger seems to maintain that the relations of simultaneity and priority-posteriority introduced in (a) are cases falling under on the these two alternatives, namely under *ex parte rei intellecte*. See [Geiger 2000], p. 155. On the contrary, I believe that the distinction drawn in (a) and the distinction drawn in (b) are just different distinctions, based on different criteria, and that the relation of priority-posteriority, for example, can occur both *ex parte rei intellecte* and *ex parte intellectus*.

³¹⁴ Aquinas does not speak of mutual inclusion, as stated in [Geiger 2000], p. 155.

³¹⁵ It is possible that he meant to highlight a difference between the dependence of individuals on universals (*ex parte rei intellecte*) and the dependence of sensible qualities on quantities (*ex parte intellectus*).

actually existing sun³¹⁶). Now, it has been seen that in the final redaction of the article Aquinas does not maintain such an identity of essential and existential dependence; rather, he aims at clarifying the cases in which something can be thought, even though it cannot exist, independently of something else³¹⁷. The question may be asked, then, how (c) would have been able to explain the abstraction of the universal from the particular and of mathematical entities from sensible matter. I see two possible strategies Aquinas could have followed. First, he could have maintained that the necessary conjunction of universals and mathematical entities with particulars and sensible qualities, respectively, is only accidental³¹⁸. Second, and much more probably, he could have argued that, since universals can exist without any given particular and mathematical entities can exist without any specific sensible quality, they can be thought without thinking of particulars or sensible qualities altogether³¹⁹. In so doing, however, Aquinas would not have explained, as he eventually did in the final redaction (and this might be the reason why Aquinas eventually deleted (c) and, for that, the first redaction from its very beginning), the significant difference between metaphysical realities, which do not need to exist in conjunction with a sensible quality, and mathematical entities, which must.

- 2) Responsio. Dicendum, quod ad evidentiam huius questionis oportet videre diversos modos abstractionis qua intellectus abstraere dicitur, et rationes eorum. Sciendum est igitur quod intellectus habet duas actiones ut dicitur in tertio de anima unam quidem qua intellectus considerat simplicem quiditatem rei aliam qua componit et dividit. Secundum igitur primam operationem intellectus abstraere dicitur aliquid altero quando quiditatem unius intelligit sine hoc quod aliquam considerationem habeat de alio. Quod quidem tunc fieri potest quando unius essentia non dependet ab essentia alterius, eo quod huiusmodi actio ad essentiam rei respicit. Quod quidem contingit quando due res nullum habent ordinem ad invicem vel quando sunt ordinate. Sed quando due res non habent aliquem ordinem ad invicem, quamvis de una earum intelligatur quid est sine intellectu alterius, non tamen dicitur abstractio, sicut sine intellectu lapidem sine intellectu animalis. Tunc autem proprie dicitur abstractio per intellectum fieri, quando ad invicem ordinate sunt et coniuncte in rerum natura. Potest autem ordo unius ad alterum attendi in triplici habitudine. Essentia enim unius rei vel est prior essentia alterius vel posterior vel simul

³¹⁶ The example of the sun in Aquinas' text must be meant as explaining *per accidens*. Cf. for example *S.Th.* q. 13 a. 9; *In Metaph.*, L. 7 l. 15: "[...] omnes formae, sive accidentales, sive substantiales, quae non sunt per se subsistentes, sunt, quantum est de se, communes multis. Et si aliqua inveniatur in uno solo, sicut forma solis, hoc non provenit ex parte formae, quin quantum est de se sit nata esse in pluribus; sed ex parte materiae (nam tota materia speciei congregata est sub uno individuo), vel magis ex parte finis (quia unus sol sufficit ad universi perfectionem)". The example derives from Avicenna, *Philosophia prima* V 1, where three meanings of "universal" are listed: "sun" is an example given to illustrate the third meaning, because it is a notion shareable by many things *quantum ad intellectum*, but which turns out to be unshareable *ex causa extrinseca*.

³¹⁷ It is interesting, however, that in variant (c), where Aquinas maintains the identity between essential and existential dependence, the example of relatives is given: "father" cannot be comprehended without "son". This should imply that father cannot exist without son; such a statement, of course, would not mean that father and son are the same thing, but rather that there cannot be a father without there being a son. Going back to the final redaction, if *separatio* in the case of relatives is interpreted in this way, then one can say that *separatio* is not possible; the general principle could thus be maintained that essential dependence entails existential dependence.

³¹⁸ I do not believe Aquinas would have maintained this for two reasons. First, I believe he would not have maintained that those conjunctions are accidental as in the example of the sun. Second, Aquinas' main point in the text, on which he would have presumably based his argument, is that existential dependence entails essential dependence – the case of accidental conjunctions being mentioned only to point to an exception to the general principle.

³¹⁹ Cf. Albertus Magnus, *Physica*, L. 1 t. 1 c. 1.

At the beginning of the second redaction of the article Aquinas introduces the distinction between the two operations of the intellect, which will remain the main feature of his approach in the final redaction. Even though the text of the second redaction is interrupted in the midst of the discussion of Conceptualisation and does not contain a discussion of Judgement, it seems safe to believe that the discussion of Judgement would have followed and that the distinction between Conceptualisation and Judgement would have grounded a distinction between different ways of abstraction³²⁰. As for Conceptualisation, its abstraction is said to consist in comprehending the quiddity of something without comprehending something else, which can happen when there is no essential dependence of the former on the latter. All of this will be repeated in the final redaction without any significant change. The peculiarity of this second redaction rather lies in the analysis of the possibility of abstraction, which, on one hand, resorts to notions introduced in variant (a) of the first redaction while, on the other, foreruns closely the analysis provided in the final redaction of the text. Aquinas distinguishes between two possible situations obtaining between two things: either they have no *ordo* to each other or they are *ordinate*. Now, this bipartition seems to correspond roughly to the distinction between separation and conjunction in reality which is found in the final version³²¹, from which it would possibly differ only for the classification of relative terms. Like in the final redaction, also in (2) Aquinas intends to restrict *abstractio*, in its most proper sense, to things which are *ordinate* to each other. Such *ordo* of one thing to another, Aquinas goes on, can be of three kinds: the former can be prior, simultaneous, or posterior to the latter. This analysis seems to be identical to the one carried out in variant (a) of the first redaction, where two possible situations were distinguished concerning the *ordo in intelligendo* of things (simultaneity and priority-posteriority). As a consequence, we may expect that Aquinas would have continued the second redaction by maintaining that simultaneous things cannot be comprehended independently of each other, the posterior cannot be comprehended without the prior while the prior can be comprehended without the posterior. If this is so, the meaning of *ordo* in the second redaction seems to be ambiguous: on one hand, it seems to be the conjunction in existence we find in the final redaction; on the other, it seems the *ordo in intelligendo* in variant (a) of the first redaction. Of course, as it is evident from variant (b) of the first redaction, Aquinas saw a connection between the essential and the existential

³²⁰ Because of the connection he sees between the relations of anteriority, simultaneity, and posteriority, on one hand, and the tripartition of abstraction, on the other, Geiger maintains that in the second redaction all the intellectual distinctions are traced back to Conceptualisation; accordingly, he maintains that the distinction between the two operations of the intellect, albeit it is mentioned, does not have the significance it will have in the final redaction. However, there is no such connection between a tripartition of abstraction and the three possible relations between quiddities; as a consequence, even though there is no way to find it out, it might of course be the case that Aquinas intended to deal with a kind of intellectual distinction performed by Judgement after having dealt with Conceptualisation. For Geiger's interpretation see [Geiger 2000], p. 158.

³²¹ Proof of this are both the example of things with no *ordo* to each other (animal and stone) and the fact that Aquinas later uses the expression "*ad invicem ordinate sunt et coniuncte in rerum natura*". Just like in the final redaction of the text, it is not clear whether, introducing this distinction, Aquinas means to isolate necessarily separated things or possibly separated things.

order; however, this is not spelled out explicitly in the second redaction, so that the ambiguity remains. In any case, it is worth noticing that many elements of (2) were reworked by Aquinas and integrated in the final redaction of the article³²².

- 3) Responsio. Dicendum, quod ad evidentiam huius questionis distinguere oportet modos quibus intellectus abstraere dicitur

As already said, the third redaction was deleted after only one sentence; this is nearly identical to the first sentence of the second redaction and was only slightly modified in the beginning of the final redaction.

Before closing this section, I would like to make two very general remarks on the development of Aquinas' solution. First, Aquinas' move from the first to the definitive redaction has been sometimes characterised as a shift from a theory with three kinds of abstraction to a theory with two abstractions and a different operation, namely *separatio*³²³. As far as I can see, however, this is not correct. There is no hint in the first redaction at three kinds of abstraction and I am rather inclined to think Aquinas would have distinguished just two kinds. Moreover, I believe it cannot be ruled out – nor can it be proved – the possibility that in the second redaction the distinction between the two operations of the intellect was meant to ground a distinction between *abstractio* and *separatio*. The only mention of three kinds of abstraction (*triplex abstractio*) is found within the final redaction itself, in a passage which followed section (1.c) before being deleted and replaced by the beginning of section (2.a). This mention of *triplex abstractio*, however, does not point to a doctrinal shift, but only to a terminological one³²⁴.

Second, I have tried to outline the development of Aquinas' article, but I believe the relations between the different redactions should deserve closer scrutiny. Here I will restrict myself only to proposing a hypothesis about the macroscopic structure of the definitive redaction. It seems to me that Aquinas reworked and included in the final redaction part of the material of both the first and the second redaction; in particular, the second part of the first redaction (variants a/b/c) provided some material for section (1.c) of the final redaction, while the second redaction provided some material for section (2.a) of the final redaction. Some sections of the final redaction, by contrast, were written independently of the previous redactions, such as, for example, section (1.b) and sections (2.b), (2.c), (2.d), and (3). If this were so, it would be easily understandable why this article by Aquinas seems

³²² Especially in section (2.a) of the final redaction.

³²³ See [Geiger 2000], pp. 153-160, and [Porro 2011], p. 282.

³²⁴ This is the passage deleted: "Patet ergo quod triplex est abstractio qua intellectus abstrahit. Prima quidem secundum operationem operationem secundam intellectus qua componit et dividit, et sic intellectum abstraere nichil est aliud quam hoc non esse in hoc. Abstrahere vero secundum aliam operationem intellectus nichil est aliud quam intelligere quid est hoc sine intellectu alicuius quod est ei in esse rei coniunctum, quandoque quidem coniunctione forme ad materiam vel accidentis ad subiectum".

not to have a clear, ordered structure, and to deal with its topic in consecutive moments, adding material and making statements not entirely in agreement with each other.

5. On the source of Aquinas' distinction between *abstractio* and *separatio*

The way in which the distinction between *abstractio* and *separatio* and their application to the theoretical sciences are carried on in *Super De Trinitate* q. 5 a. 3 is an original and peculiar elaboration by Aquinas. Yet a distinction between *abstractio* and *separatio* and a sharp differentiation of the *abstractio* proper to mathematics from other kinds of abstraction, in particular the abstraction of the universal, have been shown to be present in other works from the first half of the thirteenth century³²⁵.

Moreover, Porro has maintained, as already said, that the main source for the distinction between *abstractio* and *separatio* is Avicenna – in particular, the criticism of Platonists and Pythagoreans one finds in *Ilāhiyyāt* VII 2. In this place Avicenna clearly draws a distinction between what is abstracted and what is separated in existence. In addition, Porro points out that Avicenna's criticism is mainly based on his doctrine of the indifference of essences and on the logical tool underlying this doctrine, namely an analysis of the scope of the negation within a statement³²⁶.

Even though Aquinas derives the distinction between intellectual abstraction and separation in existence from several sources³²⁷, I am inclined to think that Porro is right in maintaining that he is mainly influenced by Avicenna (at least as far as the final redaction is concerned) and in adducing as evidence the last lines of Aquinas' text, in which "Pythagoras and Platonists" are criticised³²⁸.

In this section I do not want to go into the details of the relations between Avicenna's *Ilāhiyyāt* VII 2 and Aquinas' *Super De Trinitate* q. 5 a. 3, both because this is not essential for present purposes and because it might be more complicated than it appears at first. However, I would like to highlight, albeit in a way asking for closer investigation, one feature of Aquinas' reception of Avicenna's doctrines.

We will limit ourselves to the consideration of the following passage from the Latin translation of Avicenna's work:

Una est opinio eorum quod, cum res est exspoliata ab aliquo nec est adiunctus ei respectus alius, profecto exspoliata est in esse ab eo, quemadmodum si id cui aliquid adiunctum est consideraveris per se sine consideratione eius quod sibi adiunctum est, iam enim considerasti illud non adiunctum illi; et omnino, cum consideraveris illud sine condicione coniunctionis, iam putabis te considerasse illud cum condicione non coniunctionis, ita ut non oporteat considerare illud nisi non coniunctum, quamvis sit coniunctum. Sed, quia intellectus apprehendit intellecta quae sunt in mundo sine consideratione eius cui adiunguntur, ideo putaverunt quod intellectus non apprehendit nisi separata ab eis. Non est autem ita; immo omnis res,

³²⁵ See [Lafleur, Carrier 2000] and [Lafleur, Carrier 2010].

³²⁶ See [Porro 2011], sections 3 and 4.

³²⁷ Among which it is worth mentioning Boethius himself, whose *De ebdomadibus* is quoted by Aquinas in the first redaction of the article.

³²⁸ See [Porro 2011], especially p. 299.

secundum quod in seipsa est, habet unum respectum, et, secundum quod coniuncta est alii, habet alium respectum. Nos enim cum intelligimus, verbi gratia, formam hominis in quantum est forma hominis solummodo, iam intelligimus aliquid quod solummodo est secundum quod est in se, sed ex hoc quod intelligimus, non oportet ut sit solum et separatum. Coniunctum enim, ex hoc quod est ipsum, est non separatum secundum modum negationis, non secundum modum privationis qua intelligitur separatio existentiae. Non est autem nobis difficile intelligere per apprehensionem vel per reliquas dispositiones unum ex duobus quorum unum est scilicet quod non est de natura eius separari a sibi coniuncta in existentia, quamvis separatur ab eo in definitione et intentione et certitudine, cum fuerit eius certitudo non contenta intra certitudinem alterius, quoniam esse cum illo facit debere esse coniunctionem non contineri in intentionibus.

In the final part of this passage, Avicenna draws a distinction between what is separated in definition and what is separated in existence. In the chapter to which the text belongs, he is taking into account mathematical entities and universals and intends to deny that they can be separated in existence, even though they are considered in isolation from something else. As we know, the very same idea is expressed in Aquinas' *Super De Trinitate* q. 5 a. 3.

Unlike Aquinas, however, Avicenna does not resort to a distinction between the two operations of the intellect; it is rather the role played by the negation within a phrase that marks a difference between two ways to comprehend something without something else. On one hand, something can be considered *sine condicione coniunctionis*; on the other, *cum condicione non coniunctionis*. Interestingly, Porro shows that this logical tool is employed by Avicenna in at least three different doctrinal contexts: (i) the distinction between the immateriality of being and the immateriality of separate substances; (ii) the doctrine of the indifference of essences; (iii) the distinction between divine being and common being. Porro also points to the fact that Aquinas is well aware of this Avicennian strategy and that he employs it very faithfully on a number of occasions³²⁹.

As for *abstractio* and *separatio*, however, it must be noticed that Aquinas' distinction does not mirror Avicenna's faithfully. The reason for this is that Aquinas' aim is to distinguish what is dependent *secundum esse* on sensible matter from what is not: in other words, he intends to distinguish universals and mathematical entities, on one hand, from both positively and neutrally immaterial realities, on the other. Accordingly, he gathers both positively and neutrally immaterial realities under *separatio*, while they were distinguished according to Avicenna's logical tool: being is immaterial *sine condicione coniunctionis*, while separate beings are immaterial *con condicione non coniunctionis*.

More abstractly, Avicenna's strategy is not faithfully followed by Aquinas in q. 5 a. 3 because such strategy is not sensitive to the difference between possible and impossible separation. As a comparison of cases (i), (ii), and (iii) shows, Avicenna's consideration *sine condicione coniunctionis* does not entail that something can exist without something else (the counterexample being the essence considered without existence altogether), but does not rule it out either (the counterexample being

³²⁹ See [Porro 2011], pp. 294-299. As an example of Aquinas following Avicenna in the distinction between divine being and common being, see the text quoted at p. 298, namely *ST I* q. 3 a. 4 ad 1.

“being” considered without matter). The ultimate difference between Avicenna and Aquinas therefore lies in the introduction, by the latter, of a modal consideration. Avicenna’s twofold consideration of something without something else allows him to draw a distinction between what exists separated from something else and what does not. Aquinas’ *abstractio* and *separatio*, by contrast, are meant to differentiate between what *can* exist separated from something else and what *cannot*.

6. “Socrates’ fire”: remarks on a reading in Aquinas’ autograph

The availability of Aquinas’ autograph has proved to be of great value for understanding the development of the article. Of course, the fact that part of Aquinas’ autograph is extant is relevant also to the edition of the portion of the work which is preserved in it. As P.-M Gils observes in the introduction of the Leonine edition of the work, the presence of the autograph would push one to publish it. On the other hand, continues P.-M. Gils, a critical edition does not amount to an edition of the autograph. Accordingly, he informs the reader that the Leonine edition would correct the autograph by means of variant readings found in the manuscript tradition, whenever this should prove to be necessary and the manuscript tradition should present valuable readings³³⁰.

In the present section, I would like to discuss just one case in which the text of the Leonine edition does not follow Aquinas’ autograph. In this case, however, the Leonine edition does not follow any variant in the manuscript tradition either; rather, the editor opts for a conjecture which he deems as the most plausible reading. The relevant passage, belonging to *Super De Trinitate* q. 5 a. 3, is printed in the Leonine edition as follows:

[T1] [...] et hee partes dicuntur partes materie, que non ponuntur in diffinitione totius, set magis e converso. Et hoc modo se habent ad hominem omnes partes signate, sicut hec anima, et hoc corpus, et hic unguis, et hoc os, et huiusmodi. Hee enim partes sunt quidem partes essentie Sortis et Platonis, non autem hominis in quantum homo, et ideo potest homo abstrai per intellectum ab istis partibus³³¹.

In the passage Aquinas lists some examples of individual parts of men. According to the Leonine edition, these examples would be “this soul”, “this body”, “this nail”, and “this bone”. The critical apparatus, however, informs us that the third example, namely “this nail” (*hic unguis*), is a conjecture by the editor. In its stead, the reading which is found in Aquinas’ autograph is “this fire” (*hic ignis*).

The rest of the manuscript tradition has only one variant reading to offer. According to the *stemma* provided in the Leonine edition, manuscripts are grouped in two main branches, namely α and β , whose ancestors trace back to a single archetype³³². Nearly all manuscripts of α present the same reading as the autograph. By contrast, β simply omits the words “*et hic ignis*”. No manuscript

³³⁰ See P.-M. J. Gils, “Introduction” cit., p. 57.

³³¹ *Super De Trinitate* q. 5. a. 3, p. 149 ll. 229-237. Punctuation modified, as above in the commentary.

³³² See P.-M. J. Gils, “Introduction” cit., pp. 21-29.

is reported to present a different variant; in particular, no manuscript presents the reading “*et hic unguis*”.

The reading “*hic unguis*”, on the other hand, is not found in the Leonine edition for the first time. It was rather printed already in the previous critical edition of *Super De Trinitate* by B. Decker, who notes in the apparatus that the reading in the autograph is “*ignis*”, rather than “*unguis*”³³³. Furthermore, other editions of the text expressly based on the autograph print “*unguis*” without mentioning the presence of “*ignis*” in the autograph³³⁴; in these cases “*unguis*” might be a misreading, rather than a conjecture, by the editor.

It is not difficult to grasp the reason why both B. Decker and P.-M. Gils, even if aware of the presence of a different reading in Aquinas’ autograph, opted for the conjecture “*unguis*”. In the passage in question, Aquinas is expressly listing individual parts of men and, admittedly, the mention of “*hic ignis*” in such a list is apparently out of place. On the other hand, “*hic unguis*” is a very close variant from the point of view of paleography, in addition to referring quite evidently to an individual part of men. P.-M. Gils explicitly says that “*hic ignis*” is hardly understandable in this context, and that the closest reading is “*hic unguis*”. Accordingly, he draws the conclusion that “*ignis*” must be counted as a *lapsus* by Aquinas, suggesting that the omission of “*et hic ignis*” in one branch of the tradition (β) should be considered as an attempt of camouflage made at the level of β ³³⁵.

The omission of “*et hic ignis*” in β might indeed have been meant to cope with the problem posed by the mention of “this fire” among individual parts of men. I would also add that it is certainly difficult to think of another variant reading which would solve that problem better than “*unguis*”. In other words, the choice of “*unguis*” in Decker’s edition and in the Leonine edition is reasonable at the very least. Yet I also believe that the reading “*unguis*” poses a doctrinal problem which is ultimately unsolvable; it would thus force us to postulate a lack of accuracy in Aquinas’ statements or in his choice of examples.

The discussion which follows will fall into three parts.

[1] In the first part I shall briefly comment on the plausibility of postulating a *lapsus* by Aquinas to account for the reading “*ignis*” in the autograph.

[2] In the second section I shall conduct a doctrinal evaluation of the reading “*unguis*”, bringing to light the difficulty it creates and examining some possible solutions thereof.

³³³ *Sancti Thomae de Aquino Expositio super librum Boethii De Trinitate*, ed. B. Decker, Brill, Leiden 1955; see p. 185.

³³⁴ See for example the text of qq. 5-6 of Aquinas’ work in [Wyser 1947], in particular p. 474..

³³⁵ See P.-M. J. Gils, “Introduction” cit., p. 27 n. 1.

[3] In the third section I shall move to a doctrinal evaluation of the reading “*ignis*”, found in Aquinas’ autograph, in order to assess whether it may make sense in the passage in spite of appearances.

[1] *On the possibility of a lapsus “unguis – ignis”*

In Aquinas’ script, the two words “*unguis*” and “*ignis*” would resemble each other closely. As P.-M. Gils reports, they would be written as “ūgⁱs” and “igⁱs”, respectively³³⁶. In other words, all the difference between the two words is made by the distinction of vowels “u” and “i” and by the presence or absence of a tilde.

The close graphic resemblance between the two words might indeed cause someone, for example a copyist, to confuse them with each other. In this case, however, we are not assessing the work of a copyist, but considering the author’s autograph itself. We also know that Aquinas is not copying himself in ms. A, so as to write, for example, a fair copy of his work. If Aquinas wrote “*ignis*” by mistake, the mistake cannot consist in a copying error – and, of course, nobody has ever assumed that it was a copying error.

On the other hand, it is not obvious that graphic resemblance should push us to accept the hypothesis of a *lapsus*. Why should an author in general write *ignis* by mistake while meaning *unguis*? The presence of a *lapsus* would be more understandable in other cases, namely when the mistake is due to a connection in meaning, rather than to graphic resemblance. Just to give one example from *Super De Trinitate* q. 5 a. 3 itself³³⁷:

[T2] Preterea. Secundum Philosophum in I Posteriorum cuiuslibet scientie est considerare subiectum et partes subiecti. Set omnium materialium secundum esse materia pars est. Ergo non potest esse quod aliqua scientia consideret de his que sunt *in materia* absque hoc quod materiam consideret³³⁸.

Instead of “*in materia*”, the reading in the autograph is “*sine materia*”. The Leonine edition prints the reading “*in materia*”, found in one 14th-century manuscript³³⁹. Regardless the specific correction one might adopt³⁴⁰, it seems indeed that Aquinas meant to write the opposite of what he wrote. The error, in this case, is due to two words having opposite *meanings*, rather than to features of the *script*, and can be plausibly ascribed to the author of a text. We cannot say the same, in general, about errors due to graphic resemblance.

Having said this, in the specific case of Aquinas, and especially as far as some letters and signs are concerned, there is some additional evidence to take into account. P.-M. Gils has pointed to

³³⁶ See P.-M. J. Gils, “Introduction” cit., p. 27 n. 1.

³³⁷ This is reported in P.-M. J. Gils, “Introduction” cit., p. 26. See also the other *lapsus*’s mentioned there.

³³⁸ *Super De Trinitate* q. 5 a. 3, p. 145 ll. 10-16 (italics is mine).

³³⁹ Ms. Bologna, Biblioteca Universitaria 1655.

³⁴⁰ For example, it might be “*cum materia*” rather than “*in materia*”. The phrase “*est/sunt in materia*” is in any case more common in Aquinas’ works than “*est/sunt cum materia*”.

the risk of an error in writing words in which letters *i*, *n*, *u*, and *m* are present, and he has documented this sort of error in the case of Aquinas: *debut* (*debut*), *fusse* (*fuisse*), *fut* (*fuit*), *fuūt* (*fiunt*), *attribuut* (*attribuit*), and so on³⁴¹. In addition to this, P.-M. Gils has also observed that Aquinas often forgets signs of abbreviation, and he has given several examples in which a tilde should be added to the reading in the autograph³⁴². Given that the distinction between the two words *ignis* and *unguis*, as already said, is entirely traceable to the distinction between vowels *i* and *u* and to the presence/absence of a tilde, it is in principle possible that the reading *ignis* in the autograph be the outcome of a *lapsus* by Aquinas, who actually meant to write *unguis*.

To sum up, we cannot rule out the possibility that Aquinas wrote *ignis* by mistake, while thinking he was writing something else, namely *unguis*. It would certainly be a strange coincidence that the concerted effort of two mechanical errors – confusion between *u* and *i* together with omission of a tilde – resulted in writing a word with its own meaning (*ignis*)³⁴³. However, this scenario is possible in principle and seems to be forced upon us as the best way of making sense of Aquinas' text. The meaning of the passage appears to be the decisive element in assessing the reading in the autograph. Now, in [T1] Aquinas makes two statements about the examples of “*partes signate*” he gives:

(S1) they are “*partes signate*”, namely particular/individual parts, *of men* – which entails, in Aquinas' view, that they are material parts of the universal “man”;

(S2) they are *formal* parts of individual men like Socrates and Plato.

In what follows I shall evaluate “*unguis*” and “*ignis*” against (S1) and (S2).

[2] “*This nail*”: a doctrinal evaluation

The reading “*hic unguis*” has been printed in the Leonine edition exactly because it makes sense of (S1) in an obvious way: an individual nail is, of course, an individual part of an individual man.

There is a problem with (S2), though. We know for sure that Aquinas deems the finger, the foot, and the hand as material parts of the man³⁴⁴. I think we may safely assume, then, that he would deem the nail as a material part of the man as well (and, probably, even of the finger, of the foot, of the hand). Now, Aquinas' list of “*partes signate*” is meant to give examples of material parts of the

³⁴¹ See P.-M. J. Gils, “S. Thomas écrivain”, in Thomas Aquinas, *Opera omnia*, t. L cit., pp. 175-209, esp. p. 182.

³⁴² See P.-M. J. Gils, “S. Thomas écrivain” cit., pp. 182-183. See also B. Decker, “Prolegomena”, p. 2, in *Sancti Thomae de Aquino Expositio* cit., for a classification of mistakes made by Aquinas while writing.

³⁴³ In this respect, compare this with other errors listed above, for example *fusse/fuisse*: the word actually written by Aquinas, having no meaning at all, is clearly the result of a mechanical error. The same cannot be said *a priori* of “*ignis*”.

³⁴⁴ *Super De Trinitate* q. 5 a. 3, p. 148 ll. 222-225: “[...] set digitus, pes, et manus, et alie huiusmodi partes sunt post intellectum hominis, unde ex eis ratio essentialis hominis non dependet, et ideo sine his intelligi potest [...]”.

man *qua* man. However, Aquinas also states (S2), namely that the examples he has given are formal parts of individual men such as Socrates and Plato. In particular, in order for “this nail” to fulfil the condition prescribed by (S2), it must be a formal part of individual men. The following question should therefore be answered: how can Aquinas state that an individual nail is a formal part of an individual man, while the (universal) nail is undoubtedly a material part of the (universal) man?

I see two possible answers to this question:

- a) when it comes to individual wholes, all their parts are formal parts, because all their parts play a role in determining the individual nature and identity of the whole;
- b) an individual nail is not a formal part of an individual man, but Aquinas states so for lack of accuracy.

Against answer (a)

Answer (a) is admittedly problematic, in as far as it makes the individual nature of an individual man depend on his individual nails. By contrast, one would expect that Socrates’ individual form (his individual soul) and the *materia signata* which individuates it are sufficient to account for Socrates’ individual nature. Accordingly, one would also expect the dependence between Socrates and his nails to be the other way around: Socrates’ nail should be the individual nail it is because it is Socrates’, rather than Socrates be the individual man he is because he has that particular nail among his parts.

To the considerations just made I should add that there is at least one passage from the *Commentary on the Sentences* in which Aquinas seems to confirm expressly that Socrates’ nail cannot be one of Socrates’ formal parts:

[T3] Ablata autem identitate partium, aufertur identitas totius, si loquimur de partibus essentialibus; non autem si loquimur de partibus accidentalibus, sicut sunt capilli et ungues [...] ³⁴⁵.

(T3) belongs to a broader discussion of bodily resurrection. As such, it is clearly speaking of individual human bodies, facing the problem of their identity after the resurrection. Must Socrates’ revived body have the very same parts as Socrates’ body in his earthly life in order to be the same body? Aquinas answers that it does not have to, the reason being that the identity of a whole depends only on the identity of his essential parts, and does not depend, by contrast, on the identity of his accidental parts. Accordingly, Socrates’ revived body must indeed have the very same essential parts as Socrates’ earthly body. On the contrary, its identity does not depend on the identity of its accidental parts. Aquinas gives two examples of accidental parts of human bodies in (T3), namely “hair and

³⁴⁵ *In IV Sententiarum*, d. 44 q. 1 a. 1.

nails”. According to (T3), therefore, Socrates’ revived body can have nails different from Socrates’ original nails while remaining Socrates’ body.

The distinction between essential and accidental parts in (T3) could plausibly correspond to our distinction between formal and material parts; at least, the accidental parts as mentioned in (T3) cannot be formal parts. This means that, according to (T3), an individual nail is not a formal part of an individual man.

One last piece of evidence against answer (a) comes from a statement in Aquinas’ *De ente et essentia* which I shall quote shortly. I would say in advance here that Aquinas seems to state expressly the following principle: X is a formal part of Y if and only if “this X” is a formal part of individual Ys.

To sum up, it seems implausible that Aquinas would maintain that “this nail” is a formal part of “this man” even if “nail” is a material, rather than formal, part of “man”. Just as “man” does not depend on “nail” essentially, so does “this man” not depend on “this nail” essentially.

Against answer (b)

We have just seen that “this nail” cannot be considered a formal part of individual men. If “this nail” is the correct reading, answer (b) above would then explain why Aquinas states (S2) nonetheless: he is simply being inaccurate. In order to give examples of material parts of the man *qua* man, Aquinas lists both material and formal parts of individual men (both are, of course, material parts of the man *qua* man), but inaccurately refers to all of them as formal parts of individual men in (S2). In order to be more precise, he should have said that, even though some parts of individual men are formal parts with respect to them, they are, nonetheless, material parts with respect to man *qua* man.

In order to be in a better position to evaluate answer (b), it might be helpful to recall quickly Aquinas’ views on the essence of material substances as expressed, for example, in *De ente et essentia*, which also contains statements on the essence of man serving as an example:

[T4] Patet ergo quod essentia comprehendit et materiam et formam [...] Relinquitur ergo quod nomen essentie in substantiis compositis significat id quod ex materia et forma compositum est³⁴⁶.

[T5] [...] et dico materiam signatam que sub determinatis dimensionibus consideratur. Hec autem materia in diffinitione que est hominis in quantum est homo non ponitur, sed poneretur in diffinitione Sortis si Sortes diffinitionem haberet. In diffinitione autem hominis ponitur materia non signata: non enim in diffinitione hominis ponitur hoc os et hec caro, sed os et caro absolute que sunt materia hominis non signata. Sic ergo patet quod essentia hominis et essentia Sortis non differt nisi secundum signatum et non signatum [...] ³⁴⁷.

³⁴⁶ *De ente et essentia* c. 2, p. 370 ll. 24-25 . 38-40.

³⁴⁷ *De ente et essentia* c. 2, p. 371 ll. 75-87.

First, Aquinas states that both form and matter enter the definition of a material substance. Second, *materia non signata* enters the definition of a material substance like “man”, while *materia signata* would enter the definition of individual men if individual men had a definition. To mention Aquinas’ example: in the definition of man one should not include “this bone” and “this flesh” (which would enter the definition of individual men, if individual men had a definition), but “bone” and “flesh”. Third, the essence of individual men and the essence of man do not differ but for the feature of being *signatum* or not.

The above statements can be easily translated, in terms of formal and material parts, into the framework of *Super De Trinitate* q. 5 a. 3. First, both matter and form are formal parts of a material substance as a whole. Second, “flesh” and “bone” are formal parts of the man, while “this flesh” and “this bone” are formal parts of individual men. Third, X is a formal part of Y if and only if “this X” is a formal part of individual Ys³⁴⁸. The example of man as expressed in *Super De Trinitate* q. 5 a. 3 confirms that both matter and form are formal parts of a material substance: Aquinas’ text implies that both the rational soul and the body are formal parts of the man.

Returning to Aquinas’ examples of *partes signate* in (T1), it should be noticed that “this soul”, “this body”, and “this bone” are all formal parts of individual men. “This soul” and “this body” clearly refer to form and matter of individual men; we can know for sure that they are formal parts of individual men because “soul” and “body” are said to be formal parts of the man in *Super De Trinitate* q. 5 a. 3 itself.

As for “this bone”, *Super De Trinitate* q. 5 a. 3 does not provide us with enough information to assess its status. However, in *De ente* c. 2 flesh and bones are said to be the matter of the man and to enter his definition; as already said, this should mean that flesh and bones are formal parts of the man. Even more, I would say that flesh and bones can be roughly identified with the “body resulting from the elements being mixed *in the way required by the rational soul*”. In any case, it is plausible that “this bone” in *Super De Trinitate* q. 5 a. 3 should be taken as indicating the matter of individual men. “This body” and “this bone”, therefore, would both refer to the matter of individual men, the latter doing so in a more specific way than the former. Accordingly, “this bone” must be deemed as a formal part of individual men.

To sum up, we have seen that “this nail” cannot be considered a formal part of individual men and that answer (b) postulates a lack of accuracy in Aquinas’ stating (S2). By contrast, “this soul”, “this body”, and “this bone” refer to formal parts of individual men. Accordingly, Aquinas’ statement (S2) is true as far as these three examples are concerned.

³⁴⁸ As we have seen, this excludes answer (a) above.

In other words, answer (b) is not substantiated by the other examples in Aquinas' list. It might well be the case, of course, that Aquinas' (S2) is not accurate *only* as far as "this nail" is concerned. Still, it must be stressed that this would be an *ad hoc* solution, meant to make room just for the reading "this nail" and finding no support in the rest of the passage.

Said otherwise: answer (b) cannot be ruled out, but a different explanation of (T1) would be preferable. Having discussed both answers (a) and (b), meant to explain the reading "*hic unguis*", I shall now move to an evaluation of the reading "*hic ignis*".

[3] "*This fire*": a doctrinal evaluation

I said that the reading "*hic unguis*" has been printed in the Leonine edition because it makes sense of (S1) in an obvious way. We have also seen, however, that it is problematic with respect to (S2). This is because an individual nail is obviously a part of an individual man, but, on the other hand, it is definitely not one of his formal parts.

Unlike an individual nail, an individual fire seems to fall short of being not only a *formal* part of an individual man, but a part of an individual man more generally. For this reason, we have seen, the reading "*hic ignis*" has been rejected in the first place even against the evidence provided by Aquinas' autograph. Accordingly, an evaluation of "*hic ignis*" should assess, first of all, whether this reading is compatible with (S1); only in case of a positive answer would it make sense to ask whether it is compatible with (S2) as well.

The question posed by (S1) is the following: how can "this fire" be a part of an individual man? In the previous section we noticed that Aquinas endorses the following principle: X is a formal part of Y if and only if "this X" is a formal part of individual Ys. As a consequence, the question posed by (S1) is equivalent to the following: how can the fire be a part of the man?

Finding a satisfactory answer to this question is not as hopeless as one might expect. In fact, it is Aquinas himself who provides us with an answer in *Super De Trinitate* q. 5 a. 3. In the *solutio* Aquinas mentions twice, and in basically the same wording, the formal parts of the man: "*per se competit homini quod inveniatur in eo anima rationalis et corpus compositum ex quatuor elementis*"; "*dummodo ponatur coniunctum ex anima rationali et corpore mixto ex elementis propria mixtione quam requirit talis forma, erit homo*".

Since both matter and form are formal parts of a material substance, Aquinas mentions among the formal parts of the man both his soul and his body. The peculiar way in which Aquinas refers here to the matter of the man is remarkable: "a body *composed of the four elements*", a given kind (depending on the kind of form that the rational soul is) of "mixture" of the four elements.

According to one of the first examples of formal parts Aquinas gives in the article, the elements composing a mixture are parts of the mixture they compose³⁴⁹. Thus, the fact that the fire, as one of the four elements, enters the composition of the body of the man (and, for that, of several other non-simple bodies) implies that the fire is a part of the body of the man. The body of the man is said to be, in turn, a part of the man. Assuming the transitivity of the relation of parthood, all this entails that the fire is a part of the man – and that “this fire” is accordingly a part of individual men. The reading “*hic ignis*” so turns out to be compatible with (S1).

Along the very same lines it is possible to argue that “*hic ignis*” is furthermore compatible with (S2). A body composed of the four elements is not only a part, but a formal part of the man. This means that the man depends on such a body essentially. Moreover, elements are not only parts, but also formal parts of the mixture they compose. This means that a mixture depends on its elements essentially: the body of the man, for example, depends essentially on the elements of which it is composed, including its fire. Assuming the transitivity of the relation of essential dependence, all this entails that the fire is a formal part of the man – and that “this fire” is accordingly a formal part of individual men. The reading “*hic ignis*” so turns out to be compatible with (S2).

If this is correct, Aquinas’ four examples of *partes signate* are indeed formal parts of individual men, referring to their individual form (“this soul”) or their individual matter. Their individual matter is expressed in three different ways: by means of a reference to their individual body in virtue of the generic notion of “body” (“this body”); by means of a reference to one of the four elements composing such individual body (“this fire”); by means of a reference to the specific kind of body befitting the form it is conjoined with (“this bone”).

Conclusion

A critical edition of Aquinas’ works is required to correct even the author’s own autographs, if available, when the correction is forced or is, at least, the best option on syntactical/grammatical or semantical/doctrinal basis. At first sight, this seems to be the case, for semantical reasons, also for the reading “*hic ignis*” found in the autograph of *Super De Trinitate* q. 5 a. 3. The fire seems to be out of place in a list of parts of the man, while the nail is clearly such a part. Moreover, “*hic unguis*” is a very close variant of “*hic ignis*” from the point of view of paleography, which would allow us to suppose – even if with caution – a mistake made by Aquinas while writing the word.

At closer inspection, however, things turn out to be the other way around. The reading “*hic unguis*” is problematic from the point of view of doctrine because Socrates’ nail cannot be one of

³⁴⁹ *Super De Trinitate* q. 5 a. 3 p. 149 ll. 204-207: “Sunt enim quedam partes ex quibus ratio totius dependet, quando scilicet hoc est esse tali toti quod ex talibus partibus componi, sicut se habet sillaba ad litteras, et mixtum ad elementa [...]”.

Socrates' formal parts. The reading "*hic ignis*", by contrast, makes perfect sense because the text itself suggests that Socrates' fire (namely the fire entering the composition of Socrates' body) is one of Socrates' formal parts. The fact that Aquinas had previously insisted on specifying (twice) that the body of the man is made of the four elements is itself telling in this respect.

Admittedly, the reading "*hic ignis*" sounds very odd at first. Nonetheless I believe, all things considered, that it should be retained for the following reasons:

- Besides the omission of "*et hic ignis*" in a branch of the manuscript tradition, the only plausible alternative is the variant "*hic unguis*", a reading involving doctrinal problems which can hardly be overcome;
- The presence of the reading "*hic ignis*" is fully explained by Aquinas' mention of the human body being composed of the four elements;
- The presence of the reading "*hic ignis*" would in turn shed light on Aquinas' insistence on the human body being composed of the four elements, a peculiar reference – instead of "flesh and bones" – to the matter of the man.

To conclude, there is no need to suppose a *lapsus* by Aquinas, for the reading in the autograph makes perfectly sense and gives rise to no doctrinal problem. Furthermore, the reading in Aquinas' autograph proves to be far better than the only variant proposed so far, which would indeed introduce a doctrinal problem originally absent from the passage.

7. Conclusions

Aquinas' aim in *Super De Trinitate* q. 5 a. 3 is to explain how mathematical entities can be enquired into without taking into account sensible matter even though they cannot exist but in sensible matter. To this end, Aquinas lists three kinds of intellectual distinctions, namely *separatio* and two forms of *abstractio*, attributing them to the three theoretical sciences.

It is reasonable to think that this attribution does not concern only the subject of these sciences strictly speaking, but everything falling within the scope of the subject and, therefore, within the enquiry of the respective science. The abstraction of form from matter, for example, does not concern solely quantity, but also triangles, etc. As for metaphysics, there is no stronger connection between *separatio* and the notion of "being" than there is between *separatio* and "substance", "one", "God", etc.

Both *abstractio* and *separatio* are intellectual distinctions and, as such, they involve two terms, one of which is distinguished from the other. They are attributed to sciences because they can distinguish their objects of enquiry from something else. As for metaphysics, Aquinas probably wants

to highlight the way its objects are distinguished from sensible qualities, which therefore are the second term of *separatio* in the case of metaphysics.

Abstractio and *separatio* imply different relations (or lack of relations) between the terms they distinguish. *Abstractio* is performed by Conceptualisation and indicates the lack of essential dependence of the first term on the second term – the first term can be thought of independently of the second one; in its most proper meaning it is restricted to distinguishing things which are necessarily conjoined in their existence. *Separatio* is performed by Judgement and indicates the lack of existential dependence of the first term on the second term – the first term can exist independently of the second one. The meaning of *abstractio* and *separatio* lies entirely in the kinds of relations between two terms that they can express. When the second term of the intellectual distinction is sensible matter, the distinction between *abstractio* and *separatio* thus mirrors the distinction between objects depending on matter *secundum esse* and objects not depending on matter *secundum esse*. As for metaphysics, there is no special connection of *separatio* to “being” due to the fact that being is analogous, transcendental, and should include everything in itself. The only reason why *separatio*, rather than *abstractio*, is ascribed to metaphysics is that “being” (and “substance”, etc.) does not depend on matter *secundum esse*. Moreover, *separatio* is not ascribed as such to metaphysics; this attribution is relative to the two terms involved in the particular case of metaphysics: its objects of enquiry, on one hand, and sensible matter, on the other. In itself, *separatio* can be applied to any two terms one of which can exist without the other, as Aquinas’ examples show: the line without the triangle, etc.

It is beyond any doubt that Aquinas’ intention is to apply *separatio* to both classes of immaterial realities distinguished in q. 5 a. 1. Indeed, both positively and negatively immaterial realities need not exist in conjunction with sensible matter. For this feature, which they share, they both differ from mathematical entities, which, by contrast, must exist in conjunction with sensible matter, even though they can be thought independently of it³⁵⁰.

The role played by *abstractio* in its most proper sense is best clarified speaking of subject-attribute pairs. *Abstractio* is exactly the act which can distinguish a subject from its necessary, non-essential attributes. It cannot distinguish a subject from its essential attributes, because the former

³⁵⁰ It is therefore wrong to reduce the immateriality of being to the fact that being does not include matter in its definition, as in [Porro 2011], pp. 285-286. In so doing, neutrally immaterial realities, which can exist without matter, would not be adequately distinguished from mathematical entities, which cannot. Porro ([Porro 2011], pp. 300-301) maintains that Aquinas is aware of the fact that this is exactly Avicenna’s solution and quotes, to support this statement, the following passage from Aquinas’ *Commentary on the Metaphysics; In VI Metaph.* l. 1: “Advertendum est autem, quod licet ad considerationem primae philosophiae pertineant ea quae sunt separata secundum esse et rationem a materia et motu, non tamen solum ea; sed etiam de sensibilibus, in quantum sunt entia, Philosophus perscrutatur. Nisi forte dicamus, ut Avicenna dicit, quod huiusmodi communia de quibus haec scientia perscrutatur, dicuntur separata secundum esse, non quia semper sint sine materia; sed quia non de necessitate habent esse in materia, sicut mathematica”. However, the last sentence ought to be translated as follows: “[...] but because they do not necessarily have being in matter, as mathematical [entities] do”; it therefore express a sharp distinction, rather than similarity, between common notions and mathematical entities.

depends on the latter essentially. It cannot distinguish a subject from non-necessary attributes, because the former does not depend on the latter existentially, so that *separatio* would be the proper act performing such distinction. *Abstractio* from sensible matter is attributed to mathematics, because sensible qualities are necessary, non-essential attributes of quantified substances.

The possibility of applying *separatio* to distinguish a subject from an attribute, by contrast, lies in the fact that the latter is not a necessary attribute of the subject. In the case of metaphysics and, in particular, of “being”, this means that “material” is not a necessary attribute of “being”. But how can one know that X is not a necessary attribute of Y? Or, in the case of metaphysics, how can one know that “material” is not a necessary attribute of “being”? I do not think that Wippel’s distinction between different intelligible contents would work: it would indeed show that “material” is not an essential attribute of being, but this is not enough to show that it is also non-necessary. It is true that necessary attributes can be thought as caused by and deriving from the essence of the subject; however, Wippel’s method would still not work, unless one assumes that human minds can derive all the necessary attributes attaching to something solely on the basis of its notion. In other words, due to the difference between essential and necessary attributes, I am inclined to think that the possibility of positively immaterial beings can only be established by knowing that an immaterial being actually exists³⁵¹.

If the discovery of the subject of metaphysics were grounded on *separatio*, it would therefore presuppose the knowledge of the existence of immaterial beings. Metaphysics as a whole should thus presuppose a knowledge of immaterial substances, which however, according to Aquinas, is its goal. Even if one could try to maintain that metaphysics seeks a knowledge of separate substances different from the one it presupposes, all the evidence rather leads to denying to *separatio* any foundational role in metaphysics. The fact itself that it is mentioned in an article concerning mathematics, and with the definite aim to deny that mathematical entities can exist separately, should lead to this conclusion³⁵².

The question still remains, however, why Aquinas draws the connection between intellectual distinctions and theoretical sciences. I would propose that the application of the intellectual distinctions to the theoretical sciences has only a descriptive, and not a heuristic, value. Accordingly, I believe that Geiger’s view that q. 5 a. 3 is the “subjective” counterpart of the “objective” q. 5 a. 1 should be qualified. It is true that *abstractio* and *separatio* are subjective acts corresponding to different *speculabilia*; however, they are not mentioned as acts which must be actually performed by

³⁵¹ I mentioned that Wippel takes into account an objection, asking whether the mere possibility of immaterial beings is enough to ground the new science of metaphysics. Wippel argues that it is. Assuming that a knowledge of the immateriality of being were essential to begin metaphysics, I would agree with Wippel’s argument. However, my point here is that Wippel’s method not only does not prove that immaterial beings in fact exist, but does not even prove that they can exist.

³⁵² See [Porro 2011], p. 299.

human intellects in order for them to grasp those *speculabilia*. It is their objective correctness, rather than their subjective possibility, which is at stake. In other words, the attribution of *separatio* to metaphysics only means that being (and, for that, all metaphysical realities) *is* immaterial, not that it must be *known* to be immaterial in order to undertake the science of metaphysics.

V – The actual structure of metaphysics

Aquinas' understanding of the structure of Aristotle's *Metaphysics* has been thoroughly examined in [Galluzzo 2004]. First, Galluzzo has reconstructed and analysed the *divisio textus* of the *Metaphysics* provided by Aquinas himself in his commentary. On this basis, he has shown that Aquinas conceives of the *Metaphysics* as basically bipartite, with books A-E being preliminary to the proper scientific enquiry. Furthermore, Galluzzo has argued that Aquinas understands the proper scientific enquiry in Z-Λ as structured according to the triad *subiectum, passionem, principia*, which seems to govern – according to the prologue of the *Commentary on the Metaphysics* – Aquinas' conception of a science in general. This also suggests, as Galluzzo observes, that there is no sharp discrepancy between Aquinas' own conception of metaphysics and his understanding of Aristotle's *Metaphysics*. Finally, Galluzzo has provided an analysis of Aquinas' classification of the *aporiae* of *Met. B* and has argued that Aquinas sees the *aporiae* as a sort of index of the contents of Aristotle's *Metaphysics*. More precisely, according to Aquinas, Aristotle would present and discuss all the problems of metaphysics in *Met. B*, and then move to their solution in the remaining portion of the work.

My main aim in this section is to outline Albert's understanding of the structure of Aristotle's *Metaphysics* by means of an analysis similar to the one provided in [Galluzzo 2004] about Aquinas. In particular, I shall follow and discuss Albert's *divisio textus* of the work; at the end of the chapter, I shall also provide a list of the *aporiae* of *Met. B* according to Albert's classification. For the sake of completeness, however, I shall begin with a brief discussion of Aquinas' conception of the structure of the *Metaphysics*, basically reporting Galluzzo's main results.

For both Albert and Aquinas, the beginnings of sections of their commentaries (usually, but not only, the beginnings of their commentaries on a given book of the *Metaphysics*) are the main pieces of evidence to outline their understanding of the structure of the *Metaphysics*. I shall not comment on them in detail, assuming that their purport is adequately captured in the schemes which will be provided below.

1. Aquinas on the structure of Aristotle's *Metaphysics*

Aquinas' *divisio textus* of Aristotle's *Metaphysics* is as follows³⁵³:

³⁵³ The following *divisio textus* is basically equivalent to the one reconstructed in [Galluzzo 2004], pp. 355-356, from which it slightly differs for two non-substantial aspects. First, I have included books M-N: even though Aquinas does not comment upon them, he proves to take them into account in the *divisio textus* (see *In Metaph.*, XII, lectio 5). Second, I have put together book K with book Λ 1-5, isolating the second half of Λ; the fact that Aquinas deems the proper investigation into separate substances to begin with Λ 6 is in any case noticed in [Galluzzo 2004], p. 365.

0 Prooemium (A 1-2)

1 Scientia (A 3 – N)	1.0 Antiqui philosophi (A 3-9)				
	1.1 Veritas (α – N)	1.1.0 Ea quae pertinent ad considerationem universalis veritatis (α)			
		1.1.1 Inquirere veritatem (B – N)	1.1.1.0 Disputative (B)		
			1.1.1.1 Demonstrative (Γ – N)	1.1.1.1.0 Modus scientiae (Γ)	
				1.1.1.1.1 Res quas scientia considerat (Δ – N)	1.1.1.1.1.0 Distinguere intentiones nominum (Δ)
					1.1.1.1.1.1 Determinare de rebus (E – N)
		1.1.1.1.1.1.1 De ente determinare (Z – N)			

1.1.1.1.1.1.1 De ente determinare (Z – N)	De ente inquantum est ens (Z – I)	De ente (Z – Θ)	Secundum quod dividitur per decem praedicamenta (Z – H)	Per rationes logicas et communes (Z)	
			Per principia substantiarum sensibilium (H)		
		Secundum quod dividitur per potentiam et actum (Θ)			
	De uno (I)				
	De primis principii entium (K – N)	Compendium (K – Λ 5)	De entibus imperfectis (K)		
		De substantiis immobilibus (Λ 6 – N)	De ente simpliciter (substantia) (Λ 1-5)		
		Secundum propriam opinionem (Λ 6-10)			
		Secundum opinionem aliorum (M-N)			

The first table shows a peculiarity of Aquinas' *divisio textus*. From the work as a whole, he singles out the first two chapters and contrasts them with all the rest. When he moves on to considering the second member of the division, he singles out again a first, small portion of text and contrasts it with all the rest, and so on³⁵⁴. In each bipartition, the first part seems to be, albeit at different levels, preparatory to the second one, namely to the rest of the work. We may visualise Aquinas' strategy with a binary tree having the following structure: the root and the nodes named "1"

³⁵⁴ See [Galluzzo 2004], p. 356.

have two sons, named “0” and “1” respectively; nodes named “0” have no son. At each level, node “0” plays the role of an introduction to node “1”.

Aquinas’ way of dividing Aristotle’s text changes when he reaches books Z – N. Apparently, this is no coincidence, for Aquinas seems to deem books A – E considered as a whole as preparatory to the proper scientific investigation, which would be contained in Z – N instead³⁵⁵. As for the division of these books, Aquinas first distinguishes the enquiry into being (Z – I) from the enquiry into the principles of being (K – N). The enquiry into being is then divided into two parts on the ground of the mutual implication between being and “one”: in books Z – Θ one can find an investigation into being, while in I one can find an investigation into “one”.

On the basis of these divisions, one may see books Z – N as basically tripartite: first, an enquiry into being in Z – Θ; second, an enquiry into “one” in I; third, an enquiry into the principles of being in K – N. As observed in [Galluzzo 2004], this tripartition plausibly corresponds to the triad *subiectum, passiones, principia*, which seems to govern Aquinas’ understanding of the structure of a science in general³⁵⁶.

2. Albert on the structure of Aristotle’s *Metaphysics*

Albert’s *divisio textus* of Aristotle’s *Metaphysics*, as it emerges from the *incipit* of the books and treatises of his *Metaphysica*, is as follows:

A	Scientiae generatio Antiqui philosophi			Preambula	
α	Ostendere finitas esse causas				
B	Dubitationes				
Γ	Demonstrare quod est quaedam scientia quae per extrema et prima principia formae primae et finis ultimi considerat ens, in quantum est ens, et quae insunt enti				
Δ	Praeponere analogorum multipliciter				
E	Accidens			Ens et partes entis	
Z	Forma secundum quod est totum esse substantiae primae et quiditas ipsius	secundum principia	Concepta cum materia		Substantia
H	Forma secundum quod est diversa a materia et altera pars compositi				
Θ	Per potentiam et actum	secundum exitum ad esse			

³⁵⁵ See [Galluzzo 2004], pp. 358-359.

³⁵⁶ See [Galluzzo 2004], p. 359. For the role of book I according to Aquinas, see also [Castelli 2011]. Aquinas’ *divisio textus* seems indeed to confirm Galluzzo’s hypothesis. Yet it must also be noticed that in the prologue of the *Commentary on the Metaphysics* Aquinas seems to equate the status of “one” with the status of potency and act: “[...] ens, et ea quae consequuntur ens, ut unum et multa, potentia et actus”. This fact would speak in favour of an alternative tripartition: *subiectum* in Z – H, *passiones* in Θ – I, *principia* in K – N.

I	Ut unum et multum	secundum quod in esse constituta consideratur		
Λ	Quae sint partes substantiae et quae passiones earum De substantia immobili et incorruptibili		Partes substantiae	
M	Error eorum qui de principiis substantiae falsa tradiderunt			
N				

Just like Aquinas, Albert conceives of the *Metaphysics* as basically bipartite, with the first part being introductory to the proper scientific enquiry. As for the beginning of the proper scientific enquiry, Albert seems to identify it with book E (whereas Aquinas identifies it with book Z):

Omnibus iam determinatis quae sapientiae huic preambula esse videntur, nunc inquirere oportet de ente et partibus entibus secundum ordinem. Et cum prima divisio entis sit in substantiam et accidens [...] oportet, quod id quod primo quaeritur, sit accidens, substantia autem consequenter alium modum habebit cognitionis³⁵⁷.

Metaphysics should enquire into being and its parts, and since being is immediately divided into substance and accident, the enquiry into being will be divided into an enquiry into substance and an enquiry into accident. Accident, Albert informs us, is going to be enquired before substance: in particular, accident is enquired in book E, whereas the investigation of substance will take place starting from book Z.

As for the investigation into substance, it is basically divided into two parts (three, if we take into account also the *pars destruens* in M-N). The first part, made of books Z-I, would consist in an investigation into sensible substance. The tripartition – outlined at the beginning of Z – of these books according to the characterisations “*secundum principia, secundum exitum ad esse, secundum quod in esse constituta considerantur*” is peculiar and probably due to the influence of a general Neoplatonic scheme³⁵⁸.

The second part of the investigation of substance, contained in book Λ, would first distinguish the parts of substance (in Λ 1-5, corresponding to the first treatise of Albert’s *Metaphysica*) and then move to the consideration of separate substances (in Λ 6-10, corresponding to the second treatise of Albert’s *Metaphysica*). Actually, at the end of his commentary on Λ Albert adds a *digressio* made of a whole treatise, namely *Metaphysica* 11.3, and concerning sensible incorruptible substances. This basically means that Albert sees Aristotle’s discussion of substance as lacking. In book Λ Aristotle draws a distinction between three kinds of substances (sensible corruptible, sensible but not corruptible, neither sensible nor corruptible). According to Albert, however, he only deals with two

³⁵⁷ *Metaphysica* 6.1.1.

³⁵⁸ Cf. [Anzulewicz 2000], in particular the author’s conception of the triad “*exitus – perfectio – reductio*” as the unifying principle of the structure of Albert’s thought.

kinds of substance in the *Metaphysics*: with sensible and corruptible substance in Z – I, and with separate substances in Λ 6-10.

So far I have expounded Albert's *divisio textus* as it emerges from the *incipit* of the books (and sometimes of the treatises) of his *Metaphysica*. In the course of the work, however, Albert also provides us with further information on its structure. These additional pieces of information do not always coincide with the *divisio textus* described so far; in some cases, Albert's different statements might even not be compatible.

To begin with, let us return to Albert's description of the role of book E: it is supposed to contain an investigation of accident prior to the investigation of substance (which starts with Z). Now, the opposition between substance and accident, together with their identification with "the parts of being", forces us to take "accident" as a general reference to the categories other than substance. This being the case, Albert's description of the contents of book E is quite surprising, for Aristotle's *Metaphysics* E does not seem to contain a discussion of accidental categories. As a matter of fact, Albert himself provides quite a different account of book E at the beginning of the second treatise of the book (*Metaphysica* 6.2.1):

Quoniam autem ens simpliciter et absolute acceptum, prout ipsum est principium, dicitur multipliciter, sicut in V superiori libro est determinatum, dicitur enim ens secundum accidens et ens per se, et secundum accidens quidem dicitur ens diminutum, ens autem diminutum dupliciter dicitur, quoniam id quod casus est entis, eo quod cadit a principiis entitatis, dicitur per accidens esse secundum suum nomen, dicitur etiam ens diminutum, quod habet esse in anima, quod accidit omni enti, et hoc est verum, cuius oppositum non-ens est quasi falsum: de his erit dicendum in hoc libro. Prius enim de ente diminutam habente rationem entis dicendum est, ut illo expedito tractatibus entis veri cum subtilitate possimus intendere. Sicut igitur dictum est, ens communiter acceptum dicitur multipliciter, uno quidem modo ens dicitur per accidens et diminutum, sive sit in re sive in anima, secundo autem modo dicitur ens per se, quod habet entis principia, et hoc dividitur secundum figuras categoriarum [...] primum in hoc libro dicendum est de eo quod est secundum accidens³⁵⁹.

In the passage, Albert does not oppose substance and accident, but *ens per se* and *ens per accidens*. The former is divided into the categories, and thus includes both substance and accidents. The latter, also named *ens diminutum*, includes both being by chance and being in the soul ("being as true"). On the basis of this distinction, Albert states the purpose of book E as follows: it provides a discussion of *ens diminutum*, in order to begin the discussion of *ens per se* afterwards.

Other indications on the structure of Albert's *Metaphysica* come from *Metaphysica* 4.1.6:

Sunt autem substantiae separatae, quae primae sunt in esse secundum omnes suas differentias, licet ultimae sint in nostra cognitione, et sunt substantiae physicae secundum suas differentias, quae posteriores sunt in natura, licet priores sint in nostra, quae a sensu incipit, cognitione. Et ideo sequentes facilitatem doctrinae, in septimo et octavo determinabimus quiditates physicarum substantiarum; et sua consequentia, sicut potentiam et actum et unum et multum, in nono et decimo, et tunc in undecimo libro et deinceps de separatis cum subtilitate loquemur³⁶⁰.

Et sic etiam partes habet philosophia prima de substantia et accidente, quae erit scientia libri sexti, et de quiditate substantiae, quae erit scientia libri septimi, et de substantia physica, quae erit

³⁵⁹ *Metaphysica* 6.2.1, p. 306 l. 39 – p. 307 l. 5.

³⁶⁰ *Metaphysica* 4.1.6, p. 168 ll. 5-15.

determinanda in octavo, et de consequentibus substantiam et unam substantiam, quae erunt scientiae noni, quoniam potentia et actus sequuntur primum ens, et unum et multum et idem et diversum et contrarium sequuntur primum unum. Et potentiam et actum considerabimus in nono, et unum et multum et idem et diversum et contrarium pertractabimus in decimo, et in undecimo et deinceps attingemus ad loquendum de substantiis separatis, et in his complebitur tota ista philosophia³⁶¹.

Sic igitur oportet nos specialem in hac sapientia inducere librum, in quo distinguamus, quotiens singulum talium dicitur, et ille erit liber quintus. De principiis autem entis et de statu principiorum oportuit fieri librum primum et librum secundum. Et quia principia sunt, per quae determinantur istius scientiae quaesita et oportuit praescire quaesita, oportuit de quaesitis inducere librum tertium. Qualiter autem quaesita sunt determinanda per principia et qualiter in unam scientiam reducuntur et quo ordine determinanda sunt, oportuit scire per istum librum quartum³⁶².

The last passage concerns books A – Δ and is basically in agreement, or in any case compatible, with the *divisio textus* given by Albert in the opening lines of those books. Let us therefore focus on the two other passages quoted.

The first passage divides the *Metaphysica* starting with book Z; the second passage starts with book E. Book E is said to be “*de substantia et accidente*”: in this case, Albert opts for the (problematic) opposition substance-accident rather than *ens per se - ens per accidens*. As for books Z – I, the two passages propose the following divisions:

	<i>First passage</i>	<i>Second passage</i>
Z	Quiddities of physical substances	Quiddity of substance
H		Physical substance
Θ	Attributes of physical substances	Attributes of substance (<i>primum ens</i>)
I		Attributes of “one substance” (<i>primum unum</i>)

It is evident that the triad “*secundum principia, secundum exitum ad esse, secundum quod in esse constituta considerantur*” plays no role in the division of books Z – I as outlined in these two passages. Both passages are rather based on the opposition substance – attributes of substance, which can be seen as an opposition between a part of the subject of metaphysics and its attributes. There is an obvious difference between the two texts, though, concerning the scope of the investigation they ascribe to books Z – I. The first passage claims that the investigations carried out in Z – I are entirely restricted to physical substances. The second passage, on the other hand, seems to envisage a more general investigation of substance and its attributes in books Z, Θ, and I, while ascribing a specific investigation of physical substances to book H. Another slight difference between the two passages consists in the fact that the second one is explicit on the distinction between Θ and I: Θ deals with the

³⁶¹ *Metaphysica* 4.1.6, p. 168 ll. 36-49. I believe that the sentence “*quae erunt scientiae libri noni*” is problematic and does not mirror Albert’s intentions. Even though no variant reading is reported in the critical edition, I shall assume that Albert at least meant to write “*quae erunt scientiae libri noni et decimi*”. This assumption is required, I believe, in order to read the passage as a consistent unity.

³⁶² *Metaphysica* 4.1.6, p. 169 ll. 67-77.

attributes belonging to substance inasmuch as substance is the *primum ens*, namely the first meaning of being; I deals with the attributes belonging to substance inasmuch as substance is the *primum unum*, namely the first meaning of “one”.

The two passages end with the claim that separate substances would be investigated “*in undecimo et deinceps*”. Albert’s reference to the books following Λ must include at least M-N. In this respect, one should pay attention to the words: “*in his complebitur tota ista philosophia*”. Now, it is known that Albert maintains that metaphysics does not reach its completion in Aristotle’s *Metaphysics*, but in the *Liber de causis*. According to Albert, the *Liber de causis* should be attached to the *Metaphysics*, and more precisely to book Λ , in order that the investigation into separate substances may reach its completion³⁶³:

In hoc ergo libro ad finem intentionis pervenimus. Ostendimus enim causam primam et causarum secundarum ordinem, et qualiter primum universi esse est principium, et qualiter omnium esse fluit a primo secundum opiniones Peripateticorum. Et haec quidem quando adiuncta fuerint undecimo *Primae Philosophiae* tunc primo opus perfectum est³⁶⁴.

This being the case, it is also possible – though perhaps unlikely – that in *Metaphysica* 4.1.6 Albert is actually referring also to the *Liber de causis* inasmuch as it should follow Λ and bring metaphysical knowledge to its end.

To sum up, Albert provides us with several indications concerning the structure of his *Metaphysica* – and, indirectly, his conception of the structure of Aristotle’s *Metaphysics*. These indications are not always compatible with each other. What is clear is that Albert sees the *Metaphysics* as basically bipartite, with $A - \Delta$ serving as an introduction to the proper scientific enquiry, which is then conveyed in $E - N$ (with the addition of the *Liber de causis*). In this respect, each book of $A - \Delta$ has a proper and essential role to play, and Albert’s statements at the beginning of these books also try to justify their mutual order in the work. Another point which is clear is that the proper scientific enquiry is articulated in two investigations, carried out in E and $Z - \Lambda$, respectively. The latter concerns substance, with a specific investigation into physical substances preceding the enquiry into separate substances. Books M-N close the work with a criticism of other philosophers’ misconceptions.

Having said this, Albert’s exact understanding of the structure of the proper metaphysical enquiry, in particular of $E - \Lambda$, is more of a problem. First of all, the division of E from $Z - \Lambda$ is explained in two different ways: on one hand, by means of the opposition accident – substance; on the other, with the opposition *ens per accidens* – *ens per se*. Second, the inner articulation of $Z - \Lambda$ is expounded in different terms in *Metaphysica* 7.1.1, on one hand, and in *Metaphysica* 4.1.6, on the

³⁶³ See [Noone 2005], p. 698. See [Bertolacci 2013], p. 606, for the role played by Avicenna in Albert’s unification of the two works.

³⁶⁴ *De causis et processu universitatis*, 2.5.24, p.

other. The last problem is compounded by the fact that within *Metaphysica* 4.1.6 itself Albert describes the contents of books Z – Λ twice, and in slightly different ways.

The two divisions of books Z – Λ in *Metaphysica* 4.1.6 have a common basis, though: in both cases, Albert envisages an enquiry into the several *parts* of substance – physical and separate – and into the *attributes* of (physical) substance. This fact is important, for it seems to reflect Albert’s general conception of the unity of metaphysics as it emerges from *Metaphysica* 1.1.3. All things enquired into in metaphysics, Albert claims, can be traced back to *ens* as its *partes* and *consequentia*. The divisions of books Z – Λ provided in *Metaphysica* 4.1.6 thus seem to be motivated by a unifying principle which is able to explain different roles of the single books within a single scientific enquiry.

3. Aquinas’ and Albert’s divisions of Aristotle’s *aporiae* of Book B

In this section, I mean to provide a bare report of Aquinas’ and Albert’s divisions of the *aporiae* of *Metaphysics* B. In his commentary on *Metaphysics* B 1, Ross numbers Aristotle’s *aporiae* listing them as 14 different problems³⁶⁵.

In his commentary on *Metaphysics* B 1, Aquinas provides a list of 23 *dubitaciones*. The correspondence between Aquinas’ and Ross’ lists of *aporiae* is shown in the following table³⁶⁶:

Ross	1	2	3		4		5			6	7	
Aquinas	1	2	3	4	5	6	7	8	9	10	11	
Ross	8				9	10	11	12	13		14	
Aquinas	12	13	14	15	16	17	18	19	20	21	22	23

Aquinas’ classification is as follows:

	<u><i>In III Metaph. 1. 2</i></u>	
(a) <i>pertinentes ad modum considerationis</i>		1-9
(aa) <i>pertinens ad considerationem causarum</i>		1
(ab) <i>pertinentes ad ea de quibus est scientia</i>		2-9
(aba) <i>sicut de substantiis</i>		2-6
(abaa) <i>ex parte ipsius scientiae</i>		2-4
(abab) <i>ex parte substantiarum ipsarum</i>		5-6
(abb) <i>sicut de accidentibus</i>		7-9
(b) <i>pertinentes ad prima principia</i>		10-23
(ba) <i>pertinentes ad species</i>		10-21

³⁶⁵ Aristotle, *Metaphysics* (ed. Ross), pp. 221-222.

³⁶⁶ The following table and the classification of the *aporiae* basically depend on [Galluzzo 2004], pp. 384-385. Galluzzo has also observed that Aquinas classifies the *aporiae* in a slightly different way while discussing them in B 2-6. For this classification, see [Galluzzo 2004], pp. 385-386.

(baa) <i>quae sunt principia</i>	10-15
(baaa) <i>utrum universalialia sint principia</i>	10-11
(baab) <i>utrum res separatae sint principia</i>	12-15
(bab) <i>qualia sunt</i>	16-21
(baba) <i>secundum unitatem et multitudinem</i>	16-19
(babb) <i>secundum actum et potentiam</i>	20-21
(bb) <i>pertinentes ad mathematica</i>	22-23

As for Albert, he comments on Aristotle's list of *aporiae* of *Metaphysics* B 1 in *Metaphysica* 3.1.2, identifying 27 different problems. The correspondence between Albert's and Ross' lists of *aporiae* is shown in the following table:

Ross	1	2	3		4		5					6		
Albert	1	2	3	4	5	6	7	8	9	10	11	12	13	
Ross	7	8					9	10		11	12	13		14
Albert	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Having commented upon Aristotle's text, Albert also adds a *digressio* with a classification of the 27 problems. Albert's classification is as follows:

Metaphysica 3.1.3 – Et est digressio declarans numerum et ordinem quaestionum inductarum

27 quaestiones de principiis

(a) <i>secundum quod cadit theoria veritatis super ea</i>	1-12
(aa) <i>ex parte speculationis</i>	1-4
(aaa) <i>de unione, quam potest facere theoria sub scientia una</i>	1-3
(aaaa) <i>principium ex quo est aliud</i>	1
(aaab) <i>principium cognitionis</i>	2
(aaac) <i>principiale ens, quod est substantia</i>	3
(aab) <i>de ipsa ratione et dignitate talis scientiae</i>	4
(ab) <i>ex parte speculatorum</i>	5-12
(aba) <i>de subiectis speculationis</i>	5-6
(abaa) <i>de divisione primi entis secundum naturam</i>	5
(abab) <i>secundum quorundam positionem, secundum quod de ipsis est scientia</i>	6
(abb) <i>de per se accidentibus</i>	7-12
(abba) <i>secundum considerationem accidentis absoluti</i>	
(abbaa) <i>in genere considerati</i>	7
(abbab) <i>in specie considerati</i>	8-11
(abbaba) <i>secundum quod habet comparisonem ad subiectum, cuius est per se accidens</i>	8-10
(abbabb) <i>secundum quod comparatur ut subiectum ad accidens proprium, quod per se convenit ei</i>	11
(abb) <i>secundum considerationem accidentis comparati</i>	12
(b) <i>de ipsa natura principiorum</i>	13-27
(ba) <i>de principiis, quae sunt causae secundum rem sive naturam earum acceptae</i>	13-21

(baa) <i>prima causarum consideratio</i>	13-14
(bab) <i>secunda causarum consideratio</i>	15-18
(bac) <i>tertia causarum consideratio</i>	19-21
(bb) <i>de his quae Pythagorici et Platonici posuerunt circa principia et causas</i>	22-27
(bba) <i>de principio formali propter positionem Pythagorae</i>	22
(bbb) <i>propter Platonis philosophiam</i>	23-27
(bbba) <i>de principiis primis</i>	23-25
(bbbaa) <i>de modo ipsarum causarum</i>	23
(bbbab) <i>de modo causandi illarum causarum</i>	24-25
(bbbaba) <i>ex parte causae causantis</i>	24
(bbbabb) <i>ex parte causati</i>	25
(bbbb) <i>de his quae posuit esse principia et elementa</i>	26-27
(bbbba) <i>de substantia huiusmodi elementorum, quae sit</i>	26
(bbbbb) <i>de modo</i>	27

Aquinas' and Albert's classifications of *aporiae* would be worth a close scrutiny, both in themselves and in relation to the authors' views on the contents of the other books of the *Metaphysics*. Moreover, a detailed comparison between the two authors may turn out to be instructive. In the present context, I shall restrict myself to reporting one observation made by Galluzzo about Aquinas' classification and to extending its validity to Albert's classification.

Galluzzo has observed that Aquinas' classification mirrors his conception of the structure of *Metaphysics* as basically bipartite, with the first part (books A – E) being preparatory to the proper scientific enquiry (books Z – N). In particular, such bipartition would be reflected in Aquinas' distinction of two major classes of *aporiae*: the ones concerning the *modus considerationis*, namely 1-9, and the ones concerning the *prima principia*, namely 10-23³⁶⁷. Aquinas' mention of *prima principia* is indeed a way to refer to the actual contents of metaphysics; as a matter of fact, going into the details of the classification of 10-23 one may see a map of the development of books Z – N³⁶⁸.

Now, it has been observed that Albert, just like Aquinas, sees the *Metaphysics* as bipartite, with the first part (A – Δ) being preliminary to the proper scientific enquiry (E – N). Also in Albert's case, this bipartite conception of the *Metaphysics* appears to be reflected in the classification of the *aporiae*. There are two major classes of *aporiae*: on one hand, those concerning principles *secundum quod cadit theoria veritatis super ea*, namely, 1-12; on the other, those concerning principles themselves (*de ipsa natura principiorum*), namely 13-27.

To sum up, both Aquinas and Albert identify two major classes of *aporiae*, the first one concerning metaphysical consideration, the second one concerning the contents of metaphysics. Furthermore, both authors draw the distinction between the two classes "at the same point": following Ross' enumeration as a common ground to compare the two authors, *aporiae* 1-5 belong to the first

³⁶⁷ [Galluzzo 2004], pp. 380-382.

³⁶⁸ Actually, in the actual discussion of the *aporiae* in his commentary on B 2-6, Aquinas explicitly indicates the places of the work where the several difficulties are supposed to be solved. For an analysis of this, see [Galluzzo 2004], pp. 375-380.

class, while *aporiae* 6-14 belong to the second one. In both authors, the two classes of *aporiae* are likely to mirror an understanding of the structure of metaphysics as basically bipartite, with some books being preparatory to the actual metaphysical enquiry.

VI – Albert the Great on the relations between metaphysics and the other theoretical sciences

In this chapter I intend to examine Albert's view on the relations between metaphysics and the other theoretical sciences. As already mentioned, Albert's reflection on this matter is quite broad and undoubtedly far more complex than Aquinas'. Indeed, in his philosophical paraphrases he seems to be quite concerned with the problem how the contents of Aristotle's (and others') works follow the clear-cut division of theoretical sciences provided, for example, in *Physica* 1.1.1, and with the problem of the mutual interactions and the hierarchical arrangement of these sciences. Accordingly, he apparently develops a systematic framework to explain the possible relations among the theoretical sciences. In some cases, Albert's views are clearly expressed in abstract and general terms; in other cases, Albert's remarks explicitly concern only a particular case and are simply prompted by the portion of text he is commenting upon. Even in these cases, however, Albert's remarks resemble much more closely the application of a general principle, rather than specific solutions for the problem at stake. In this respect, a comparison of several "commentary chapters" (as opposed to digressions) of Albert's works may provide interesting evidence, revealing a general principle at work in different contexts to tackle similar, specific issues.

This chapter will fall into three parts. In the first part (section 1), I shall present Albert's statements concerning the mutual order of theoretical sciences, mainly according to the distinction between their objective order and their order of learning. In the second part (sections 2-5), I shall examine how Albert develops a doctrine he basically derives from Avicenna, namely the view that metaphysics establishes the principles of the other theoretical sciences. This view is closely related to the priority of metaphysics according to the objective order of sciences, but does not coincide with it, nor is it entailed by it, as will be clear by the end of this second part. In the third part (section 6), I shall take into account another possible relation between sciences, which does not by itself imply an order among them, namely overlapping. In particular, I will try to highlight the essential ideas behind Albert's strategy to explain different cases of overlapping between two sciences.

1. *Ordo rei and ordo doctrinae*

A) *Ordo rei*

In the first chapter of his *Physica*, immediately after stating the goal of his paraphrases, Albert divides theoretical philosophy into three theoretical sciences. In so doing, he also makes explicit that they are ordered in a definite way according to what he calls the *ordo rei*: the first science is

metaphysics, the second is mathematics, while the third and last science is physics³⁶⁹. In another passage in the same chapter, which concerns the view that metaphysics establishes the principles of particular sciences, he states:

Adhuc autem, cum prima simplex quidditas primum det esse, a quo fluit esse huius quidditatis in mensurato per quantitatem, a quo ulterius etiam profluit esse huius sensibilis distincti per quantitatem et distincti per formas activas et passivas, erit primum absque dubio causa secundi et tertii, unde tam mathematica quam naturalia causantur a metaphysicis et accipiunt principia ab ipsis, et quia ibi probata sunt, ideo non peccant supponendo ea³⁷⁰.

I will come back to this text in the next section. Suffice it to observe now that here the “beings of the quiddities” enquired into by the theoretical sciences are arranged in a way corresponding to the *ordo rei* among the respective sciences. The *prima simplex quidditas*, which I take to be the quiddity of being *qua* being³⁷¹, the subject of metaphysics, gives the *first* being, from which the being of mathematical quiddity issues; *ulterius*, namely following the mathematical being, also the physical being derives. Albert draws the conclusion that both mathematical and physical objects are caused by metaphysical realities, and of course this is possible only insofar as metaphysical objects are prior to the others. For the time being, however, the relation of causation should be left aside: our only concern here is with the order according to which metaphysical being is first, mathematical being is second, and physical being is third. This suggests that the *ordo rei* of the sciences – metaphysics, mathematics, physics – is based on the order of the quiddities they enquire into³⁷².

It remains to be understood why such quiddities are ordered in the way they are. No explicit answer can be found in the prologue of the *Physica*, but one feature of the order is evident and is revealed by the passages we have considered so far, namely that the objects enquired into by the sciences are ordered according to an increasing level of determination. The metaphysical being is the least determined, while the physical being is the most determined. In the last passage quoted, Albert speaks of a “first being”, without qualifying it further; from this the mathematical being flows in what is measured by quantity; finally, the physical being belongs to what is distinguished both through quantity and through “active and passive forms”, namely sensible qualities. The same picture had emerged from the division of sciences: the objects of metaphysics do not contain in their definition any matter at all; the objects of mathematics contain intelligible matter, namely imaginable quantity, but not sensible matter; the objects of physics contain sensible matter (which presupposes intelligible matter).

³⁶⁹ *Physica* 1.1.1, p. 1 ll. 49-51.55-56.58: “Inter partes vero illas prima quidem secundum ordinem rei est, quae est universalis de ente secundum quod ens [...] Secunda autem in eodem ordine rei est mathematica [...] Ultima autem est physica [...]”.

³⁷⁰ *Physica* 1.1.1, p. 2 ll. 76-84.

³⁷¹ Cf. [Bertolacci 2001], pp. 145-146.

³⁷² This is confirmed by the fact that, later in the chapter, Albert refers to *ordo quaesiti et scibilis*, which is probably to identify with the *ordo rei*. For a connection between the order of sciences and the order of their subjects, as far as the priority of metaphysics is concerned, see [Tremblay 2013], p. 566.

That the ground for the order among metaphysical, mathematical, and physical quiddities is such an increasing level of determination is expressly confirmed by the following passage from the first chapter of Albert's later *Metaphysica*:

Cavendus autem hic est error Platonis, qui dixit naturalia fundari in mathematicis et mathematica in divinis, sicut tertia causa fundatur in secunda et secunda fundatur in primaria, et ideo dixit mathematica principia esse naturalium, quod omnino falsum est. Et causa erroris fuit, quia videbat consequentiam sine conversione inter physica et mathematica et divina, quia esse mobile est esse continuum et esse continuum est esse simpliciter, et non convertitur, et substantia mobilis est substantia continua et substantia continua est substantia, et non convertitur. Et quia id a quo non convertitur consequentia, est natura et causa prius et ante id quod antecedit in consequentia, ideo posuit dimensiones mathematicas principia esse physicorum³⁷³.

Again, I shall come back to this text in greater detail while discussing the view that metaphysics establishes the principles of particular sciences. However, two statements in the passage are essential evidence for the problem at stake now:

- (P1) there is a *consequentia sine conversione* among physical, mathematical, and metaphysical objects: *esse mobile* entails *esse continuum*, which in turn entails *esse simpliciter*, while the opposite entailments do not hold;
- (P2) if A entails B but not vice versa, then B is a nature and a cause prior to A.

(P1) corresponds to what I have called earlier “increasing order of determination”: if A entails B but not vice versa, then A is the more determined and B is the less determined³⁷⁴. Then, according to (P2), the less determined form is a nature prior to – and a cause prior to – the more determined form³⁷⁵.

Admittedly, in the text the two statements function as premises of an argument whose conclusion is the following view, which Albert ascribes to Plato:

- (C) mathematical dimensions are principles of physical realities.

³⁷³ *Metaphysica* 1.1.1, p. 2 ll. 31-44.

³⁷⁴ If Albert accepts the *consequentia sine conversione* (see below), the entailments must be understood from a merely “intensional” point of view. At least, the statement that *esse continuum* entails *esse mobile* but not vice versa cannot imply that there is some mathematical object which is not physical: Albert expressly denies that mathematical entities can exist apart from sensible beings.

³⁷⁵ The priority by nature, based on the *consequentia sine conversione*, is one of the meanings of “prior” Albert distinguishes in *De praedicamentis* 7.12. According to this meaning the genus is said to be prior to its species. See *De praedicamentis* 7.12, p. 163 ll. 28-47: “Secundo autem dicitur prius quod non convertitur secundum subsistendi consequentiam. Subsistendi autem consequentiam dico, ut si unum ponatur actu subsistere secundum esse, quod alterum propter hoc necesse sit ponere subsistere secundum esse, sicut dicimus quod unum prius est duobus; duobus enim existentibus mox consequens est unum esse et subsistere, uno vero existente non est necessarium duo esse vel subsistere. Et hic modus est inter inferius et superius in coordinatione praedicabilium, quia inferius est sicut duo, quorum alterum est id quod directe est super ipsum et alterum differentia constitutiva. Unde posito inferiori in esse ponitur suum superius, sed non convertitur quod posito superiori in esse ponatur inferius in esse necessario, quia superius concipitur in inferiori sicut unum in duobus, sed inferius non concipitur in superiori nisi in potentia, sicut duo in uno sunt potentia, et ideo non convertitur consequentia ab uno existente, ut necessario propter hoc sit reliquum. Et inter illa prius esse videtur id a quo non convertitur consequentia, et hoc est unum; ab illo enim ad duo consequentia non convertitur”. For an analysis of this passage and its application to the case of the priority of metaphysics, see [Tremblay 2013], pp. 563-566.

Albert deems (C) wrong; in order to explain why Plato endorsed (C), Albert ascribes to him an argument whose premises are (P1) and (P2) and whose conclusion is (C). In other words, Albert is not stating (P1) and (P2) in first person. This notwithstanding, I believe that Albert would accept the premises of the argument and reject only its conclusion (and, for that, the validity of the argument). First of all, he states (P1) and (P2) in an objective way – not as Plato’s views, but as something he endorses (at least, I think that this is undoubtedly the case with (P2)). In addition to this, one should also take into account the fact that Albert states his own position shortly after and that this position is very close to “Plato’s error”:

Et hoc modo physica fundantur secundum esse et principia cognoscendi in his quae quantitate determinantur, non in quantum quantitate determinantur, sed in quantum esse determinabilis sola quantitate est fundamentum esse determinabilis contrarietate passivorum et activorum³⁷⁶.

Later I will try to highlight the exact meaning of Albert’s position and how it differs from the one he ascribes to Plato. For the time being, let us assume that Albert’s position is adequately captured by (C*):

- (C*) being determinable by quantity is a principle of being determinable by sensible qualities.

It must be noticed that Albert probably deems (C*), rather than (C), as the correct conclusion to be drawn from (P1) and (P2) – and this is further evidence that he would endorse them.

To sum up: Albert maintains that there is a definite *ordo rei* among the three theoretical sciences, according to which metaphysics is the first science, mathematics is the second, and physics is the last. This order can be traced back to the order obtaining among the objects enquired into by such sciences, according to which less determined quiddities are prior to more determined ones³⁷⁷. A deeper insight into this real order of quiddities may be gained observing that the more determined “nature and cause” is dependent on and presupposes the less determined one. Even though I will deal with the foundation of particular sciences starting from the second section of this chapter, it is already clear from the texts quoted above that Albert denies that physics is founded by mathematics. Still, mathematics is prior to physics in the *ordo rei* among sciences: accordingly, the relation of foundation does not coincide with the *ordo rei*³⁷⁸.

³⁷⁶ *Metaphysica* 1.1.1, p. 2 ll. 62-67.

³⁷⁷ Cf. also *Metaphysica* 6.1.3, p. 306 ll. 21-32: “Hoc enim ens esse vel illud habet a determinantibus se et distinguentibus, et in quantum per illa consideratur, in contemplatione cadit scientiarum particularium. In communi autem determinantia ipsum sunt duo, quantitas videlicet et motus principia. Esse enim primum non pendet nisi ex ipsis principiis esse et substantiae. Consequitur autem illud secundum intellectum mensuratum esse quantitate, non concernens sensibilem materiam. Ultimo autem determinans est id quod fit principiis motus. Et penes ista tria sunt acceptae tres theoriae; et inter illas sola divina est prima philosophia et universalis”.

³⁷⁸ Even though it presupposes a given order: the founding science must be prior to the founded one.

Before closing this section, I would like to examine briefly an idea emerging from a passage in Albert's *Physica* which could be seen as related to the *ordo rei*, namely the view that the science which is prior can be applied to the objects of the science which is posterior, and that the posterior science cannot, strictly speaking, contradict the conclusions of the prior one. The text I will focus on concerns precisely the sciences for which a relation of foundation is lacking, namely mathematics and physics.

In *Physica* 4.2.8, the aim of which is to reject the existence of the void, Albert includes a digression in which he intends to demonstrate that two bodies cannot exist in the same place³⁷⁹. The details of Albert's argument need not concern us now; suffice it to say that it is of a mathematical nature and based on geometrical principles. After having reached the conclusion that dimensions existing in the same place are the same and that bodies whose dimensions are the same are identical, Albert deals with the objection that such conclusion is only true of mathematical, rather than physical, bodies:

Sunt autem, qui concedunt hoc de corporibus mathematicis et non de physicis, quod mirum est, cum corpora physica magis sint replentia locum quam mathematica. Quorum error convincitur ex hoc, quid corpora physica praeter formas naturales habent dimensiones facientes corporeitatem in ipsis; quod ergo sequitur de mathematicis propter naturam corporeitatis, sequitur etiam de physicis³⁸⁰.

Sunt iterum, qui dicunt, quod inconvenientia dicta tenent de essentia corporum et non de esse, et ideo dicunt, quod mathematica cum sint essentiae corporales, physica autem distinguantur penes esse, quod tunc non sequitur, quod duo corpora physica efficiantur unum corpus, sed duo mathematica, quia formae physicorum corporum distinguunt ea. Hoc autem, quod error pessimus sit, de facili probatur, quia formae physicae sunt in materia quanta; probatur autem, quod quantitates duorum corporum physicorum si sunt in eodem loco, necessario sunt eadem, et quorum quantitates sunt eadem, illa quanta sunt eadem; ergo duo corpora efficiuntur unum quantum. Sed formae physicae numerantur per subiectum; ergo informatum formis physicis hoc non erit nisi idem et unum³⁸¹.

The objection is simply stated at first. Albert's answer indicates that mathematics enquires into bodies inasmuch as they have dimensions, which account for their *corporeitas*. However, also physical bodies have a *corporeitas* and dimensions, besides having natural forms: Albert draws the conclusion that, if something holds true of mathematical entities in virtue of *corporeitas*, it must hold true also of physical entities.

Later in the text the same objection is found, but it is argued for on the basis of a distinction between *essentia* and *esse* of bodies. The main idea of the objection seems to be that the mathematical conclusion that bodies existing in the same place are the same concerns their *essentia* and not their *esse*; however, physical entities are distinguished through *esse* and, at this level, the natural forms can still distinguish them. In his answer, Albert neglects the distinction between *essentia* and *esse*

³⁷⁹ See the title of the chapter: "Cap. 8. In quo declaratur non esse vacuum ex propria natura vacui; in quo est digressio declarans, quod duo corpora non possunt esse in eodem loco".

³⁸⁰ *Physica* 4.2.8, p. 252 l. 81 – p 253 l. 3.

³⁸¹ *Physica* 4.2.8, p. 253 ll. 21-35.

which the objection had employed. Rather, he observes that natural forms inhere in subjects of which the mathematical conclusion holds true – and since natural forms are “numbered” in virtue of their different subjects, it is not possible for two physical bodies to be distinguished solely by their natural forms while their subject is the same.

To conclude, Albert seems to maintain that the mathematical conclusion about the identity of bodies in the same place holds true of physical bodies exactly because it is based on the nature of *corporeitas* and dimensions, which physical bodies have in addition (and before) to what properly makes them the objects of physics, namely natural forms³⁸². Now, this idea emerges from an example concerning the nature of *corporeitas* and of mathematical bodies in general. The question is: can we assume that Albert would justify, on the very same grounds, the applicability of other mathematical properties and truths to physical objects? For example, if something is true of a sphere inasmuch as it is a sphere, must it also be true of any sensible sphere? One could plausibly answer “yes”, for a sensible sphere, while being characterised by a given natural form, is also characterised by *corporeitas* and by accidents attaching to it only inasmuch as it has *corporeitas* (for example, the spherical figure). As a consequence, one could argue, all the properties which can be demonstrated on the basis of *corporeitas* and of the spherical figure must belong to any sensible sphere.

Albert, however, would answer differently. In fact, to the question formulated above he must definitely want to answer “no”, since he mentions properties which hold true of mathematical entities as such but not of mathematical entities inasmuch as they are in sensible matter. For example, he interprets the mention of the straight line and the bronze sphere in *De Anima* I 1³⁸³ in quite a peculiar way: Albert states that a sensible line would never actually touch the bronze sphere in one point, while the line separated from sensible matter in the intellect would necessarily touch the sphere in one point³⁸⁴. Related to this, one should mention more generally Albert’s endorsement of the doctrine of *minima naturalia*: sensible quantities are not continuous, that is, they are not infinitely divisible, while mathematical quantities are³⁸⁵.

³⁸² See also the mention of this passage in [Lo Bello 2013], p. 391; the author sees the passage as showing that Albert “understood that physics could not be done without mathematics”.

³⁸³ Arist., *De Anima* I 1, 403a 12-16. “Bronze” is secluded by Ross.

³⁸⁴ *De Anima* 1.1.6, p. 12 l. 96 – p. 13 l. 10: “Sicut est videre in recto, quia lineae rectae multa accidunt, quae non conveniunt ei, secundum quod est in materia sensibili. Sicut est, quod sphaera aenea tangit ipsum in puncto, quae tamen sphaera aenea numquam tanget ipsum separatum in puncto secundum actum, sed potius tanget ipsum coniunctum cum materia sensibili, non in puncto, sed in superficie. Et tamen secundum intellectum acceptum rectum et non in materia lignea vel cuprea vel alia materia sensibili non tangetur a quacumque sphaera nisi secundum punctum”.

³⁸⁵ This feature of sensible quantities derives from the ontological principle proper to physical realities, which is, as we shall see, the physical form. See for example *Metaphysica* 5.2.2, p. 238 ll. 23-27: “Corpori autem omni sicut et omni quanto accidit divisibilitas ratione continuationis, quam habet. Et si non dividatur, hoc non est ratione continuationis, sed ratione physicae formae continuationi superadditae, sicut diximus”. For a survey of the doctrine of *minima naturalia* in the 13th and 14th century, see [Maier 1966], pp. 179-196; for Albert, see pp. 183-184. See also [Trifogli 1990], especially pp. 53-58, for the problem of the relations between continuum and *minima naturalia* with a reference to the predecessors of Giles of Rome (Averroes, Albert the Great, Thomas Aquinas).

Does this mean that the idea of the application of mathematical properties to physical objects is not generally valid – and that its validity in *Physica* 4.2.8 was the exception rather than the rule? I think Albert’s answer might not be as clear-cut as the above brief survey of presumed counterexamples seems to suggest. Physical realities have quantities among their accidents, after all, and we saw that the *esse mobile* is also *esse continuum*: accordingly, it is difficult to see how the features of quantities as such might not describe sensible beings properly. Yet physical forms, we have seen, may hinder these features. What does this mean exactly? For example, how can *minima naturalia* be compatible with the continuum proper to quantities as such? Albert seems to adopt a solution – which goes back to Roger Bacon – based on a distinction between two ways of considering the same physical body: on one hand, it can be considered inasmuch as it is a body and, on the other, inasmuch as it is physical. From the former standpoint, the physical body is infinitely divisible; from the latter, it is not³⁸⁶. A similar solution is adopted by Albert to answer another question, concerning the divisibility of the heavens: if heavens are considered without taking into account their heavenly nature, but only inasmuch as they are a *solidum continuum*, they are divisible; inasmuch as they are heavens, they are not³⁸⁷. Ultimately, it does not seem correct to state that mathematical properties might not hold true of physical beings in an absolute sense; rather, they might not hold true of physical beings only inasmuch as they are given physical beings, determined by given physical forms. By contrast, they are truly described by mathematical properties with respect to their being bodies in general.

³⁸⁶ See [Maier 1966], pp. 182-184, for Bacon’s position and the connection with Albert’s. *De generatione et corruptione* 1.1.12, p. 120 ll. 48-54: “[...] licet enim non sit accipere minimum in partibus corporis, secundum quod est corpus, quod non possit accipi minimum per divisionem, tamen est in corpore physico accipere ita parvam carnem, qua si minor accipiatur, operationem carnis non perficiet, et hoc est minimum corpus, non in eo quod corpus, sed in eo quod physicum [...]”.

³⁸⁷ The passage is actually complicated by the idea that mathematical entities are potentially present in sensible beings. *Metaphysica* 12.1.3, p. 551 ll. 69-81: “Palam igitur est, quia contingit caelo inesse posse solidum continuum sine caelo et indivisibili ita, quod natura caelestis eius et indivisibilitatis eius non consideratur. Et ideo geometri recte dicunt et de his quae sunt vere entia, disputant; haec enim quae considerant, vere sunt entia. Sicut enim in antehabitis determinatum est, ens dicitur dupliciter, de ente endelechia sive actu et de ente potestate. Et ideo cum talia qualia mathematici considerant, sint potestate in entibus sensibilibus, verae scientiae ipsorum sunt de entibus, et ideo, sicut supra docuimus et in I et in VI huius philosophiae libris, sunt de numero scientiarum theoricarum”. Another passage is more explicit on the distinction between two ways of considering heavens; see *Physica* 7.1.2, p. 520 ll. 57-65 . p. 521 ll. 28-36: “Et ideo etiam diximus supra, quod omne mobile est divisibile, cum tamen caelum, quod mobile est, non sit divisibile, quia divisibile est caelum, secundum quod est mobile, non tamen divisibile est, secundum quod est hoc mobile ad materiam contractum. Et ita dicimus etiam, quod omne mobile in quantum mobile continuabile est cum omni mobili, in quantum est mobile, et si accipiatur continuum cum ipso, nihil debet sequi impossibile. [...] Si autem forte aliquis dixerit, quod ista demonstratio non valet, quia non concludit simpliciter, sed concessio quodam falso, hoc est, quod omnia moventia et mota contiguentur vel continentur, dicemus, quod hoc non impedit nostram demonstrationem, quia hoc licet sit falsum secundum corpora physica in specie et forma accepta, tamen est possibile et contingens secundum genus mobilis, in quantum est mobile, ut diximus”. Note, however, that here the point of view which does not take into account the specific nature of heavens is described by the formula “inasmuch as it is mobile”, rather than “inasmuch as it is a body/solid”. That would seem to point to a physical, rather than mathematical, consideration of heavens – even though one which disregards the specific physical nature of heavens. An explanation might be that for Albert this kind of physical consideration is enough here, inasmuch as he is concerned only with divisibility rather than with infinite divisibility. Another explanation would consist in identifying the consideration “inasmuch as it is mobile” with a mathematical consideration – in both cases, the specific physical form of the physical being in question is not taken into account.

Now, going back to the argument in *Physica* 4.2.8, it must be noticed that it really is an exception rather than the rule. This is not, however, because mathematics does not normally describe physical things. Rather, the exceptional character of that argument consists in the fact that it deals with a problem – namely the identity of bodies in the same place – for which the mathematical and physical consideration of physical beings cannot differ. As we have seen, Albert takes into account an objection according to which the conclusion of his mathematical argument holds true only of mathematical bodies, not of physical bodies, inasmuch as the latter can still be distinguished by physical forms. Albert’s answer denies this possibility: since the mathematical argument proves the identity of the very substratum of physical forms, there can only be one physical form to determine the body which is in a given place. In this case at least, physical forms cannot hinder the properties of bodies as such, because their very identity depends on the identity of their substratum – accordingly, a physical body which is in a given place is not only a numerically one body, but also a numerically one physical body.

B) *Ordo doctrinae*

In the last paragraph of *Physica* 1.1.1 Albert expressly clarifies the *ordo* of physics with respect to the other theoretical sciences. After recalling that physics is the last science according to the *ordo rei*, he specifies that it is the first science according to the *ordo doctrinae*:

Ex dictis autem facile innotescit, quo ordine se habet ad alias partes philosophiae realis. Est enim ipsa ordine sui quaesiti et scibilis ultima, sed tamen ordine doctrinae est ipsa prima. Doctrina enim non semper incipit a priori secundum rem et naturam, sed ab eo a quo facilius est doctrina. Constat autem, quod humanus intellectus propter reflexionem, quam habet ad sensum, a sensu colligit scientiam, et ideo facilius est doctrina, ut incipiatur ab eo quod possumus accipere sensu et imaginatione et intellectu, quam ab eo quod possumus accipere imaginatione et intellectu, vel ab eo quod accipimus intellectu solo. Et ideo etiam nos tractando de partibus philosophiae primo complebimur deo iuvante scientiam naturalem et deinde loquemur de mathematicis omnibus et intentionem nostram finiemus in scientia divina³⁸⁸.

The order of theoretical sciences in the *ordo doctrinae* is therefore “physics – mathematics – metaphysics”; in the last sentence Albert declares his intention to deal with theoretical philosophy according to such order. In this case, Albert makes it explicit why the sciences are arranged in the way they are in the *ordo doctrinae* and why this order does not mirror the *ordo rei*. *Doctrina* – so Albert states – does not always start with what is anterior *secundum rem*, but with that with which *doctrina* itself turns out to be easier. Albert’s use of the term “*doctrina*”, however obvious, must be noticed here: with all likelihood, it refers to the process of teaching and learning involved in the acquisition of sciences. The *ordo doctrinae* is thus the order in which theoretical sciences are most easily learnt – and, therefore, the order in which they should be taught³⁸⁹.

³⁸⁸ *Physica* 1.1.1, p. 3 ll. 26-41.

³⁸⁹ Cf. also *Metaphysica* 5.1.1, p. 207 l. 57 – p. 208 l. 6.

Such *ordo* is not something the theoretical sciences have in themselves; rather, they are arranged in this order only insofar as they are referred to the human intellect, which is the subject of the relevant process of learning. This is clear from the ground Albert indicates for the order “physics – mathematics – metaphysics”, namely the *reflexio* of human intellect towards senses. As a consequence of this *reflexio*, the acquisition of science for human intellects starts with sensation – and therefore it is easier to begin with physical objects (which can be grasped by sense, imagination, and intellect) than with mathematical objects (which can be grasped only by imagination and intellect) or metaphysical objects (which can be grasped only by intellect). It is the nature of human intellects, with their inclination towards sensation, which accounts for the priority of physics in the *ordo doctrinae*. Mathematics comes second: even though Albert does not explicitly give a reason for this, we may infer it is because mathematical objects are grasped by both imagination and intellect, rather than only intellect, and imagination is closer to sense than intellect. Metaphysics, whose objects can be grasped only by intellect, comes last³⁹⁰.

The distance of metaphysics from an intellect which is bound to imagination and sensation is highlighted by Albert in a number of places. For example, in *Metaphysica* 2.1.2, at the close of his metaphor of light employed to distinguish a *triplex intelligibilis* and a *triplex intellectus*³⁹¹, Albert justifies the path followed by human intellects in the acquisition of knowledge on the ground that such intellects are joined to imagination and sensation. The path described by Albert seems to imply the order “physics – mathematics – metaphysics”³⁹².

The same idea is found in a weird passage in *Metaphysica* 1.2.1, where Albert is commenting upon the opinion, reported by Aristotle in *Met.* A 2, that the wise man is the one who knows difficult things. Albert expands on this statement speaking of a twofold difficulty of the objects of wisdom: on one hand they are difficult for men, on the other they are difficult in themselves³⁹³. As for the difficulty for men, Albert states:

³⁹⁰ For the posteriority of metaphysics, see [Tremblay 2013], pp. 566-569. It is not clear to me whether Tremblay ascribes to mathematics a priority over physics in what he calls the “order of learning”, since his main focus is on metaphysics. He is aware that Albert explicitly states the priority of physics over mathematics, though, for he mentions the passage from *Physica* 1.1.1 quoted above while speaking of the “temporal order” among sciences; see [Tremblay 2013], p. 563 n. 65. As we shall see in a while, there is indeed a way in which mathematics is easier than physics; however, I am going to maintain that this does not affect the *ordo doctrinae*, according to which physics precedes mathematics.

³⁹¹ On this passage see [Steel 2001].

³⁹² *Metaphysica* 2.1.2, p. 93 l. 81 – p. 94 l. 6: “Intellectus autem humanus, eo quod est animae intellectus, quae imaginatione distenditur et sensu patitur et alteratur, coniunctus est imaginationi et sensui. Et ideo incipit ab eo lumine quod est permixtum tenebris, et per separationem apud se factam tandem venit in intelligibile sincerum; propter quod est sicut visus nycticoracis in inceptione sua. Sed quia praeeistentium cognitio multum confortat lumen ipsius, per studium facit, quod visus noctuae non habet. Venit enim ab intellectu obscuro ad lumen sincerum, et a lumine sincero coadunato visu venit ad lumen perpurum et per gradus ascendens tandem accipit ipsum in fonte luminis, sicut aquila contuetur lumen in rota solis”.

³⁹³ *Metaphysica* 1.2.1, p. 18 ll. 19-23: “Postea autem secundario et minus propria ratione dicimus hunc esse sapientem qui cognoscit ea quae duplici difficultate cognoscuntur, quia sunt et difficilia homini cognoscere et difficilia noscere secundum seipsa”.

Quae enim difficilia sunt homini, sunt a sensu remotissima; et haec sunt item prima, ante quae nihil est penitus; haec enim difficulter homo cognoscit, quia intellectus hominis cum continuo et tempore cognoscere natus est. Ista autem intellectualia sunt secundum intellectum divinum, qui quidem solus locus est huiusmodi veritatum purissimarum³⁹⁴.

Albert is not clear about the identity of the things farthest from sense: it would be possible for them to encompass all that is enquired into in metaphysics, including the *prima quiditas*, the quiddity of being *qua* being³⁹⁵. However, it seems that the very same things are said to be difficult to know in themselves – and Albert’s remarks on this point suggest that he has in mind God, rather than the *prima quiditas*:

Et haec sunt etiam in se cognoscere non levia etiam divino intellectui. Cuius probatio est, quia cum duo sint difficulter intelligibilia ex se, unum est difficile intelligibile ex sui imperfectione, alterum autem ex sui perfectione. Ex sui autem imperfectione non levia sunt cognoscere, quaecumque principium intelligendi, quod est forma, perfectum non habent, sed potentiae valde permixtum, sicut hyle et motus et tempus. Ex sui autem perfectione non levia sunt ad dignoscendum, quae omne principium intelligendi praeveniunt, sicut deus deorum, dominus, qui non intelligitur nec enarratur nisi per formam sui causati primi vel secundi et sic deinceps. Et ideo dicit Philosophus, quod non habet nomen et quod deficiunt linguae ab enarratione eius. Et talia, prout possunt, in ista declarantur scientia³⁹⁶.

Albert distinguishes two cases in which something can be difficult to know in itself: either this is due to its imperfection, or to its perfection. Difficult to know in the first way are things whose *principium intelligendi*, the form, is not perfect, but mixed to potency: examples are physical realities such as matter, motion and time, on whose obscurity I shall come back later. Difficult to know for their perfection, on the other hand, are things superior to any *principium intelligendi*, which are above all forms: Albert’s example is God, who can only be known through the form of its first effect, namely the *prima quiditas*, or of subsequent effects, namely the forms which are added to being. With these latter, Albert concludes, metaphysics is concerned.

It should be noticed, however, that Albert is ambivalent in the description of things which are difficult to know in themselves. When he introduces them, he states that they are not easy to know in themselves, even for the divine intellect. However strange this statement might appear, we may accept it as simply stressing, with the reference to the divine intellect, that the objects of wisdom are difficult to know in themselves³⁹⁷. By contrast, at the close of the whole passage on the twofold difficulty of wisdom, Albert summarises it as follows:

Haec igitur est acceptio sapientis, et est data secundum proportionem scibilis sibi proprii ad intellectum humanum, qui accipit ipsum³⁹⁸.

In Albert’s final statement, the difficulty of wisdom seems to depend on the relation of its objects to the human intellect, no reference being made to a difficulty of such objects in themselves;

³⁹⁴ *Metaphysica* 1.2.1, p. 18 ll. 23-27.

³⁹⁵ In this case, Albert’s characterization “*ante quae nihil est penitus*” should be understood in terms of inner causality.

³⁹⁶ *Metaphysica* 1.2.1, p. 18 ll. 29-44.

³⁹⁷ If they are difficult for the most perfect intellect, they must be difficult in themselves.

³⁹⁸ *Metaphysica* 1.2.1, p. 18 ll. 45-47.

still, there is no hint at the fact that this conclusion should be restricted only to the first part, rather than to the whole passage on the twofold difficulty of metaphysics.

Indeed, Albert himself rejects, while commenting on Aristotle's *Met.* α 1, the idea that the objects of metaphysics may be difficult to know in themselves. Rather, they are easy to know in themselves and, since the same thing cannot be both easy and difficult in itself, the cause of the difficulty of metaphysics must lie with the knowing intellect:

Hoc autem ut melius intelligatur, attendendum est, quod non potest idem esse causa oppositorum per se loquendo. Igitur idem non erit causa difficultatis et facilitatis in theoria sapientiae. Non autem sunt in ipsa nisi duo, theorans videlicet et res theorata. Habitu autem est, quod ipsa res pro foribus est; est enim res in sapientia considerata pro foribus et via ad omne scire et principia, per quae est scire, stabilienda. Igitur facilitatis causa est res theorata, et difficultatis causa est in theorante. Exemplum autem horum quae dicuntur, habetur ex his quae diximus in primi libri prooemiis. Quoniam quando res ipsa immixta potentiae, quae nullius scibilis cognoscendi principium esse potest, cum et ipsa non cognoscatur nisi per analogiam ad formam, illa est causa difficultatis cognoscendi ex seipsa, sicut multa difficulter cognoscuntur physicorum. Quando autem res ipsa primum cognoscendi principium est, nihil penitus habens potentiae obumbrantis, tunc si hoc difficulter cognoscitur, erit causa difficultatis non in re cognoscenda, sed in dispositione cognoscentis. Licet enim id quod simpliciter primum est et causa omnium, sit praeveniens intellectum et sic sit obscurum, non est haec obscuritas in ipso, sed in lippitudine et imperfectione cognoscentis intellectus, quem praevenit³⁹⁹.

As in the previous passage, the objects of physics are here said to be difficult to know in themselves because they are mixed to potency. However, no other class of things difficult to know in themselves is mentioned here. By contrast, the first cause is now said to be the *primum cognoscendi principium*, completely without potency; therefore, it cannot be difficult to know in itself. One should notice here the shift from “*principium intelligendi praeveniunt*” in the previous passage to “*primum cognoscendi principium*” in the present passage. In the present passage, the first cause is not said to be above the first principle of understanding, but only to be above the knowing intellect (*praeveniens intellectum*). Its obscurity is not to be traced back to it, but to the imperfection of the knowing intellect.

Now, assuming that God is difficult to know only with respect to the intellect which knows him, and restricting our consideration to human intellect, it should be understood how this difficulty relates to the difficulty due to the *reflexio* of human intellects to senses. Is Albert speaking of exactly the same difficulty in both cases? Or does this difficulty concern human intellects in themselves, regardless of their conjunction with senses? The fact that in *Metaphysica* 1.2.1 Albert distinguishes the difficulty of knowing God from the difficulty the intellect derives from its conjunction with senses – however inconsistent that passage may be with other passages and perhaps even in itself – seems to suggest the latter. The same impression is conveyed by the way Albert describes the difficulty of knowing the first cause in *Metaphysica* 2.1.2: he simply states that it is *praeveniens intellectum* – no reference to the senses being made.

³⁹⁹ *Metaphysica* 2.1.2, p.92 ll. 44-68.

It could be helpful to take into account one more passage concerning the order of sciences deriving from the conjunction of human intellects with imagination and senses. The passage belongs to *Metaphysica* 1.2.10, a chapter not directly concerned with the relations among sciences; however, after having distinguished between *via inquisitionis* and *via doctrinae* and having explained that the *via doctrinae* is a path contrary to the *via inquisitionis*, in the last part of the chapter Albert applies this distinction to the relation among sciences:

Amplius, sicut patet ex praehabitis, aliae scientiae speculativae ex additione se habent ad istam, et ideo demonstrationes earum in istam exaltantur et fundantur per ipsam. Lumen ergo intelligibile istius sapientiae colligit in omnibus aliis entibus particularibus, quae nostro intellectui, qui continuo et tempori coniungitur, naturalius proportionantur. Paulatim igitur magis ac magis accipit luminis ex resolutione intelligibilium physicorum et mathematicorum ad divina; et ideo quoad nos etiam inchoat haec scientia a physicis et mathematicis et terminatur ad speculationes divinorum. Propter quod ultimo docetur, et philosophi ab aliis scientiis manuducti in ista terminabant totam vitam. Modo autem postquam inducti et eruditi sumus ex aliis, per contrarium modum incohabimus, sumentes exordium doctrinae ab altissimo genere causarum et principiorum⁴⁰⁰.

In the present context, the terminology of this passage and of the chapter to which it belongs can be misleading and should therefore be clarified before any further comment. The *via inquisitionis* had been described as the one which begins from the effect and from the admiration deriving from ignoring the cause; once the cause is known, however, the *via doctrinae* starts with the indication of the cause by the teacher, who knows the cause and, accordingly, does not admire the effect any longer. The *via inquisitionis*, the “way of enquiry”, is the way in which scientific discovery proceeds; the *via doctrinae*, by contrast, is the order in which a science should be taught, for its demonstrations should proceed from causes to effects, which can properly be known only by means of their causes. When the application of this distinction to the order among sciences is taken into account, it should therefore be borne in mind that the *via doctrinae*, the ideal order of teaching, is different from the *ordo doctrinae*, according to which what is easiest to learn comes first. Rather, the *via doctrinae* mirrors the *ordo rei*, while the *via inquisitionis*, as well as the *ordo doctrinae*, begins with what is closest to the knowing intellect.

Having clarified this, we can now go back to the passage quoted. In the last sentence, Albert states that, in the *via doctrinae*, metaphysics comes first: it is the science which deals with the highest genus of causes and principles. The statements coming before the last sentence, on the other hand, deal with the *via inquisitionis*. According to the *via inquisitionis*, physics and mathematics come before metaphysics, because they are more commensurate to human intellects, insofar as it is conjoined “with continuity and time”, the features of mathematical and physical objects respectively⁴⁰¹. The path leading to metaphysics is grounded on the *resolutio* of “physical and

⁴⁰⁰ *Metaphysica* 1.2.10, p. 27 l. 81 – p. 28 l. 11.

⁴⁰¹ Nothing is said concerning the relation between physics and mathematics in *via inquisitionis* and *via doctrinae*. While this could be simply due to Albert’s main purpose in the passage, one should notice that *via inquisitionis* and *via doctrinae* are described in the first place in terms of contrary motions between causes and effects, and that mathematical and physical objects cannot be arranged, according to Albert, in a causal relation.

mathematical intelligibles” into “divine intelligibles”. From other passages within the *Metaphysica* it is clear that such process of *resolutio* is the one at the end of which *simplex esse*, the subject of metaphysics⁴⁰², is attained⁴⁰³; it consists in separating *simplex esse* from mathematical and physical being, with which it is intermingled⁴⁰⁴. Human intellects, whose knowledge starts with senses, can access the kind of speculation proper to metaphysics, namely the enquiry into what is purely intellectual, only in virtue of this process of *resolutio*.

Returning to the problem of the *ordo doctrinae* and, in particular, to the position Albert ascribes to metaphysics in such *ordo*, it should be certain by now that the difficulty of beginning theoretical philosophy with metaphysics does not derive from the difficulty of knowing God for human intellects. Rather, metaphysics is last in the *ordo doctrinae* because it deals with *simplex esse*, which is purely intelligible and further from senses than mathematical or physical being. God is difficult to know for human intellects because it exceeds them; *simplex esse*, on the other hand, can be grasped by human intellects, but not by imagination or senses. Accordingly, since human intellects are naturally conjoined with sensible faculties, they know more easily mathematical and physical being than *simplex esse*, which they eventually reach in the process of *resolutio* as the ultimate component of physical and mathematical being.

Twice in the texts considered so far mention has been made of the fact that physical realities are obscure in themselves insofar as they are mixed to potency. The same idea is found in passages where the obscurity of physics and metaphysics is contrasted with the clarity of mathematics. Mathematical forms are not above human intellects; moreover, they are steady, separated from motion and sensible matter. Mathematics does not require time and experience to be acquired because its demonstrations are carried out as demonstrations *propter quid*; therefore, they can be apprehended also by young people. But still, in spite of its clarity, mathematics is said to come after physics in the *ordo doctrinae*. This must not be surprising: mathematical entities are not, in themselves, sensible, but only imaginable and intelligible; they are grasped in virtue of a process of abstraction from sensible realities. Mathematical objects as such are grasped after physical objects; mathematical enquiry begins, accordingly, after physical enquiry. Once mathematical realities have been abstracted, however, their fixed nature is suitable to be adequately grasped by the intellect and to allow for *propter quid* demonstrations.

To sum up, in the *ordo doctrinae* sciences are arranged in the following order: physics, mathematics, metaphysics. This order is the one in which sciences are most easily learnt by men, for

⁴⁰² Or better, in Albert’s words: the act of being as being, which is the subject of metaphysics.

⁴⁰³ See *Metaphysica* 1.1.1, p. 2 ll. 67-70; *Metaphysica* 1.2.3 p. 20 ll. 26-28.

⁴⁰⁴ See *Metaphysica* 1.2.3, p. 20 ll. 14-19: “[...] in eis invenimus intellectualia quasi incorporata, sicut lucem videmus incorporatam coloribus, et quaerimus eas, ut id quod veritatis et luminis puri et intellectualis est in ipsis, separando colligamus et ex hoc in nobis perficiamus theoremata pura et firma”.

human intellects are naturally conjoined with imagination and senses. Accordingly, the *ordo doctrinae* follows the increasing distance from sensation of the objects of sciences. Physical objects are the ones with which human intellects are most acquainted, inasmuch as they are in themselves objects of sensation. Mathematical objects are further away from senses, because they are abstracted from all sensible qualities and therefore are not, in themselves, objects of sensation; they are nonetheless objects of imagination, a cognitive faculty closer to sensation than the intellect. When mathematical objects are grasped, however, their steady and fixed nature allows for a knowledge far more clear than the one attainable in physics. Finally, metaphysical objects are farthest from sensation and can be grasped only by intellect. Since human intellects are conjoined with sense and imagination, however, *simplex esse*, which is enquired into in metaphysics, is attained through the *resolutio* of determined kinds of being into it, inasmuch as it is recognised to be their first inner principle. Metaphysics should also include an enquiry into the cause of *simplex esse*, namely God; at this point another, different difficulty of metaphysical enquiry appears, which lies in the fact that God is above intellects. As a consequence of this, any intellectual knowledge of God necessarily moves from his effects.

2. Metaphysics as the founding discipline I: the general statements

In the last section I quoted passages in which Albert expresses the idea that metaphysics establishes the principles of particular sciences. This doctrine is extraneous to Aristotle; it originated in late Greek philosophy, from which it passed into Arabic philosophy⁴⁰⁵. It is clearly expressed, for example, by al-Fārābī and further developed by Avicenna, whose works contributed to its passage into Latin medieval thought⁴⁰⁶. Among the Latin authors mentioning this doctrine, Albert is probably the one who provides the most detailed account thereof. He definitely endorses the doctrine at stake, stating it – both in its general terms and in more specific aspects – in his paraphrases. As we shall see, there are good reasons to maintain that Avicenna is Albert’s main source in this respect.

In this section I shall examine Albert’s general statements of the doctrine starting with the texts already quoted above, where the main ideas are stated and grounded. As we have seen, in the first chapter of his *Physica*, after characterising the objects of the three theoretical sciences, Albert states:

⁴⁰⁵ See [Bertolacci 2007], pp. 68-73. In addition to this, see also what Averroes reports about Alexander in Averroes, *Tafsīr mā ba’d at-ṭabī‘at*, ed. Bouyges, *Lam*, C. 5. For a translation, see *Ibn Rushd’s Metaphysics* (tr. Genequand), pp. 71-76.

⁴⁰⁶ See [Bertolacci 2006], pp. 267-272, for Avicenna’s general statements of the doctrine of the metaphysical foundation of particular sciences.

Adhuc autem, cum prima simplex quidditas primum det esse, a quo fluit esse huius quidditatis in mensurato per quantitatem, a quo ulterius etiam profluit esse huius sensibilis distincti per quantitatem et distincti per formas activas et passivas, erit primum absque dubio causa secundi et tertii, unde tam mathematica quam naturalia causantur a metaphysicis et accipiunt principia ab ipsis, et quia ibi probata sunt, ideo non peccant supponendo ea⁴⁰⁷.

The passage implies the *ordo rei* among sciences according to which metaphysics is first, mathematics is second, and physics is third. The fact that the text states the priority of mathematics over physics is, in my opinion, beyond doubt, especially on two grounds: first, the use of the adverb *ulterius*; second, the mention of sensible qualities *in addition to* quantity to characterise physical being, whereas quantity alone characterises mathematical being.

This being the case, the order of quiddities is not perfectly mirrored in relations of causality; rather, Albert eventually draws the conclusion that the *primum esse*, namely metaphysical being, is the cause of *both* mathematical and physical being⁴⁰⁸. In other words, while the order of quiddities is linear (starting with metaphysics, passing through mathematics, and ending with physics), the relation of causality is a partial relation, with mathematics and physics being unrelated.

Albert's conclusion that metaphysical being is the cause of both mathematical and physical being is then developed with two statements: first, mathematical and physical realities are caused by metaphysical ones; second, they receive principles from the latter. As for this last statement, it should more properly be referred to the sciences ('principle' having an epistemological sense), even though Albert keeps speaking of their objects. Mathematics and physics receive principles from metaphysics and, as Albert elaborates, such principles can be faultlessly assumed in mathematics and physics just because they are demonstrated in metaphysics.

The absence of a clear-cut distinction between Albert's speaking of sciences and of their objects is not simple lack of accuracy. Rather, it is a first clue to the fact that physics and mathematics have their principles proved in metaphysics exactly because physical and mathematical realities are caused by metaphysical ones. Metaphysics can provide particular sciences with their principles only inasmuch as the objects it enquires into are causes of physical and mathematical being. This also implies that, even though the quoted passage says nothing about the nature of these principles, they must show a connection with the objects particular sciences enquire into.

⁴⁰⁷ *Physica* 1.1.1, p. 2 ll. 76-84.

⁴⁰⁸ This poses a question concerning the correct translation of the phrase "*a quo ulterius etiam profluit*": which is the antecedent of the relative pronoun? It can be either (i) the *primum esse* or (ii) the *esse huius quidditatis in mensurato per quantitatem*, namely mathematical being. According to translation (i), both mathematical and physical being would issue from metaphysical being. According to translation (ii), physical being would issue from mathematical being, which in turn would issue from metaphysical being. I believe translation (i) to be correct for two reasons: the use of *etiam* in "*a quo ulterius etiam profluit*" would be best explained if both mathematical being and physical being were said to issue from metaphysical being; moreover, the conclusion drawn by Albert that metaphysical being is the cause of both mathematical and physical being would require translation (i) in order to have adequate premises. Even if translation (ii) were adopted, however, it should still be understood that mathematical being is not the principle of physical being; rather, physical being would be said to issue from mathematical being only insofar as the former is further than the latter from metaphysical being, in the sense which has been clarified above (see the discussion of the *ordo rei*).

More space is devoted to the idea of a metaphysical foundation of mathematics and physics in the first chapter of Albert's *Metaphysica*. The relevant passages are found immediately before and after Albert's criticism of "Plato's error". In the first passage, Albert describes metaphysics as follows:

[1] Haec autem speculatio est rerum altissimarum divinarum, quae sunt esse simplicis differentiae et passiones praeter conceptionem cum continuo et tempore, nihil accipientes principiorum essendi ab eis, eo quod priora illis sunt et causae eorum, et ideo ista stabiliunt in esse omnia continua et omnia temporalia. [2] Quod esse stabilitum et fundatum supponitur et non quaeritur in eis in scientiis doctrinalibus et physicis, partes entis continui vel mobilis considerantibus. [3] Sicut enim causa tertia in ordine fundatur in secundaria et secundaria fundatur in primaria et primaria non fundatur in aliquo, sed est fundamentum omnium consequentium, ita naturalia et doctrinalia fundantur in divinis, et divina non fundantur, sed fundant tam mathematica quam physica⁴⁰⁹.

In [1], Albert states that metaphysical realities are causes of physical and mathematical realities; accordingly, they are said to establish *in esse* all physical and mathematical realities. In [2], Albert's argument switches from objects to sciences: mathematics and physics assume the *esse* of mathematical and physical realities, which has been established in metaphysics.

The end of this passage, namely [3], is extremely interesting. One should notice, in particular, the weird "imperfect parallelism" made there: on the one hand, Albert speaks of the third cause being grounded on the second cause, which in turn is grounded on the first cause; on the other, he states that both physical and mathematical realities are grounded on metaphysical ones. Albert could have easily avoided the "imperfect parallelism" by speaking of "second causes" – in the plural – being grounded on the first cause⁴¹⁰; the fact that he does not avoid it strongly suggests that he is stating his view on the metaphysical foundation of theoretical sciences against the background of the *ordo rei* among sciences. The passage is followed by the criticism directed at Plato for having maintained a "perfect parallelism".

As already said⁴¹¹, Albert believes this error to be the conclusion drawn by Plato from the *consequentia sine conversione* between *esse continuum* and *esse mobile*. The correct way of interpreting this *consequentia* is explained by Albert immediately after, and I shall come back to this in the next section. For the time being, I will restrict myself to the final part of the passage on the metaphysical foundation of mathematical and physical being:

[1] Et utrumque istorum fundatur in esse, quod est simplex esse, actus existens primae essentiae, quae est, in qua stat omnis compositi resolutio ultima. Hoc enim non dependet ab aliquo secundum principia essendi, eo quod priora secundum principia essendi non dependent a posterioribus, sed posteriora secundum principia essendi a prioribus dependent, quia priora principia sunt essendi posterioribus. [2] Propter quod cum physicus supponit esse corpus mobile et cum mathematicus supponit esse continuum quantum vel discretum, ideo ponit esse, quia ex suis propriis principiis esse ipsum probare non potest, sed oportet, quod esse probetur ex principiis esse simpliciter. Et ideo ista scientia stabilire habet et subiecta et principia omnium aliarum scientiarum. [3] Non enim

⁴⁰⁹ *Metaphysica* 1.1.1, p. 2 ll. 16-30.

⁴¹⁰ In this case, the "second causes" would correspond to mathematics and physics, while the first cause would correspond to metaphysics.

⁴¹¹ See the section on the *ordo rei*.

possunt stabiliri et fundari ab ipsis scientiis particularibus, in quibus ‘quia sunt’ vel esse relinquuntur vel supponuntur. Neque etiam sunt sic prima, quia ipsa sunt sicut omnium aliorum fundamenta non fundata alio quodam praecedente ipsa secundum naturam. Et ex his duobus necessario sequitur, quod in ista sapientia habeant fundari et stabiliri⁴¹².

In [1], Albert points to *simplex esse* as the end of the process of *resolutio*, which apparently is meant to trace the composite back to its components. *Simplex esse* is thus said to be the ultimate component of mathematical and physical being⁴¹³; *resolutio* cannot be pushed further because nothing is prior to *simplex esse* which, accordingly, has no principles. From the priority of *simplex esse* over mathematical and physical being Albert draws a conclusion for the theoretical sciences in [2]: both mathematics and physics assume “that their subjects are” because they cannot demonstrate it on their own right. This assumption can only be demonstrated in virtue of something prior to mathematical and physical being, “the principles of *esse simpliciter*”. Since *esse simpliciter* is what metaphysics enquires into, Albert draws the conclusion that metaphysics has to establish the subjects and the principles of all other sciences. In [3], Albert makes it explicit from which premises this conclusion is drawn. The first premise is that subjects and principles of a particular science cannot be established in that science, which rather presupposes “that they are”⁴¹⁴. The second premise, which had not been mentioned so far yet, is that the subjects and principles in question are not so *prima* as to be not founded on anything prior to them by nature. Since they are not founded in particular sciences but still need to be founded, it follows that they are to be founded in metaphysics.

Two aspects of the passage are of great interest here. First of all, it gives at least a partial indication of how the metaphysical foundation of particular sciences should be accomplished: metaphysics takes charge of establishing the *esse* of the subjects of particular sciences. Thus, the dependence of determined being on *simplex esse* allows for a demonstration concerning the very subjects of particular sciences – something that remained implicit in *Physica* 1.1.1. However, Albert also states that metaphysics has to establish “the subjects *and* the principles” of particular sciences. Is this simply a hendiadys? It is not easy to give a definite answer to this question, but there is some evidence that this might not be the case. I will come back to this while giving examples of principles provided by metaphysics.

The second remarkable point about the passage is that it grounds the need of a metaphysical foundation of particular sciences on the fact that their subjects are not first by nature. By contrast, it should be noticed that *simplex esse* is exactly what Albert means here by “first”, namely something not founded in anything prior to it by nature. Accordingly, the same argument cannot be applied to

⁴¹² *Metaphysica* 1.1.1 p. 2 ll. 67-88.

⁴¹³ Actually, the term *utrumque* does not exactly refer to mathematical and physical being, but to “*esse determinabilis sola quantitate*” and “*esse determinabilis contrarietate passivorum et activorum*”. Nonetheless, these should be seen as the basis of mathematical and physical objects, respectively: basically, mathematical and physical objects are determined by quantities and sensible qualities, while here Albert only speaks of “determinable *esse*”. The relevance of this distinction for Albert will become clear later.

⁴¹⁴ As already said, this is due to the fact that they should be demonstrated in virtue of something prior to them.

metaphysics: insofar as it enquires into what is first by nature, it does not need to be established as particular sciences do. Even though metaphysics is the last science learnt by human intellects, it is actually the only one which is self-sufficient, its knowledge being certain in itself; physics and mathematics are closer to human intellects, but their truth is grounded on hypotheses whose truth can be granted only by another science, namely metaphysics⁴¹⁵.

3. Metaphysics as the founding discipline II: Plato's error

Before going into the details of the metaphysical foundation of particular sciences, I would like to clarify one point which emerged from the texts taken into account so far, namely Albert's claim that mathematical realities are not causes of physical realities and, as a consequence, mathematics cannot establish the principles of physics. This claim requires a proper understanding especially since, on the other hand, mathematics is said to be prior to physics in the *ordo rei*. Which is then the difference between the *ordo rei* and the relation of foundation? More concretely: why is mathematics prior to physics in the *ordo rei* while not playing any role in establishing physics?

Plato's error

I have already quoted the beginning of Albert's criticism of "Plato's error" while speaking about the *ordo rei* among sciences⁴¹⁶. In this passage Albert explicitly claims that mathematical realities are not causes of physical realities and, as a consequence, mathematics cannot establish the principles of physics. At the same time, Albert also explains why Plato wrongly believed the contrary: he saw a *consequentia sine conversione* between *esse continuum* and *esse mobile*, just like he saw a

⁴¹⁵ Cf. *Metaphysica* 1.1.1, p. 3 ll. 20-26: "Et ipsa est intellectus divini in nobis perfectio, eo quod est de his speculationibus quae non concernunt continuum vel tempus, sed simplices sunt et purae ab huiusmodi esse divinum obumbrantibus et firmatae per hoc quod fundant alia et non fundantur; admirabiles ergo sunt altitudine et nobiles divinitate"; *Metaphysica* 1.2.1, p. 18 ll. 4-8: "Scit autem iste, sicut decet, persuasus non ab alio, sed prima scire facientia considerans. Quod non decet physicum vel mathematicum, qui ea quibus scit, esse et subsistere sive entitatem habere supponit ab isto philosopho [...]"; *Metaphysica* 1.2.7, p. 24 ll. 31-35: "Et ista libera existens in se omnibus aliis libertatem dat quandam in hoc quod eis certitudinem in his quae supponunt, administrat; per hoc enim liberas facit ab obligatione, qua sibi non sufficiunt".

⁴¹⁶ It has been suggested in [Weisheipl 1958] that Albert's criticism is mainly directed to authors such as Grosseteste, Kilwardby, and Roger Bacon (especially Kilwardby). These are referred to by Weisheipl as "Oxford Platonists". According to Weisheipl, they are criticised throughout Albert's *Metaphysica* for "Plato's error", which would be a complex view of science and of reality, involving several mistakes, rather than a simple error. I believe Albert's mention of "Plato's error" in *Metaphysica* 1.1.1 to refer quite specifically to the doctrine of the mathematical foundation of physics; I also think that this view can be dealt with independently of other errors allegedly ascribed to the "Oxford Platonists". Weisheipl seems to maintain that Albert's solution to this particular problem consists in a distinction between physical dimensions and abstract dimensions, and in recognising that physics has its own principles. I believe the reasons behind Albert's refutation of "Plato's error" to be different from the ones indicated by Weisheipl. Weisheipl's article, it must be said, antedates the edition of Albert's *Metaphysica* in the *Editio Coloniensis*, which makes the passage concerning "Plato's error" in *Metaphysica* 1.1.1 more clear than Borgnet's edition, used by Weisheipl, did. The interpretation provided by Weisheipl is also followed in [Tkacz 2011], pp. 749-751.

consequentia sine conversione between *esse simplex* and *esse continuum* (and between *esse simplex* and *esse mobile*).

In Albert's view, *esse simplex* is undoubtedly a cause of both *esse continuum* and *esse mobile*. By contrast, the relation between *esse continuum* and *esse mobile* is problematic. Is the former a cause of the latter? Both possible answers involve difficulties. If the answer is "no": why should *esse simplex* be a cause of *esse mobile* while *esse continuum* is not? If, on the other hand, *esse continuum* is maintained to be a cause of *esse mobile*, how can this not imply that mathematical realities are principles of physical realities?

The answers to these questions should be found in the second half of Albert's criticism of "Plato's error" in *Metaphysica* 1.1.1. After having clarified the reasons behind Plato's endorsement of his wrong view, Albert goes on to explain why that view is wrong and which is the correct view opposed to Plato's:

[1] Dimensiones enim non sunt principia corporis secundum esse aliquod, sed potius consequentia esse eius quod est corpus, et sua principia secundum esse ratum, quod habet, sunt forma et materia, et illius materiae subiectae in esse, quod dat forma, dimensiones sunt lineae et superficies et corpus mathematicum. [2] Propter quod materia secundum esse aptum mensurari tribus diametris se ad angulos rectos secantibus est ante materiam, quae subicitur motui et tempori per esse, quod habet a forma physica. Et in hoc errabat Plato. [3] Materia autem determinata secundum formam dantem esse tantum constituit substantiam in eo quod substantia est absolute et est divina ante eam quae determinatur quantitate, et ante eam quae determinatur contrarietate passivorum et activorum. [4] Et hoc modo physica fundantur secundum esse et principia cognoscendi in his quae quantitate determinantur, non inquantum quantitate determinantur, sed inquantum esse determinabilis sola quantitate est fundamentum esse determinabilis contrarietate passivorum et activorum. Et utrumque istorum fundatur in esse, quod est simplex esse, actus existens primae essentiae, quae est, in qua stat omnis compositi resolutio ultima⁴¹⁷.

The passage does not stand out for its clarity, but some key ideas seem to be definitely asserted. First, dimensions are not principles of body, but accidents following upon body; principles of body are rather form and matter (in [1]). Second, such dimensions are identified with "line, surface, and mathematical body" (again in [1]). Third, matter according to the possibility of having three dimensions is prior to matter determined by a physical form, which makes it the subject of motion and time (in [2]). Fourth, matter determined by the form giving only *esse* is "divine", and it is prior to matter determined by quantity and to matter determined by sensible qualities (in [3]).

While these four points are undoubtedly stated, they are nonetheless not completely clear, for it is not plain to understand what exactly the terms employed by Albert refer to. What are, for example, the "matter according to the possibility of having three dimensions", or the "matter determined by the form giving only *esse*"? Actually, I would say that the most important step towards interpreting the passage consists exactly in understanding Albert's repeated references to matter

⁴¹⁷ *Metaphysica* 1.1.1, p. 2 ll. 47-70.

determined in different ways, and in answering the following question: how do these references fit together with each other⁴¹⁸?

To begin with, I mentioned that Albert characterises matter determined by the form giving only *esse* as divine⁴¹⁹. However strange the reference to a “divine matter” might appear, I believe it makes perfect sense in Albert’s eyes. In his works Albert often employs the adjective *divinus* as meaning “metaphysical”. “*Divinus*” can qualify anything falling within metaphysical enquiry, or somehow related to metaphysics – indeed, in *Metaphysica* 1.1.1 itself Albert refers to the objects of the three theoretical sciences as *naturalia*, *mathematica*, and *divina*⁴²⁰.

As for matter, Albert states several times, both in his *Metaphysica* and in other works, that there is a sort of enquiry into matter which is proper to metaphysics. For present purposes, it is not essential to understand what, according to Albert, the metaphysical consideration of matter is supposed to be⁴²¹. Suffice it to say that Albert expressly states that “matter inasmuch as it is *x*” – where “inasmuch as it is *x*” stands for the point of view from which matter falls within metaphysical enquiry – is prior to change⁴²². Matter inasmuch as it is subject to change would belong to the consideration of physics, rather than of metaphysics. If we turn to [3], the same priority of matter over the physical realm is expressed: matter determined by the form giving only *esse* is prior to matter determined by sensible qualities (and also to matter determined by quantities).

From what has been said, I think we may safely conclude that “matter determined by the form giving only *esse*” must refer to a level of determination of matter according to which matter falls within metaphysical consideration, and that this is exactly the reason why Albert calls this matter “divine”. Now, I would assume that the levels of determination of matter are exactly three and

⁴¹⁸ I restrict myself to mentioning here other unclear points, whose understanding is not vital to the present discussion. First of all, Albert states that “metaphysical matter” constitutes “*substantiam in eo quod substantia est absolute*”, and this is at odds with the existence of immaterial substances. It would have been unproblematic if Albert had stated that metaphysical matter constitutes “the body inasmuch as it is a substance”; perhaps this is what he means here. Other problems derive from the position of certain statements and phrases in the passage. One example is the sentence: “*Et in hoc errabat Plato*”. About what exactly was Plato wrong? The natural interpretation of the sentence according to its position in the text would imply that, in Albert’s view, Plato wrongly believed that matter determinable by quantity is not prior to matter determined by sensible qualities. However, how could this explain “Plato’s error”, namely the idea of the mathematical foundation of physics? Another possibility would be that the sentence refers to the fact that Plato wrongly believed that something else, rather than matter determinable by quantity, is prior to matter determinable by sensible qualities. This interpretation is far less natural, but fits well with Albert’s criticism of Plato, as we are going to see. More generally, however, it seems to me that the whole structure of Albert’s argument in the passage is not entirely clear.

⁴¹⁹ It seems preferable to me – both from the point of view of syntax and on the basis of the larger context provided by the passage – to take the adjective *divina* as qualifying *materia*, rather than *substantia*.

⁴²⁰ *Metaphysica* 1.1.1, p. 2 ll. 31-33. In *Metaphysica* 6.1.3 Albert explicitly states that everything falling within metaphysics is called divine. See *Metaphysica* 6.1.3, p. 305 ll. 38-40: “[...] ita in prima philosophia omnia dicuntur divina, eo quod in diffinitione eorum cadit deus”. See also *Physica* 1.1.3 (quoted below), where the metaphysician is called “*divinus*”.

⁴²¹ For some of Albert’s statements in this regard and possible interpretations, see [Hoßfeld 1980], pp. 211-212; [Rodolff 2004].

⁴²² See *Metaphysica* 3.3.1, p. 139 ll. 77-87.

correspond to the three theoretical sciences. They are listed in a single sentence, namely [3], as follows:

- i) *Materia determinata secundum formam dantem esse tantum*
- ii) *[Materia] quae determinatur quantitate*
- iii) *[Materia] quae determinatur contrarietate passivorum et activorum*

As said, [3] explicitly connects (i) with metaphysics, and I would add that (ii) and (iii) should be connected with mathematics and physics, respectively. The other mentions of matter, in the other sentences of the passage, are the following:

- A) *[Materia subiecta] in esse, quod dat forma* – in [1]
- B) *Materia secundum esse aptum mensurari tribus diametris* – in [2]
- C) *[Materia] quae subicitur motui et tempori per esse, quod habet a forma physica* – in [2]

To this one should add Albert's mentions of two kinds of *esse* in [4], which – I believe – may be safely understood as two formal determinations of matter, just like the different kinds of *esse* mentioned in (A), (B), and (C):

- D) *Esse determinabilis sola quantitate*
- E) *Esse determinabilis contrarietate passivorum et activorum*

If the assumption that the first list (i-ii-iii) includes all possible levels of determination of matter is correct (and I hope it will prove to be so in due course), then the key to understanding Albert's argument is to connect each element in the list (A-B-C-D-E) to one element in the list (i-ii-iii).

Some information can be gained from the passage. To begin with, [1] seems to imply that the composite of form and matter as determined in (A) is the subject of mathematical quantities: dimensions are said to be *consequentia* of the body, while form and matter are its principles. Second, it is possible that (B) should be identified with (D): in both cases, a determination in potency is involved; the respective actual determinations are the three dimensions in the first case and quantity in the second – and these two might eventually mean the same. Third, it is also possible that (A), inasmuch as it constitutes the subject of mathematical quantities, should be identified with both (B) and (D), namely with what is determinable by quantities. If these three suggestions are true, we get a first equivalence:

$$- A = B = D$$

Fourth, (C) should be identified with at least one of (iii) and (E), for matter determined by a physical form is definitely somehow related to sensible qualities: it is either *determined* or, at least, *determinable* by them. In any case, there is no hint in the text at the fact that (iii) and (E) should be

distinct: accordingly, it is also possible that (C) be identical with both (iii) and (E). I believe this to be the case, and I shall assume so in the present section⁴²³. We thus obtain a second equivalence:

- iii = C = E

Fifth, [2] definitely entails that (B) is distinct from (C): the former is said to be prior to the latter. Sixth, [4] suggests that (ii) is distinct from (D): there is a distinction between what is *determined* by quantity, on one hand, and what is *determinable* by quantity, on the other. As a consequence, we have the following:

- iii = C ≠ B = D ≠ ii

Together with the assumption that the list (i-ii-iii) is exhaustive, this entails:

- i = B = D = A

This equivalence might appear counterintuitive. In fact, one might suggest that (B) and (D) should be identified with (ii), rather than with (i). One might argue, for example, that the descriptions of (B) and (D) resemble the description of (ii) more closely than the description of (i). However, there are at least three facts speaking against the identification of (ii) with (B) and (D). First, as already said, [4] points to a distinction between (ii) and (D) (see the phrase “*non in quantum quantitate determinantur, sed in quantum esse determinabilis sola quantitate*”). Second, [4] is supposed to state Albert’s own view – but Albert’s view would be identical with “Plato’s error” if (ii) were the same as (D). Third, other passages in Albert’s works suggest that (B) is different from (ii). We are going to examine these passages in the next sub-section. I would say in advance that Albert draws a distinction between *corpus simpliciter*, enquired into by the metaphysician (*divinus*), and *corpus mathematicum*, and that the definition of *corpus simpliciter* corresponds to (B).

To sum up, if all the points made so far are correct, the only possible picture is the following:

i	A – B – D
ii	---
iii	C – E

Basically, this picture means that matter determined by the form giving only *esse* (rather than a determined kind of physical being), while being prior to matter determined by quantity, is apt to be measured with three dimensions, namely it is determinable by quantity, for actual dimensions follow upon it. At this level of determination, matter is also prior to motion and time. It becomes subject to

⁴²³ For a justification of this assumption, see [Quartucci 2019], pp. 434-436.

motion and time in virtue of a physical form; the composite involving a physical form is also the subject of sensible qualities.

I believe this picture finds support in Albert's discussions of the different notions of body, to which I shall turn in the following section. Before that, however, let us read, according to this picture, the conclusion of the argument Albert draws in [4]. Physical realities, he states, are indeed founded on what is determined by quantity, but not inasmuch as it is determined by quantity. Rather, Albert says, this happens because the *esse* which is determinable by sensible qualities is grounded on the *esse* which is determinable by quantity only. If the interpretation given so far is correct, this would mean that the matter determined by a physical form (the physical body) is grounded on the matter determined by the form giving only *esse* (the metaphysical body). Dimensions (among which there is the mathematical body) are, of course, proper accidents of the latter, but do not belong to its essence. Accordingly, something can be grounded on metaphysical matter without being grounded on quantities: in particular, physical matter is grounded on metaphysical matter, the subject of quantities, but not on quantities themselves.

This is, to sum up, Albert's criticism of Plato's error: Plato wrongly believed the physical body to be founded on the mathematical body⁴²⁴. The physical body is rather founded on the metaphysical body. As the last sentence indicates, both the physical and the metaphysical body are ultimately founded on *simplex esse*. To this one should add that the mathematical body is founded on the metaphysical body as well, inasmuch as the former is an accident of the latter. Accordingly, both mathematical and physical realities are founded on the metaphysical body, albeit in different ways, and this is the reason why metaphysics undertakes to establish the principles both of mathematics and of physics.

So far I tried to explain why Albert denies that mathematics can provide the foundation of physics. However, an adequate interpretation of Albert's criticism of "Plato's error" should also account for the priority of mathematics over physics in the *ordo rei*. How can mathematics still be prior to physics, given that there is no mathematical foundation of physics? I believe that the interpretation of the passage provided above gives a simple answer to this question. Mathematical realities, we saw, are proper accidents of the metaphysical body, on which the physical body is grounded. The physical body is posterior to the metaphysical body, because it requires a further level of formal determination, namely the determination given by a physical form. Accordingly, the subject of mathematical realities is prior to the subject of sensible qualities, assuring the priority of mathematics over physics.

⁴²⁴ I speak here of "body" to refer to the outcome of matter being determined in different ways. This terminology will be justified in the next sub-section.

Notions of “body” and theoretical sciences

Until now I have taken into account only Albert’s criticism of “Plato’s error” in *Metaphysica* 1.1.1, a text, as we have just seen, not entirely transparent in all of its aspects. However, the interpretation given above can find some support in other places from Albert’s works. To begin with, the third chapter of Albert’s *Physica* provides some clue into the different notions of “body” involved in the theoretical sciences. Here Albert states that the subject of physics is the mobile body; in order to clarify such statement, he takes care of explaining what he means by “body” by means of two features: it is body *in communi* (rather than “this or that” body) subject to motion (rather than *simpliciter*). The lines which follow are devoted to explaining these two features:

Corpus enim ab alio habet, quod est corpus simpliciter, et ab alio, quod est hoc corpus, sive mathematicum sive naturale. Habet enim, quod est simpliciter corpus, ex eo quod ubique aptum est, quod duae diametri ad rectos angulos se secant et tertia secet duas diametros ad rectos angulos. Trium autem diametrorum una est mensura longitudinis, alia latitudinis et tertia profunditas corporis. Si enim corpus haberet, quod est corpus, ab actu intersecationis harum diametrorum, oporteret, quod cum cera comprimitur inter manus vel aliud corpus formabile, quod mutaretur secundum corporeitatem. Hoc autem non est verum. Non ergo habet, quod corpus est, ab aliqua actuali dimensione, quae sit per tres diametros se in uno puncto secantes secundum latum, longum et profundum, sed potius ab aptitudine sic se intersecandi tres diametros in sua dimensione. Ab actuali autem trina dimensione trium diametrorum habet, quod est hoc corpus mathematicum, sed a forma perficiente materiam sensibilem in aptitudine trinae dimensionis existentem habet, quod est corpus naturale, in quantum naturale est. Et ab actuali trina dimensione materiae sensibilis, quae forma substantiali perfecta est, habet, quod est corpus naturale hoc vel illud. Sic ergo patet, quod corpus absolute et simpliciter sumptum est ante mathematicum et ante naturale, et secundum reductionem ad ens considerat ipsum divinus. Corpus autem mathematicum secundum diversitates figurarum actualiter in ipso inventarum considerat geometres. Corpus autem naturale in universali subiectum est naturalis philosophiae, et corpus hoc physicum vel illud, scilicet mobile ad locum tantum vel mobile ad formam et locum vel corpus simplex vel mixtum, cadit in considerationem alicuius partis scientiae naturalis⁴²⁵.

Basically, four notions of “body” are distinguished in the passage:

- a) *Corpus simpliciter*: this is the body as body, characterised solely by its being a body, its *corporeitas*, which consists in its being apt to be measured with three dimensions;
- b) *Hoc corpus mathematicum*: this is the body characterised by having three dimensions in act;
- c) *Corpus naturale*: this is the body resulting from a physical form, which completes the sensible matter apt to be measured with three dimensions;
- d) *Corpus naturale hoc vel illud*: this is the body resulting from a physical form, which completes the sensible matter having three dimensions in act.

It is worth mentioning that Albert’s description of the (a) *corpus simpliciter* follows Avicenna’s *Liber primus naturalium* I 2 closely⁴²⁶, even though the expression “*corpus simpliciter*”

⁴²⁵ *Physica* 1.1.3, p. 5 ll. 32-66.

⁴²⁶ As indicated in the *Editio Coloniensis*. See Avicenna Latinus, *Liber primus naturalium* I 2 (ed. S. van Riet), p. 18 l. 5 – p. 19 l. 23: “Et dicam quod corpus naturale est substantia in qua possibile est intelligi lineam unam, et aliam lineam secantem illam super rectos angulos, et tertiam aliam intersecantem ambas illas super rectos angulos, et ex hoc quod est huiusmodi, est forma qua corpus est corpus. Et corpus non est corpus ex eo quod habet tres dimensiones designatas, quia

is not found there⁴²⁷. Since the *corpus simpliciter* is enquired into by metaphysics, I shall refer to it also as “metaphysical body”. I also used the expression “metaphysical body” in the previous subsection as a label for a certain level of determination of matter. The ambiguity in my usage of the expression “metaphysical body” will disappear once we realise that the *corpus simpliciter* as described in *Physica* 1.1.3 is identical to what I called “metaphysical body” earlier.

The distinction between the four notions of body in the last quoted text is apparently quite simple. (a) and (b) are characterised only by three dimensions; they differ from each other just because in (a) the three dimensions are considered as potentially determining the body, while in (b) they are considered as actually determining the body. The difference between potential and actual dimensions determines also the distinction between (c) and (d), but in these two cases matter is perfected by a physical form, namely it has a further determination in addition to dimensions. In Albert’s account, different sciences undertake the enquiry of “body” according to its different notions: (a) is enquired into by metaphysics, (b) by mathematics (geometry), (c) by physics, (d) by the several parts of physics.

Leaving aside the distinction between (c) and (d), which is somehow problematic⁴²⁸, Albert’s example of the wax may help distinguish notions (a) to (c). Let us assume one has a cylindrical piece of wax. This piece of wax is, of course, a body. Now, its being a body as such does not depend on its actual shape and dimensions, for if it is moulded and, accordingly, takes on a different shape, its being a body does not undergo any change. Neither does its being a body depend on the “physical form” – in this case, let it be the form of the wax – in virtue of which it undergoes motion. Indeed, this form can be lost and a new physical form acquired, without that body ceasing to be a body at any time. Moreover, the cylindrical shape with its actual dimensions does not, by itself, undergo motion; the piece of wax undergoes motion only as a physical body, namely a body resulting from a physical form.

An important aspect of Albert’s account lies in the fact that the *corpus naturale*, which is the subject of physics, does not presuppose actual dimensions, which characterise mathematical bodies, but only the predisposition for dimensions, namely what characterises the *corpus simpliciter*, which is enquired into by metaphysics. More precisely, the *corpus naturale* consists in the *corpus simpliciter*

corpus habet esse corpus constitutum, quamvis mutantur dimensiones quae sunt in eo in effectu, quia cera aut pars aquae aliquando habet dimensiones in effectu, scilicet longitudinem, latitudinem et spissitudinem, definitas suis terminis, sed, quando commutatur figura, corrumpitur unaquaeque illarum dimensionum designatarum et succedunt loco illarum aliae dimensiones et extensiones, et corpus remanet in sua corporeitate nec permutatum nec corruptum. Forma autem quam assignavimus, scilicet quod ipsum est eiusmodi in quo possibile est intelligi has dimensiones, nec est permutata nec corrupta. Sed iam de his alias innuimus, et cognovisti quod hae dimensiones designatae sunt quantitas extremorum eius quae adveniunt ei et permutantur, sed forma suae substantiae non permutatur, et haec quantitas sequitur permutationem accidentium in eo aut formarum, sicut aqua cum calescit augetur capacitas”.

⁴²⁷ The term employed in the Avicennian passage is *corpus naturale*. The expression *corpus simpliciter* is found, by contrast, in Averroes’ *De substantia orbis*, where it refers to matter characterised by the *dimensiones indeterminatae*.

⁴²⁸ See [Quartucci 2019], pp. 429-431.

being completed by a physical form. The fact that the physical body presupposes the metaphysical body, rather than the mathematical one, is underscored in *Metaphysica* 1.4.8 in order to deny that mathematical realities are principles of physical realities:

[...] et secundum hoc corpus naturale constitueretur dimensionibus quantitatum, et mathematica secundum esse accepta erunt principia physicorum, quae ambo sunt absurda apud omnes qui aliquid noverunt de peritia Peripateticorum. Ideo in physicis determinavimus corpus physicum ab aptitudine mensurationis trium diametrorum constitui et non ab actuali mensuratione quantitatis mathematicae secundum esse acceptae [...]⁴²⁹.

In the passage, Albert is basically recalling the notion of “physical body” as determined in *Physica* 1.1.3 in order to reject “Plato’s error”, even though Plato is not explicitly mentioned. This is important, for it confirms that the distinction between the different notions of body must be the theoretical background also for Albert’s criticism of “Plato’s error” in *Metaphysica* 1.1.1.

Additional information on Albert’s distinction of different notions of “body” are found in Albert’s *Metaphysica* 5.2.2, within the discussion of corporeal substance:

Ex omnibus igitur huiusmodi concluditur, quod corporis esse non pendet ex habere tres secundum actum dimensiones, sed potius corpus est, quod aptum est tribus dimensionibus mensurari [...] Forma autem huius aptitudinis facit corpus esse corpus, sed mensurae secundum actum in ipso acceptae consequuntur esse ipsius et substantiam et succedunt sibi, substantia eius manente una et eadem. Si enim accipiatur cera et comprimatur, mutantur pro certo in ea dimensiones, quae sunt actu in ea, et tamen manet idem corpus⁴³⁰.

Ex omnibus igitur inductis concluditur, quod corpus in eo quod est substantia corporalis, est substantia continua, in qua possunt poni tres diametri orthogonaliter se secantes in omni parte sui. Et secundum hanc formam omne corpus aequaliter est corpus omni corpori, sed secundum mensurari vel communicare vel huiusmodi non omne corpus aequaliter se habet omni corpori, quia talia accidunt ex numero dimensionum disciplinalium, quae secundum actum accipiuntur in corporis actuali quantitate. Constat etiam, quod corpus per formam corporeitatis sub eadem forma corporeitatis est rarefactibile et condensabile, licet non retineat eandem formam dimensionum secundum actum. Corpus autem disciplinale est quantitas actualium dimensionum superficie vel superficiebus terminatum non secundum esse, sed secundum rationem mensurae quantitatis acceptum. Et hoc consequitur ad corpus praedicto modo sumptum et ideo est accidens ipsius⁴³¹.

Again, the *esse corporis* – where by *corpus* Albert means the “body inasmuch as it is a corporeal substance”, rather than, for example, the mathematical body – is said not to depend on actual dimensions: the substantial body is rather what is just apt to be measured with three dimensions and is different from the mathematical body which, by contrast, consists in the actual dimensions. In addition to this, two more points are explicitly made in *Metaphysica* 5.2.2. First, Albert specifies the nature of the relation between the metaphysical body and the mathematical body: the latter follows upon (*consequitur*) the former and, therefore, is one of its accidents. Second, here Albert also provides something like an “ontological analysis” of the metaphysical body: he does not only assert that the body is what is apt to be measured, but also speaks of the *forma huius aptitudinis*. This is the *forma*

⁴²⁹ *Metaphysica* 1.4.8, p. 58 ll. 81-89.

⁴³⁰ *Metaphysica* 5.2.2, p. 237 ll. 65-79.

⁴³¹ *Metaphysica* 5.2.2, p. 238 ll. 5-23.

corporeitatis, namely what accounts for the body to be a body and a continuous substance⁴³². Albert derives the notion of *forma corporeitatis* from Avicenna – more specifically, in *Metaphysica* 5.2.2 Albert quotes extensively Avicenna’s *Philosophia prima* II 2⁴³³. In Albert’s view, the *forma corporeitatis* can be described as the substantial form of the metaphysical body⁴³⁴. With respect to such a form, every body is a body in the same way as any other body; moreover, a body changes its actual dimensions while retaining its *forma corporeitatis*. In other words, the *corpus simpliciter* – which, it will be recalled, is prior to any physical form by which a body may be determined – turns out to be composed of matter and form – prime matter and the *forma corporeitatis*⁴³⁵.

Notions of body and Plato’s error

The distinction between *corpus simpliciter*, *corpus mathematicum*, and *corpus naturale* supply the appropriate conceptual tools for a deeper insight into Albert’s criticism of “Plato’s error”. As we have seen, in *Metaphysica* 1.4.8 it is Albert himself who connects such conceptual apparatus to a criticism of the view that mathematical realities are principles of physical realities – in other words, to an implicit criticism of “Plato’s error”. We are therefore definitely allowed to read the

⁴³² Hence it is also called by Albert “*forma continuitatis*”; see *Metaphysica* 5.2.2, p. 238 ll. 37-43: “Ex his autem colligitur, quod substantia corporea, secundum quod est substantia corporea, est aliquid in potentia et aliquid in effectu. In potentia enim est id quod est susceptibilis dimensionis secundum actum, in actu autem est corpus continuum, et in eo quod est continuum, est compositum ex forma continuitatis et materia [...]”. See also *Metaphysica* 5.2.3, p. 238 ll. 80-83: “Licet autem corpus sit compositum ex materia et forma et corporeitas prima, quae est forma substantialis corporis, non sit nisi continuitas apta penetrari tribus diametris [...]”.

⁴³³ See [Bertolacci 1998], pp. 322-323. *Metaphysica* 5.2.2 is actually part of a larger quotation: as Bertolacci observes, in *Metaphysica* 5.2.1-4 Albert quotes most of *Philosophia prima* II (all the chapters).

⁴³⁴ Albert’s dependence on Avicenna, as far as the *forma corporeitatis* is concerned, was already noticed in [Fronober 1909], pp. 55-58. However, Fronober also maintains that Albert’s doctrine would be different from Avicenna’s, inasmuch as *corporeitas* would be an accident for the former and an essential form for the latter. While noting that the accidental nature of *corporeitas* apparently contrasts with Albert’s statement that *corporeitas* is prior to substantial forms (no accident should be such), Fronober suggests that Albert solves this contradiction by making plain that the priority of *corporeitas* over substantial forms is not temporal, but only a priority by nature. I do not think this solution would work, for the problem apparently posed by the priority of an accident over a substantial form should not only concern temporal priority, but also, and especially, priority by nature. However, I would deny that this problem is posed at all by Albert’s statements. The sentence quoted by Fronober, in which Albert would maintain the accidental nature of *corporeitas* (*Metaphysica* 5.2.3, p. 239 l. 40: “[...] continuitas autem est accidens”), is actually found within Albert’s report of an argument he wants to refute. See *Metaphysica* 5.2.3, p. 239 ll. 36-45: “Sunt autem quidam qui dicunt divisionem non primo convenire continuo, sed materiae, assignantes pro ratione, quod partes substantiae quaedam sunt et substantia non acquiritur per accidens, continuitas autem est accidens. Quod quidem licet derisibile sit, tamen quia ‘sapientibus et insipientibus debitores sumus’, hoc refellendo dicimus id quod est pars, esse substantiam, sed quod sit in ratione et esse partis, hoc accidit, et non est inconueniens accidens acquiri ex accidente”. It is true that Albert does not refute the premise that *continuitas* is an accident; rather, he tries to show that its assumption does not entail anything impossible. Nonetheless, this does not mean he would endorse that premise. On the other hand, he characterises the *forma corporeitatis* as one of the two principles of the metaphysical body, namely the body inasmuch as it is a corporeal substance: it is highly unlikely that an accidental form may play this role. Quite the opposite, it seems that Albert’s *forma corporeitatis* should be deemed as a sort of substantial, metaphysical (rather than physical) form. Moreover, he explicitly labels the *forma corporeitatis* as a substantial form; see *Metaphysica* 5.2.3, p. 238 ll. 80-83: “Licet autem corpus sit compositum ex materia et forma et corporeitas prima, quae est forma substantialis corporis, non sit nisi continuitas apta penetrari tribus diametris [...]”.

⁴³⁵ I restrict my attention to the passages on matter of Albert’s works which are relevant to the present section; for a discussion of Albert’s statements concerning prime matter see in particular [Hoßfeld 1980], [Rodolfi 2004].

passages where “Plato’s error” is explicitly addressed against the background of the distinction of different notions of body.

I would start with drawing some connections between the levels of determination of matter encountered in *Metaphysica* 1.1.1 and the different notions of body. First, (ii) matter determined by quantity should correspond to the mathematical body, for the mathematical body is precisely the “quantity of actual dimensions”. Second, (iii) matter determined by sensible qualities should correspond to the physical body: as said, the physical body is the one determined by a physical form, and this presumably is, in the picture of *Metaphysica* 1.1.1, the subject of sensible qualities⁴³⁶.

What is problematic is rather the (i) *materia determinata secundum formam dantem esse tantum*: there is no plain correspondence between (i) and one of the notions of body as defined in the relevant texts. However, (i) such matter was characterised as “metaphysical” (*divina*) and, as such, it seems to be connected with the *corpus simpliciter*, which is enquired into by the metaphysician (*divinus*). Now, the *corpus simpliciter* also shows connections with two other modes of determination of matter, namely (A) the *materia subiecta in esse quod dat forma* and (B) the *materia secundum esse aptum mensurari tribus diametris*. If it is true that (i) corresponds to the *corpus simpliciter*, and if it is true that the *corpus simpliciter* corresponds also to (A) and to (B), then also the identification (i) = (A) = (B) must be true.

As for (A), it is apparently one of the two principles of the body among whose *consequentia* the dimensions are included. As we have seen, Albert expressly states in *Metaphysica* 5.2.2 that the mathematical body follows upon (*consequitur*) the *corpus simpliciter*: accordingly, it seems that the “body” of which matter (A) is a principle should be identified with the *corpus simpliciter*. As for (B), it is less of a problem: of course, the *corpus simpliciter* is exactly – by definition – the matter endowed with the *esse aptum mensurari tribus diametris*, namely (B). All this evidence confirms that (A) and (B) should indeed be identified with (i) the *materia determinata secundum formam dantem esse tantum*: in all the three cases, the matter at stake is one of the two components of the *corpus simpliciter*.

There is a problem, however, concerning the other component, namely the form. As we know from Albert’s account in *Metaphysica* 5.2.2, the form which constitutes the *corpus simpliciter* is the *forma corporeitatis*. Accordingly, the *corpus simpliciter* cannot correspond to (i) the *materia determinata secundum formam dantem esse tantum*, unless the *forma dans esse tantum* is in fact the *forma corporeitatis*. I think there are solid grounds to maintain that it is. First, Albert states that the matter of which the *corpus simpliciter* is composed does not itself show a matter-form composition.

⁴³⁶ It will be recalled that I assumed the identity of (iii) what is determined by sensible qualities with (E) what is determinable by them.

In other words, the *forma corporeitatis* does not determine a substratum which has already been determined by another form⁴³⁷: it determines prime matter, and it is the first form to do so, physical forms coming after it. Second, matter cannot be separated from the *forma corporeitatis*, so as to be a “being in act” without it – by contrast it can be separated from any given physical form⁴³⁸. Third, form is expressly said to be the cause of the *esse* of matter⁴³⁹; accordingly, if the *forma corporeitatis* is the first form to determine prime matter, it is plausible that it be described as the form which gives *only* being – at least, it is the only candidate to fit that description. Most interesting, in this respect, is the following passage from Albert’s *De caelo*, in which one should notice, in particular, the juxtaposition of the expressions “*ex omnino non-corpore*” and “*ex nihilo omnino*”:

[...] et ita corporeitas materiae, quae est sicut forma prima respectu omnium formarum, quae sunt perfectiones corporeae, remanet in ipsa, et numquam denudatur ab ipsa in aliqua transmutatione quorumcumque corporum; et si denudaretur, contingeret, quod corpus esset ex omnino non-corpore et quod fieret corpus ex nihilo omnino, et hoc ostendimus impossibile esse secundum naturam in primo physicorum⁴⁴⁰.

To sum up, the body resulting from the matter being determined by the *forma dans esse tantum* is probably the same as the *corpus simpliciter*, namely the body which has three dimensions in potency. This is the proper substratum of the mathematical body, namely of actual dimensions. The physical form, in virtue of which sensible qualities attach to the body and it undergoes motion, presupposes matter as already determined by the *forma corporeitatis*; it does not presuppose matter, however, as already determined by actual dimensions. This is the reason why physics is not founded in mathematics: physical realities are not grounded on specific mathematical bodies, but on the body as such, whose enquiry belongs to metaphysics.

This is also what Albert states in the conclusion of his argument against Plato’s error. The (D) *esse determinabilis sola quantitate*, if it is indeed identical with the (B) *esse aptum mensurari tribus diametris*, is the kind of being proper to the *corpus simpliciter*, the metaphysical body. On the other hand, the (E) *esse determinabilis contrarietate passivorum et activorum*, if it is identical with (C) matter determined by a physical form, is the kind of being proper to the *corpus naturale*. Accordingly,

⁴³⁷ *Metaphysica* 5.2.2, p. 238 ll. 47-60: “Obiciet autem forte aliquis dicens, quod hyle corporis est composita ex materia et forma, quia hyle est actu substantia quaedam apta continuitati. Igitur est substantia actu ens et aptitudinem habens, et sic est composita ex actu et potentia. Sed ad hoc dicendum, quod substantialis hyle nihil addit supra hyle nisi modum negationis, quod non est in subiecto. Et ideo per hoc quod est actu substantia, non ponitur in actu alicuius formae, et per hoc quod additur ‘apta continuationi’, non ponitur in actu aliquid esse, sed in potentia. Et ideo si haec potentia determinatur ad actum corporeitatis indistinctae, in quam possunt orthogonaliter penetrare tres diametric, efficietur compositum ex materia et forma”.

⁴³⁸ *Metaphysica* 5.2.3 is entirely devoted to proving this. See for example *Metaphysica* 5.2.3, p. 239 ll. 34-36: “Patet igitur, quod materia a corporeitate non est separabilis, ita quod aliquid sine ea actu ens designatum existat”; *Metaphysica* 5.2.3, p. 239 ll. 68-72: “Ex omnibus autem his manifestum est materiam a corporeitate nullo modo posse separari. Quod autem materia sit maioris vel minoris spatii vel rara vel densa vel figurae huius vel illius, hoc habet a forma physica, quae separabilis est ab ipsa”.

⁴³⁹ *Metaphysica* 5.2.4; what is said in this chapter is probably not to be restricted to the *forma corporeitatis* only – see *Metaphysica* 5.2.4, p. 239 ll. 87-88: “Eam autem nunc dico formam, quae est forma corporis, quocumque modo sit forma corporis”.

⁴⁴⁰ *De caelo* 1.3.4, p. 62 l. 80 – p. 63 l. 6.

the passage would state that the *corpus naturale* is not grounded on the *corpus mathematicum*, but rather on the *corpus simpliciter*.

It is also interesting to read the first half of the passage on “Plato’s error” – where Albert clarifies the reasons which made Plato endorse his wrong view – with the different notions of body in mind. Plato made his error, Albert relates, because he saw a *consequentia sine conversione* between *esse mobile* and *esse continuum*. We saw that Albert himself would not deny such *consequentia* and we were therefore left with the following alternative: either this does not entail that *esse continuum* is a cause of *esse mobile*, or the fact that *esse continuum* is a cause of *esse mobile* does not entail that mathematical realities are principles of physical realities. All in all, it seems that Albert’s position is the latter. The *consequentia sine conversione* between *esse mobile* and *esse continuum* is ultimately valid because the physical body is grounded on the metaphysical one – in other words, the *esse continuum* is probably not something belonging to mathematics as such, but only inasmuch as it is the subject of actual dimensions.

On the other hand, the very same *consequentia* accounts for the priority of mathematics over physics in the *ordo rei*: mathematical realities are accidents of the *esse continuum* as such, and the *esse continuum* is the kind of being which is granted by the *forma corporeitatis*. In other words, mathematical quantities do not inhere in bodies in virtue of physical forms, but solely in virtue of the *forma corporeitatis*, which is prior to any physical form⁴⁴¹. They inhere in individual substances, as it were, at a “higher level” than sensible qualities do.

To conclude, Albert’s account explains at the same time both the priority of mathematics over physics and the fact that mathematics does not provide a foundation of physics. It is rather metaphysics which establishes both mathematics and physics, and does so without any mediation. Metaphysics immediately grounds both the kind of being proper to mathematical realities and the kind of being proper to physical realities; this is the case because, even though physical realities never exist without actual quantities, the principle of their own kind of being, namely physical form, does not depend on actual quantities in any respect.

⁴⁴¹ *Metaphysica* 5.3.2, p. 259 ll. 24-36: “Diximus enim, quod substantia, quae corpus est, constituitur ex materia et forma corporeitatis tali quae suscipit omni modo mensuram trium diametrorum. Et in hac forma nullum corpus differt ab alio corpore, nec est magis unum corpus quam aliud. Et ex hoc patet, quod mensura dimensionum actualium, secundum quam comparantur corpora ad invicem secundum maius et minus et aequale, est mensura et quantitas suscepta ab huiusmodi substantia secundum hoc quod susceptibilitas per actum formae substantialis est in ea. Igitur quantitas, quae mensura est, inest composito et non materiae simplici”. The priority of the *forma corporeitatis* over physical forms is also, in Albert’s view, the reason why mathematical entities are abstracted from sensible matter; see *Metaphysica* 5.3.2, p. 259 ll. 52-57: “Attende igitur, quod quia quantitatum mensurae non insunt subiecto determinato secundum aliquam formam specialem, sed secundum ipsam formam corporeitatis primam, ideo in diffinitiva ratione quantitatum disciplinalium non intrat subiectum sensibilis materiae [...]”.

4. Metaphysics as the founding discipline III: on the principles provided by metaphysics

Albert's rejection of the view that physics is founded in mathematics also reaffirms his own view that both mathematics and physics are founded in metaphysics by pointing out that the *corpus simpliciter* is actually a concern of metaphysics. I would now resume this view of Albert's on the metaphysical foundation of particular sciences, trying to understand more precisely what Albert means by saying that metaphysics establishes the principles of particular sciences⁴⁴².

In one of the "general statements" of the doctrine discussed above, Albert states that metaphysics takes charge of establishing the "subjects and principles" of particular sciences, and I left the question unanswered whether the mention of both subjects and principles was a hendiadys or not. In fact, at the end of the very same chapter to which that passage belongs we find a hint at the fact that it is not a hendiadys at all:

Inter theoreticas autem excellit haec divina, quam modo tractamus, eo quod fundat omnium aliarum subiecta et passiones et principia, non fundata ab aliis⁴⁴³.

Metaphysics is here said to found *subiecta*, *passiones*, and *principia* of the other theoretical sciences, the three components of demonstrations introduced by Aristotle himself in the *Posterior Analytics*⁴⁴⁴. Albert, like other medieval authors, presents us with a clear picture of the sort of knowledge a science must presuppose about those three elements by drawing a clear connection between them, on one hand, and a passage in *An. Post. A 1*, on the other⁴⁴⁵. In Albert's words:

Dicamus igitur quod de quibusdam oportet praecognoscere et praecipinari, quia sunt, ut de dignitatibus. De quibusdam autem praecognoscere oportet quid est quod dicitur per nomen, ut de passionibus. De quibusdam vero oportet utroque modo praecognoscere, ut de subiectis⁴⁴⁶.

Even though by "*dignitas*" Albert would normally understand common principles like the law of non-contradiction, he expressly specifies that a science should presuppose a knowledge, more broadly, of its propositional principles – and therefore that the term "*dignitas*" is here used in a loose

⁴⁴² By "principles" here I mean every kind of starting-points of particular sciences; "principles" are also one specific kind of these starting-points. The meaning of "principle" in the strict sense will be specified below. Albert himself employs the word both in a broad and in a narrow sense. See *Analytica Posteriora* 1.1.4 (Borgnet), p. 12: "Cum enim dicitur, quod oportet praecognoscere principium, communiter accipitur principium et comprehendit principium complexum quod est dignitas, et principium incomplexum quod est subiectum vel passio [...]".

⁴⁴³ *Metaphysica* 1.1.1, p. 3 ll. 18-20.

⁴⁴⁴ See for example *An. Post. A 7*, *An. Post. A 10*. In *An. Post. A 7* Aristotle refers to the conclusion rather than to *per se* attributes. This implies no substantial difference between the two chapters, since a scientific conclusion is nothing else than the outcome of a demonstration proving the inherence of a *per se* attribute to its subject.

⁴⁴⁵ Here Aristotle distinguishes two sorts of knowledge to presuppose and three different cases according to whether they are needed or not (in the first case only one kind of knowledge is presupposed, in the second case only the other, in the third case both are). See Aristoteles latinus, *Analytica Posteriora* (transl. Iacobi), p. 5 ll. 12-18: "Dupliciter autem necessarium est praecognoscere; alia namque, quia sunt, prius opinari necesse est, alia vero, quid est quod dicitur, intelligere oportet, quedam autem utraque, ut quoniam omne quidem aut affirmare aut negare verum est, quia est, triangulum autem quoniam hoc quidem significat, sed unitatem utraque, et quid significat et quia est; non enim similiter horum unumquodque manifestum est nobis".

⁴⁴⁶ *Analytica Posteriora* (Borgnet), p. 12.

way⁴⁴⁷. The sort of knowledge to presuppose in this case is the knowledge “that they are”, which in the case of propositional principles is interpreted by Albert – and by many others with him – as a knowledge of their truth⁴⁴⁸.

The *passiones* are not properly principles, but rather *principiata*, inasmuch as they are caused by their subjects⁴⁴⁹. As a consequence, the fact “that they are” is not presupposed, but rather known as a consequence of the demonstration of their inherence in the subject. Of a *passio* the science rather presupposes *quid est quod dicitur per nomen*, the meaning of the term used to indicate the *passio* in question, for such knowledge is necessary in order to demonstrate its inherence in its subject⁴⁵⁰.

Finally, of the subject a science must presuppose both *quia est* and *quid est*. Albert traces the need of a double knowledge concerning the subject back to the double role it has to play with respect to its attributes: on one hand, it is their cause; on the other, it is their substratum. Since it is their cause, and since it causes them in virtue of its essence, a knowledge of its *quid est* is required in order to demonstrate the inherence of the attributes; since it is their substratum, it must be known “that it is”: were it not, it would not be their substratum either⁴⁵¹. It is also interesting that Albert seems to endorse a position he ascribes to the “commentators”, according to which the *quia est* of the subject

⁴⁴⁷ *Analytica Posteriora* (Borgnet), p. 13: “Adhuc autem principia demonstrationis non sunt tantum dignitates, sed etiam suppositiones et petitiones, sicut patet in principio Euclidis, quae omnia oportet praecognoscere: et ideo talia omnia supponuntur hic in nomine dignitatum large sumendo dignitatem”.

⁴⁴⁸ See for example, regarding the law of excluded middle, *Analytica Posteriora* (Borgnet), p. 12: “[...] oportet praecognoscere et praesupponere quia est: haec enim si negetur, ostensive probari non potest [...]”.

⁴⁴⁹ *Analytica Posteriora* (Borgnet), p. 13: “Omnium autem horum ratio et causa haec est, quod res significatae in scientia, aut sunt principia, aut sunt principiata. Et siquidem sunt principiata, esse suum quia sunt, habent ab aliis: et ideo non potest hic (quia sunt) supponi de ipsis, sed debet probari per principia. De principiis autem quia esse suum non habent ab aliis, in ipsa scientia oportet relinqui quia sunt, nec potest probari de ipsis. Principiata autem sunt passionis quae causantur a subjectis, et ideo probantur de ipsis”. I do not understand the round brackets in “(quia sunt)”. I also suspect that the final “*probantur*” might actually be a variant for “*probat*”. Of course, attributes are demonstrated of their subject; however, Albert’s point here seems to be that, since attributes are caused by their subjects, their “*quia sunt*” is proved of them (namely of the attributes). Both the round brackets and the reading “*probantur*” are also found in Jammy’s edition.

⁴⁵⁰ *Analytica Posteriora* (Borgnet), p. 12: “[...] sed si nesciatur quid est quod dicitur per nomen, de subjecto passio probari non potest: quia per diffinitionem passionis probatur inesse subjecto: unde in passione quid est, est praecognitio: principium enim est ad cognoscendum quia est: et ideo cognitio quid est, praecedit demonstrationem: et cognitio quia est, sequitur eandem”. The passage immediately preceding this one presents a problem, inasmuch as it states that the knowledge *quid est passio* follows the demonstration of the inherence of the *passio* in the subject (unless *quid est passio* is a variant reading which should be corrected into *quia est passio*). This seems to point to a distinction by Albert between *quid est* and *quid dicitur per nomen* (a distinction found in other commentators). Still, the passage quoted above speaks against any such distinction and would make the emendation (*quid* into *quia*) a more probable solution. See *Analytica Posteriora* (Borgnet), p. 12: “De passione autem quae est triangulus, quoniam hoc quidem significat, hoc est, quid dicitur per nomen ejus: et hoc est ideo, quia non potest sciri quid est passio nisi per subjectum et subjecti proprii diffinitionem, per quam subjecto probatur inesse: et hoc est post demonstrationem qua probatur inesse subject, et non ante ipsam [...]”.

⁴⁵¹ I quote here Albert’s final comments (nearly at the close of the chapter) on the knowledge of subject, attributes, and principles which a science should presuppose. *Analytica Posteriora* (Borgnet), p. 14: “De principio igitur oportet supponi et praesciri quia est, et quia verum est: quia esse et esse verum convertuntur: quia nisi hoc praesciatur, nulla erit consequentia demonstrationis, cum principium per hoc quod est, et per hoc quod de necessitate est verum, sit causa consequentiae. De passione autem praescitur quid est: quia per suum quid est, hoc est, per diffinitionem, multoties probatur inesse subjecto. De subjecto autem et quid est et quia est: quia per quid est, quid est ejus diffinitio, scitur esse subjectum per se passionis: eo quod passio manat de substantialibus subjecti: nec potest sciri, quod proprium subjectum sit passionis, nisi per quidditatem essentialium subjecti. Oportet etiam praecognoscere quia est: aliter passioni non substaret. Et quia subjectum sic dupliciter se habet ad passionem, ut causa scilicet, et subjectum: et ideo de ipso in quantum est causa, oportet praecognoscere quid est: et de eodem in quantum immediate substat passioni, oportet praecognoscere quia est. Et iste proculdubio est intellectus Aristotelis”.

can only be known if its *quid est* is presupposed, unless it is known *per accidentalia*. This would seem to indicate a definite path to follow in order to acquire the knowledge of the subject of a science⁴⁵².

Albert's remarks in his *Analytica Posteriora* on the kind of knowledge presupposed by sciences are, of course, relevant to present purposes, because they tell us which kind of knowledge metaphysics should provide to establish subjects, attributes and principles of particular sciences. For example, it is not up to metaphysics to demonstrate, of an attribute of the subject of a particular science, "that it is": this demonstration is carried out in the particular science itself; accordingly, the particular science does not presuppose its conclusion. By contrast, it seems that, in order to grant all the assumptions on which particular sciences are grounded, metaphysics should demonstrate: *quia est* and *quid est* of their subject; *quid est* of the attributes with which they deal; *quia est* of their propositional principles, namely their truth.

Unfortunately, there is no uniform evidence in Albert's works, as far as I know, concerning the way metaphysics establishes subjects, attributes, and propositional principles. As for attributes, it may be argued, metaphysics provides the conceptual apparatus required to define them – and there is indeed evidence, regardless of the specific problem of attributes, that notions proper to particular sciences presuppose notions proper to metaphysics⁴⁵³.

By contrast, Albert gives some examples of propositional principles of particular sciences which should be provided by metaphysics. For example, in *Physica* 1.2.1 he states that the fact that natural beings are many is a principle of physics, such as the fact that a line is infinitely divisible is a principle of geometry. Who denies the truth of such principles cannot be refuted with the means of physics or geometry – and exactly because such refutation should be grounded on what is prior, rather than posterior, to those principles. Accordingly, this refutation can only be carried out by the metaphysician⁴⁵⁴. In the same chapter Albert also states that in physics one should suppose that

⁴⁵² *Analytica Posteriora* (Borgnet), p. 14: "Sciendum etiam quod esse de subjecto, sive quia est, simpliciter et per essentiam non potest sciri, nisi praecognoscatur qui est subjectum. Quaestio enim quae est si est, sciri non potest per se et per essentialia, nisi sciatur et cognoscatur quaestio quid est: potest tamen sciri per accidentalia si est subjectum etiam non cognito quid est". The same, Albert goes on, is true for attributes.

⁴⁵³ For example, in *Physica* 2.1.1, where Albert begins to speak about "nature", he justifies the fact that the discussion of nature precedes the discussion of causes inasmuch as nature is something concerning more than one cause. However, this order poses a problem inasmuch as the notion of cause is included in the notion of nature. Albert's solution is that the notion of cause which is included in the notion of nature is the one proper to metaphysics, rather than to physics. See *Physica* 2.1.1, p. 77 ll. 18-30: "Tractandum autem prius erit de natura, antequam tractemus de causis, quia natura ambit plures causas; continet enim tam materialem quam formalem. Et ideo oportet ipsam primo describere et postea de causis agere sigillatim; licet enim causa et principium in descriptione naturae ponantur, tamen causa et principium secundum specialem intentionem suam non describit eam. Et de causis secundum quoddam physicum genus causarum agit physicus et non secundum communem intentionem et generalem, secundum quam primus philosophus de causis considerat, et ideo tractatus de natura praecedet tractatum de causis physicis, de quibus solis speculatur naturalis".

⁴⁵⁴ *Metaphysica* 1.2.1, p. 16 ll. 90ss. (especially until p. 17 l. 24 and p. 18 ll. 9-21).

natural realities move⁴⁵⁵; in *Physica* 1.3.18 he affirms that the fact that the compound is composed of matter and form is a principle which physics receives from metaphysics⁴⁵⁶. These two cases are, actually, more of a problem, since it is not really clear whether Albert is dealing with propositional principles at all, rather than with the subject of physics itself, from which those propositions may be derived tautologically.

Along with the uncertain evidence concerning principles I have brought forth, and partially in contrast thereto, it should be added that it is not clear whether Albert's reference to the metaphysical foundation of the principles of particular sciences must be understood as involving propositional principles at all. It is true that principles are mentioned along with subjects and attributes and therefore expressly recall the model of the *Posterior Analytics*; however, Albert might very well be quoting the "epistemological triad" of the *Posterior Analytics* while implying a shift from "propositional principles" to "ontological principles"⁴⁵⁷. Indeed, there are passages in which Albert expresses the idea of the foundation of principles of particular sciences and in which the term "principles" can hardly mean anything other than ontological principles⁴⁵⁸. In this sense, for example, "matter", "form", "nature", etc. might all be considered principles of physics.

The aspect of the foundation of particular sciences best attested in Albert's works is definitely the one concerning their subjects. On the basis of Albert's *Analytica Posteriora*, it seems that metaphysics should provide the *quid est* and *quia est* of the subjects of particular sciences; it has also been mentioned the remark in the *Analytica Posteriora* according to which the *quia est* of the subject can be known only through its *quid est*. Something similar is also said in *Metaphysica* 6.1.1 quoting Averroes: the same science must show the *quid est* and the *an est*, for "‘*quid est*’ dicit ‘*esse*’"⁴⁵⁹. As a matter of fact, when Albert states that metaphysics should establish the subjects of particular sciences, he usually simply refers to their *esse/quia sunt*:

⁴⁵⁵ *Physica* 1.2.1, p. 16 ll. 65-67: "In ista autem scientia oportet, quod supponamus, quod ea quae naturaliter sunt, moventur, aut omnia aut quaedam [...]"

⁴⁵⁶ *Metaphysica* 1.3.18, p. 76, ll. 17-21: "Scias enim, quod compositum esse compositum ex materia et forma accipit physicus a metaphysico, sicut bene dicit Avicenna, et tamen reprehendit eum de hoc Averroes, cum sua reprehensio non careat reprehensione".

⁴⁵⁷ For example, "nature" is often said by Albert to be a principle of natural realities – and in *Physica* 2.1.6 Albert states that metaphysics should refute the one who denies the existence of nature. Such a shift in the meaning of "principle" in the triad "subject, attributes, principles" – from "propositional principle" to "ontological principle" – is present in Aquinas' view of the structure of Aristotle's *Metaphysics* – and of the structure of metaphysics more in general. See [Galluzzo 2004], pp. 359-362. In Aquinas, the ontological principles at stake are definitely external causes (separate substances), while in this context it would probably be easier to understand Albert as referring to inner principles.

⁴⁵⁸ For example *Metaphysica* 1.2.2, p. 19 ll. 49-58: "[...] principia illius quod actus et effectus est essentiae simplicis, non conceptae cum magnitudine et tempore, dant causare et esse principiis entis determinati per quantitatem et determinati per motum; et non potest sciri mobile esse, secundum hoc quod est esse verum et primum, nisi per huiusmodi principia existendi; nec principia mobilis, in eo quod mobile, principia esse possunt, nisi sint prius a principiis esse veri et puri in esse stabilita et posita, et hoc est sciendi genus perfectissimum".

⁴⁵⁹ *Metaphysica* 6.1.1, p. 302 ll. 74-79: "Dicit etiam Averroes, quod eiusdem scientiae est ostendere et quid et an est sive si est hoc vel non est. Per demonstrationem enim simplicem scitur 'quid est' et ideo scitur 'esse', eo quod 'quid est' dicit 'esse'. Et sic scientia unius et eiusdem quaestionis scitur quid est et si est, quando bene et debite scitur, quid est, et per eandem scientiam scitur, propter quid est, quia si vere scitur diffinitio, scitur omnis causa".

Et ideo ista scientia stabilire habet et subiecta et principia omnium aliarum scientiarum. Non enim possunt stabiliri et fundari ab ipsis scientiis particularibus, in quibus 'quia sunt' vel esse relinquuntur vel supponuntur⁴⁶⁰.

Sicut enim nos ostendimus in praehabitis, ista sapientia quae vere ex propriis considerat entis principia, sola vere dicit quid et ex ipsis principiis quiditatis probat esse subiecta particularium scientiarum⁴⁶¹.

This focus on the subjects is actually not surprising if one takes into account Albert's source for the doctrine of the metaphysical foundation of particular sciences. As will be clear shortly, a closer look at Avicenna is actually essential to achieve a full understanding of Albert's account.

5. Metaphysics as the founding discipline IV: Albert's Avicennian foundation of particular sciences

As already said, the view that metaphysics should establish the principles of particular sciences is not found in Aristotle; it was rather introduced into Latin medieval thought through other sources, first of all Avicenna's *Philosophia prima*. In *Philosophia prima* I 2 Avicenna explicitly states that a part of metaphysics is concerned with the foundation of particular sciences:

Sequitur ergo necessario ut haec scientia dividatur in partes, quarum quaedam [...] et quaedam inquirunt principia scientiarum particularium; principia enim uniuscuiusque scientiarum minus communium quaestiones sunt in scientia communiore, sicut principia medicinae in naturali, et principia mensurationis in geometria. Contingit igitur ut in hac scientia monstrentur principia singularium scientiarum quae inquirunt dispositiones uniuscuiusque esse. Igitur haec scientia inquit dispositiones esse et ea quae sunt ei quasi partes et species, quousque pervenitur ad appropriationem ex qua provenit subiectum naturalis. Igitur permittamus illam appropriationem ei; et appropriationem ex qua provenit subiectum disciplinalis, permittamus ei, et similiter ceteris. Id autem quod praecedit illud subiectum et est ei sicut principium, nos inquiremus et stabiliemus eius dispositiones⁴⁶².

This passage is of special interest to us because it makes it plain that the foundation of particular sciences concerns their subjects. In addition, it also gives some detail about Avicenna's views on the way in which such subjects are supposed to be established: metaphysics enquires into being and into all its subsequent determinations (starting from categories, the highest genera), until it reaches something so determined as to be the subject of a particular science. At that point, metaphysics hands such subject over to the particular science in question, which can then enquire into it. By contrast, all that is prior to it, and which is required for it to be established, cannot be enquired into by the particular science itself, but must fall within the consideration of metaphysics.

⁴⁶⁰ *Metaphysica* 1.1.1, p. 2 ll. 80-84.

⁴⁶¹ *Metaphysica* 6.1.1, p. 302 ll. 40-44.

⁴⁶² *Philosophia prima* I 2, p. 14 ll. 68-69 . p. 15 ll. 73-85.

Albert's focus on the foundation of subjects of particular sciences is therefore grounded in his source⁴⁶³. Incidentally, it can be noticed that the passage from the *Philosophia prima* might also help to interpret Albert's mention of the foundation of principles as referring to ontological principles: Avicenna says that the determinations which are prior to the subjects of particular sciences are "like principles" for those subjects⁴⁶⁴. In this respect, the foundation of subjects and principles mentioned by Albert would actually turn out to be a single task, for principles would be inner principles of the subjects.

Be this as it may, Albert definitely endorses Avicenna's view that metaphysics should establish the subjects of particular sciences and includes it in his *Metaphysica*. Now, even though the idea of a metaphysical foundation of particular sciences antedates Avicenna, he seems to have been the first to develop it fully in his *Book of the Cure*⁴⁶⁵. Indeed, it has been shown that Avicenna actually carries out his program of providing a foundation of particular sciences within the *Ilāhiyyāt*. In particular, it has been suggested that logic would be established by means of the analysis of the categories in *Ilāhiyyāt* II – III and of universals in *Ilāhiyyāt* V⁴⁶⁶; physics would be established mainly by means of the analysis of physical substance in *Ilāhiyyāt* II and of causality in *Ilāhiyyāt* VI⁴⁶⁷; mathematics would be established with the analysis of quantity in *Ilāhiyyāt* III⁴⁶⁸. More specifically, the subjects of these sciences would be established in *Ilāhiyyāt* V (universals), *Ilāhiyyāt* II (physical substance), and *Ilāhiyyāt* III (quantity), respectively⁴⁶⁹.

Returning to Albert, one should notice that, although his *Metaphysica* is a commentary on Aristotle's *Metaphysics* – and therefore, unlike Avicenna's *Ilāhiyyāt*, closely follows Aristotle's work – the "digression" chapters still allow for the insertion and development of doctrines extraneous to the text commented upon. His general statements of the metaphysical foundation of particular sciences, quoted above, belong to two digressions (*Physica* 1.1.1; *Metaphysica* 1.1.1). As we have seen, in these texts Albert expressly states that metaphysics should establish mathematics and physics: I would thus temporarily leave aside the case of logic, to which I shall come back later. Three more digressions, belonging to the commentary on *Metaphysics* Δ, are relevant in this respect. Their titles are illuminating:

⁴⁶³ See [Bertolacci 2006], pp. 267-272 for Avicenna's general statements of the doctrine of the metaphysical foundation of particular sciences. While stressing Avicenna's focus on the foundation of subjects, Bertolacci also points out that this is not the only aspect of the Avicennian doctrine; see especially pp. 269-271.

⁴⁶⁴ See [Bertolacci 2006], p. 269.

⁴⁶⁵ For Avicenna's sources, see [Bertolacci 2006], pp. 294-300.

⁴⁶⁶ See [Bertolacci 2006], pp. 272-279.

⁴⁶⁷ See [Bertolacci 2006], pp. 284-288.

⁴⁶⁸ See [Bertolacci 2006], pp. 293-294.

⁴⁶⁹ In the sections of [Bertolacci 2006] I have referred to in the preceding footnotes it is made clear that these are the texts directly dealing with the subjects of particular sciences; by contrast, the treatment of the categories is said to concern a principle of the subject of logic, while the treatment of causality is said to concern the most important common notion employed in physics.

- *Metaphysica* 5.2.2: “Et est digressio declarans esse substantiae corporalis in eo quod est corpus”⁴⁷⁰
- *Metaphysica* 5.3.2: “Et est digressio declarans esse et naturam quantitatis”⁴⁷¹
- *Metaphysica* 5.3.5: “Et est digressio declarans esse formam et circa aliquid constantem figuram”⁴⁷²

In all the three titles, it is made plain that the digression is meant to deal with the *esse* of something⁴⁷³: of the corporeal substance, of quantity, of figure. We know that metaphysics should establish the *esse* of the subjects of particular sciences, and of course corporeal substance, quantity and figure are very much related to the subjects of physics and mathematics. In fact, quantity can be considered the very subject of mathematics, and the beginning of *Metaphysica* 5.3.2 could not be more explicit:

Oportet autem nos adhuc declarare, quod omnes praeducti modi quantorum accidentis habent entitatem et non substantiae; aliter enim non satisficiemus de his secundum istius primae philosophiae proprietatem, nec satis erit certum mathematico suum subiectum, nisi ostendamus, quod non nisi accidentis habet esse et rationem⁴⁷⁴.

Metaphysica 5.3.2 is therefore devoted to establishing the *esse* of quantity; this task is carried out by showing that quantity has the *esse* of an accident. Albert gives two reasons why this task is to be carried out: first, in order to deal with quantity adequately, according to the way proper to metaphysics; second, in order to make the subject of mathematics certain. As for the first reason, Albert himself seems to explain it at the end of the chapter, saying that the things examined in the chapter depend on the *esse entis primi* (plausibly the *esse* of substance) and as such must they be considered in metaphysics⁴⁷⁵. As for the second reason, it is clear evidence of the fact that, in Albert’s view, the foundation of the subject of mathematics takes place *Metaphysica* 5.3.2.

The beginning of *Metaphysica* 5.3.5 is equally interesting. It informs us that, even though the subject of a particular science has already been established, the subject of a given part of that science might require further foundation. In the present case, quantity has already been established – and therefore metaphysics has already secured to mathematics *in general* its subject. Still, a part of mathematics, namely geometry, deals with quantities as determined by qualities of a given sort,

⁴⁷⁰ *Metaphysica* 5.2.2, p. 236 ll. 81-82.

⁴⁷¹ *Metaphysica* 5.3.2, p. 259 ll. 15-16.

⁴⁷² *Metaphysica* 5.3.5, p. 263 ll. 1-2.

⁴⁷³ The same is true for other digressions as well, for example *Metaphysica* 5.3.4,

⁴⁷⁴ *Metaphysica* 5.3.2, p. 259 ll. 17-23.

⁴⁷⁵ *Metaphysica* 5.3.2, p. 260 l. 96 – p. 261 l. 1: “Sed hoc advertendum est, quod entitas omnium eorum quae dicta sunt, pendet ex vero esse entis primi. Et ideo in ista philosophia sic consideranda sunt, sicut in prima huius capituli parte diximus”. The presence of this first reason explains why some chapters are devoted to establish the *esse* of other categories without apparently having any foundational role with respect to particular sciences.

namely figures. Accordingly, geometry requires that also the *esse* of this sort of qualities be shown in order for its subject to be established:

Est etiam una species qualitatis, quae est forma vel circa aliquid constans figura, secundum quod in Praedicamentis dictum est, quae est qualitas in quantitate continua accepta. Et hanc oportet nos probare esse, eo quod hanc esse non probat geometer, sed relinquit eam. Non enim probatur aliquid de aliquo, nisi relinquatur esse. Convenit igitur, quod probatum sit illud esse⁴⁷⁶.

No similar statement concerning the foundation of a particular science is found at the beginning of *Metaphysica* 5.2.2. This chapter, as already seen before, deals with the body as such, clarifies that it is what is apt to have three dimensions, and analyses it into matter and *forma corporeitatis*.

Now, it has been shown that the three digressions I have been taking into account are basically composed of quotations of large portions of chapters of Avicenna's *Philosophia prima*⁴⁷⁷. The following matches can be found:

- Albert *Metaphysica* 5.2.2 – Avicenna *Philosophia prima* II 2⁴⁷⁸
- Albert *Metaphysica* 5.3.2 – Avicenna *Philosophia prima* III 4
- Albert *Metaphysica* 5.3.5 – Avicenna *Philosophia prima* III 9

The initial remark in *Metaphysica* 5.3.5 concerning geometry derives from *Philosophia prima* III 9⁴⁷⁹; by contrast, the claim that *Metaphysica* 5.3.2 establishes the subject of mathematics seems to be Albert's own insertion before the beginning of the quotation – and therefore reveals his own interpretation of *Philosophia prima* III 4 and its overall purport. Albert's view on the role played by *Metaphysica* 5.2.2 requires closer scrutiny, but before this I would sum up the conclusions which can be drawn from the data available so far. First, Albert derives from Avicenna the doctrine of the metaphysical foundation of the subjects of particular sciences. Second, Albert's statements definitely imply that this metaphysical foundation should extend to mathematics and physics; I am not aware of any clear evidence concerning the foundation of other sciences. Third, just like Avicenna, Albert does not restrict himself to claiming that metaphysics should establish the subjects of particular sciences; he also means to carry out this task in his metaphysical work. Fourth, Albert employs digressions in order to accomplish the foundation of particular sciences, namely an Avicennian task,

⁴⁷⁶ *Metaphysica* 5.3.5, p. 263 ll. 3-10.

⁴⁷⁷ [Bertolacci 1998], pp. 322-323. Bertolacci labels the kind of quotation at stake in these three cases as “implicit textual quotation”: the quotation is implicit because Avicenna is not explicitly referred to, and it is textual because a whole text is being quoted by Albert. These quotations must not be understood as a “literal”, *verbum de verbo* quotations. Rather, they are basically Albert's reworking of Avicenna's text, along with omissions and insertions, as a close comparison between Albert's and Avicenna's texts reveals. For example, see the comparison of *Metaphysica* 5.3.5 with its source provided by S. Van Riet in “Annexe 3” of her introduction to the critical edition of *Philosophia prima I-IV*. See also the analysis of other quotations of Avicenna of this kind in Albert's *Metaphysica* provided in [Bertolacci 2001a].

⁴⁷⁸ *Metaphysica* 5.2.2 is actually part of a larger quotation: as Bertolacci observes, in *Metaphysica* 5.2.1-4 Albert quotes most of *Philosophia prima* II (all the chapters). See [Bertolacci 1998], pp. 322-323.

⁴⁷⁹ *Philosophia prima* III 9, p. 163 l. 54 – p. 164 l. 56: “Circulus enim et linea curva et sphaera et pyramis et columna talia sunt quod nullius eorum esse manifestum est, et impossibile est geometrae probare esse eorum [...]”.

within the context of Aristotle's *Metaphysics*. Fifth, the digressions to which Albert ascribes a foundational role are basically composed of quotations of chapters from *Philosophia prima* II-III; in other words, Albert deems some chapters in *Philosophia prima* II-III as the place where Avicenna accomplishes the foundation of the subjects of particular sciences. It is noteworthy that the Avicennian chapters quoted by Albert belong to *Philosophia prima* II-III, for it is highly likely that Avicenna had indeed meant the foundation of physics and mathematics to be contained, respectively, in the second and third treatise of the *Ilāhiyyāt*.

Now, we know that, in Albert's view, metaphysics should found at least physics and mathematics; we also know that the subject of mathematics is established in *Metaphysica* 5.3.2 (and *Metaphysica* 5.3.5 as far as geometry is concerned). It would be expected that the subject of physics is established somewhere in Albert's *Metaphysica*, but, as far as I can see, no explicit indication is given by Albert himself. The fact that *Metaphysica* 5.2.2 is actually a quotation of *Philosophia prima* II 2 – together with the fact that *Ilāhiyyāt* II is probably seen by its author as containing the foundation of physics – suggests that this is the chapter intended by Albert to establish the subject of physics. However, this is not the case – or at least, the main occupation of *Metaphysica* 5.2.2 is definitely not the subject of physics. As I have mentioned, *Metaphysica* 5.2.2 clarifies what the body as corporeal substance is: it is what is apt to be measured in three dimensions, and it has this aptitude in virtue of the *forma corporeitatis*. This is not the subject of physics, though. The natural body, as we have seen in a previous section, is further determined by a physical form, in virtue of which it is subject to motion. By contrast, the body as determined only by the *forma corporeitatis* is the *corpus simpliciter*; it may be called “metaphysical body”, for it is prior to motion and, accordingly, is enquired into in metaphysics. In this respect, it is remarkable that the references to the “natural body” as opposed to the “mathematical body” which are present in *Philosophia prima* are omitted by Albert:

Propter hoc etiam est possibile ut, cum unum corpus rarificatur et densatur calefactione et in frigidatione, permutetur eius quantitas, sed corporeitas eius quam diximus non permutetur nec alteretur.

Constat etiam, quod corpus per formam corporeitatis sub eadem forma corporeitatis est rarefactibile et condensabile, licet non retineat eandem formam dimensionum secundum actum.

Igitur corpus naturale est substantia secundum hunc modum.

Per corpus autem disciplinale vel intelligimus formam aliquam, in quantum est terminatum et mensuratum, acceptum in anima, non in esse; vel intelligimus per illud mensuram aliquam habentem continuitatem secundum hunc modum, in quantum habet continuitatem terminatam, sive sit in sculptione, sive in materia plana.

Corpus autem disciplinale est quantitas actualium dimensionum superficie vel superficiebus terminatum non secundum esse, sed secundum rationem mensurae quantitatis acceptum.

Igitur corpus disciplinale in se est sicut accidentale huic corpori quod designavimus, cuius terminus est superficies, linea vero est terminus termini eius.

*De his etiam adhuc postea amplius tractabimus, cum consideraverimus quomodo est eis continuatio et quomodo est ipsa corpori naturali*⁴⁸⁰. Et hoc consequitur ad corpus praedicto modo sumptum et ideo est accidens ipsius⁴⁸¹.

Whether Albert interpreted the expression “*corpus naturale*” as suggesting that, in Avicenna’s view, *Philosophia prima* II 2 was an attempt to establish physics, or he simply deemed the use of the expression “*corpus naturale*” inaccurate, it is difficult to say. He might even have considered the statement “*igitur corpus naturale est substantia secundum hunc modum*” acceptable, meaning that “the physical body is a substance in virtue of the *forma corporeitatis*”, while it is physical in virtue of a physical form. Be this as it may, the omission of the expression “*corpus naturale*” should plausibly be considered as intentional: in the passage quoted, Albert wants to contrast the mathematical body with the metaphysical body – and, therefore, any mention of the physical body would be misleading at least.

Going back to the main problem, namely the role of *Metaphysica* 5.2.2 and the place of Albert’s foundation of physics, two questions must be distinguished clearly. First, does *Metaphysica* 5.2.2 have any foundational role? Second, is the foundation of physics accomplished therein?

As for the first question, the answer is definitely “yes”. The main aim of *Metaphysica* 5.2.2 is to establish the *esse* of the metaphysical body. Now, the metaphysical body is prior to both the mathematical and the physical body and is presupposed by them. The *resolutio* of the subjects of particular sciences ultimately leads to the *esse simplex*, but their immediate foundation is the metaphysical body. The mathematical body is, as we have seen, an accident of the metaphysical body: it is the actual quantities of what is apt to have quantities. The physical body, on the other hand, is the result of the metaphysical body being determined by a physical form. In other words, *Metaphysica* 5.2.2 does indeed have a foundational role, and this foundational role extends to *both* mathematics and physics. More precisely, *Metaphysica* 5.2.2 is a necessary step to the foundation of mathematics and physics. That this is the case is also supported, as far as mathematics is concerned, by the fact that *Metaphysica* 5.3.2 (Albert’s foundation of mathematics) clearly presupposes *Metaphysica* 5.2.2⁴⁸².

This takes us directly to the second question. *Metaphysica* 5.2.2 turned out to be necessary, but not sufficient, to the foundation of mathematics, which is eventually accomplished in *Metaphysica* 5.3.2. What about the foundation of physics? There would be two ways to maintain that

⁴⁸⁰ *Philosophia prima* II 2, p. 73 l. 72 – p. 74 l. 85.

⁴⁸¹ *Metaphysica* 5.2.2, p. 238 ll. 14-23.

⁴⁸² I think that this would be evident to anyone going through *Metaphysica* 5.3.2. I shall restrict myself to quoting a few lines just to give an example. *Metaphysica* 5.3.2, p. 259 ll. 22-29: “[...] nisi ostendamus, quod non nisi accidentis habet esse et rationem. Hoc autem, si praeducta ad memoriam revocentur, facile erit nobis. Diximus enim, quod substantia, quae corpus est, constituitur ex materia et forma corporeitatis tali quae suscipit omni modo mensuram trium diametrorum. Et in hac forma nullum corpus differt ab alio corpore, nec est magis unum corpus quam aliud.”

the foundation of physics is accomplished in *Metaphysica* 5.2.2: either one should identify a part of this chapter in which the *esse* of the natural body is established, or it should be claimed that the analysis of the metaphysical body is sufficient for the foundation of physics. Both the possibilities are problematic. As for the first, all the mentions of physical forms in the chapter are there to state quite specific facts about them – in any case, something which is very far from a foundation of their *esse*⁴⁸³. As for the second, it should be explained why, in the case of the foundation of mathematics, a further discussion of quantities proves to be necessary (*Metaphysica* 5.3.2), while, in the case of physics, there would be no need of a specific discussion of physical forms.

More than this, however, what really speaks against the view that the foundation of physics is accomplished in *Metaphysica* 5.2.2 is the fact that Albert does not inform us about that. The reference to geometry at the beginning of *Metaphysica* 5.3.5, it will be recalled, derives from Albert's source, Avicenna's *Philosophia prima* III 9. However, Albert himself had included in *Metaphysica* 5.3.2, as a foreword to the long quotation of Avicenna's *Philosophia prima* III 4, a reference to the fact that the subject of mathematics would be established within the chapter. Given his general statements on the metaphysical foundation of particular sciences, in which both mathematics and physics are expressly addressed, one would expect Albert to introduce the foundation of the subject of physics with an explicit announcement thereof, just as he does for the subject of mathematics. Quite the contrary, Albert even omits the mentions of the *corpus naturale*, which he would identify with the subject of physics, that one finds in Avicenna's *Philosophia prima* II 2.

If the subject of physics is not established in *Metaphysica* 5.2.2, it might be asked where it is established. As far as I can see, there is no conclusive evidence in Albert's *Metaphysica*, and I would leave the possibility open that Albert left the task unaccomplished.

I would close this section by resuming briefly the case of logic. As we have seen, Avicenna's discussion of universals in *Ilāhiyyāt* V probably counts as a foundation of the subject of logic. As for the reception of Avicenna in Albert's *Metaphysica*, we have a scenario somehow similar to the ones just discussed: there are quotations or influences of *Philosophia prima* V 1-4 in *Metaphysica* 5.6.5, 5.6.7, 5.6.10-11⁴⁸⁴. However, the quotations concerning universals are quite shorter than the ones

⁴⁸³ In one point, Albert states that a body which preserves the same dimensions perpetually owes this feature to its physical form rather than to the *forma corporeitatis* (Albert probably has the heavens in mind). See *Metaphysica* 5.2.2, p. 237 l. 98 – p. 238 l. 4: “Si autem est aliquod corpus quod retinet et conservat perpetuo dimensiones actuales, quae sunt in ipso, hoc non habet a natura corporeitatis, secundum quod est corporeitas, sed a forma physica addita corporeitati”. In another point, Albert states that “divisibility” belongs to bodies in virtue of the *forma corporeitatis* and that, if a body cannot be divided, this is due to its physical form. See *Metaphysica* 5.2.2, p. 238 ll. 23-27: “Corpori autem omni sicut et omni quanto accidit divisibilitas ratione continuationis, quam habet. Et si non dividatur, hoc non est ratione continuationis, sed ratione physicae formae continuationi superadditae, sicut diximus”. At the end of the chapter, Albert states that physical forms are not differentiae of *corporeitas*, but rather its *consequentia*. See *Metaphysica* 5.2.2, p. 238 ll. 72-76: “Si autem adveniant formae physicae, sicut caelestis et terrestres et calidum et frigidum et huiusmodi, non dividunt corporeitatem, cum non sint differentiae ipsius, sed consequentia ipsam, sicut dictum est”.

⁴⁸⁴ [Bertolacci 1998], pp. 323-324.

concerning body, quantity, and figures. Moreover, there is no allusion, in Albert's *Metaphysica*, to the effect that the chapters about universals concern the very *esse* of universals. It seems, therefore, that Albert did not use Avicenna's discussion of universals as a foundation for logic – which, on the other hand, fits in well with his sole focus on mathematics and physics in the general statements of the doctrine of the metaphysical foundation of particular sciences.

6. Overlaps between sciences

In some passages of his works, Albert informs us that a given topic is dealt with in more than one science: in other words, in some cases sciences overlap. However, a clear-cut division of sciences based on distinct domains of realities – such as the one provided by Albert – would seem to make overlapping impossible. As a matter of fact, it seems that Albert would agree that, strictly speaking, different sciences cannot carry out exactly the same investigation. Indeed, whenever he points to a case of overlapping between sciences, he also adds some explanatory remarks, which are ultimately meant to clarify the illusory character of the overlapping itself.

In this section, I shall give some examples of overlapping between sciences as they are found in Albert's works. From a survey of Albert's statements, it turns out that the cases of overlapping may be grouped in two classes, which I shall call (A) and (B).

- A) In some cases, Albert informs us that a given examination is carried out within two sciences even though it would properly pertain to only one of them. The fact that it is also found in the other science is only due to didactical reasons, serving “for an easier instruction”.
- B) In other cases, the consideration of certain objects truly pertains to more than one science. Yet the different sciences in question enquire into the same objects from different points of view, and thus their examinations are ultimately distinct.

A) “For an easier instruction”

The possibility for a certain examination, which would normally pertain to a given science, to be carried out also in another science “for an easier instruction” emerges in two distinct and somehow opposite circumstances: (A.1) either something which would normally be examined in a lower science is also examined in a higher science, or (A.2) vice versa.

(A.1) The first case is closely connected to the arrangement of sciences in the *ordo doctrinae*. Just like physics and mathematics precede metaphysics in the order of learning because they are closer to human intellects, it is also possible for a physical or mathematical discussion to be included

within metaphysics as preparatory to the properly metaphysical investigation. In *Metaphysica* 9.1.1, for example, Albert introduces a discussion of potency and act and announces that he would begin with physical potency, even though the latter actually falls outside the scope of metaphysics:

Determinantes autem de potestate, primum determinationis principium sumemus de potestate, quae maxime proprie dicitur, licet non sit utilis, ad quod nunc intendere volumus, eo quod doctrina non erit facilis, nisi ab ea incipiamus. Potestate proprie est in materia mobili ad formam, et haec est potentia physica, quae non est de nostra intentione, eo quod entis particularis et non est entis, secundum quod est ens [...] ⁴⁸⁵

Et haec potestas sic accepta ut confusa nihil diffiniens est huic intentioni primae philosophiae propria, licet propter doctrinae facilitatem incohemus a physica potestate ⁴⁸⁶.

(A.2) In other cases, Albert includes properly metaphysical discussions in lower sciences. This typically happens when a given examination cannot reach its completion, or cannot be considered well-founded, without a metaphysical discussion. This would imply for the learner to leave some questions unanswered, or to assume something without a proper examination, until he would reach the science of metaphysics – which is the last one in the order of learning. In order to avoid these setbacks, a properly metaphysical discussion may be moved up and included in a lower science. For example, in *Physica* 1.2.1 Albert states that the fact that physical beings are many and have causes of their motion is a principle which must be assumed in physics. Accordingly, it is not the task of physics to argue with those who deny that principle, claiming that being is one and immobile (Parmenides and Melissus). It is rather metaphysics which has to ascertain the principles of physics and thus to refute those who contradict them. This notwithstanding, a refutation of Parmenides and Melissus is provided also in physics *propter faciliorem doctrinam*:

Licet ergo contra tales negantes principia naturalis philosophiae disputare non habeamus, in quantum naturales sumus, quia eorum dubitationes et defectus sunt non naturales, tamen quia sunt de naturis, fortassis propter faciliorem doctrinam bene se habet aliquantulum disputare contra ipsos, quia respectus hic habet philosophiam primam. Et ideo induentes philosophum primum disputabimus contra eos, quia forte aliter in doctrina physicorum generaretur obscuritas, licet scientiae propter hoc nihil deesset, si disputationem omitteremus ⁴⁸⁷.

Just to give another example ⁴⁸⁸, in the first chapters of his *De quinque universalibus* Albert deals with the three questions asked by Porphyry at the beginning of his *Isagoge*. In chapters I.2-3, Albert repeatedly states that it is metaphysics which has to answer those questions, for logical principles are not sufficient to that end. This notwithstanding, he announces a discussion of the matter, albeit inadequate, within logic itself:

Quamvis autem haec determinare sit supra vires logicae, eo quod oportet in his uti rationibus sumptis ex principiis entis secundum quod est ens [...] tamen propter bonitatem doctrinae et ne suspensus sit lectoris animus, haec aliquantulum explanare temptandum est ⁴⁸⁹.

⁴⁸⁵ *Metaphysica* 9.1.1, p. 410 ll. 48-55.

⁴⁸⁶ *Metaphysica* 9.1.1, p. 411 ll. 11-14.

⁴⁸⁷ *Physica* 1.2.1, p. 18 ll. 12-21.

⁴⁸⁸ For further evidence, see also *Physica* 1.3.11, p. 60 ll. 56-58; *Physica* 8.1.1, p. 551 ll. 1-3; *Physica* 8.1.15, p. 580 ll. 66-70.

⁴⁸⁹ *De quinque universalibus* 1.3, p. 20 ll. 61-69.

B) “From different points of view”

The view that certain objects may be considered by more than one science, even though from different points of view, emerges a great number of times in Albert’s works. I shall restrict myself to outlining it briefly while giving some significant examples. Again, I would distinguish between two different circumstances: (B.1) either some objects are considered by two sciences according to a more common and a more specific scope, respectively; (B.2) or they are considered by more than one science according to the same extension – the difference of their points of view being properly intensional.

(B.1) The first – and more trivial – case basically concerns the same objects being investigated by metaphysics, on one hand, and a particular science, on the other. Since metaphysics is the universal science, it would enquire into a given notion in its full scope, whereas the particular science might not encompass it in its entirety. For example, in *Physica* 2.1.1 Albert addresses the following problem: on one hand, the discussion of the notion of “nature” should precede the investigation of causes because “nature” encompasses more than one cause; on the other, the very notion of nature presupposes the notion of cause. Albert claims that the vicious circle is not real, though, because the notion of nature only presupposes the general notion of cause as it is clarified in metaphysics. The physical investigation of causes can thus safely follow the discussion of “nature”:

Et de causis secundum quoddam physicum genus causarum agit physicus et non secundum communem intentionem et generalem, secundum quam primus philosophus de causis considerat [...]⁴⁹⁰

Another example of Albert’s attitude is provided by the metaphysical and physical considerations of the notion of nature itself, which differ for their extensions:

Naturam autem post hoc convenit distinguere, quod licet prout est principium motus et status per se et non secundum accidens, sit a nobis distincta in II Physicorum, tamen etiam hic communius naturam speculantes convenit distinguere, quia et formam, quae natura est, et materiam, quae natura est, et alia huiusmodi communius speculamur. Secundum enim quod sunt entis, consideramus huiusmodi, et non secundum quod sunt rei vel corporis mobilis⁴⁹¹.

(B.2) In other cases, different scientific examinations of the same objects are distinguished solely by the difference in the modes of consideration. For example, separate substances are investigated in two different parts of physics and in metaphysics according to different points of view. Likewise, universals are investigated in both logic and metaphysics:

Et ideo oportet considerare separata, in quantum impressiones eorum per motum caelestium sunt in generabilibus et corruptibilibus, et horum quidem naturam declarabimus in caelo et mundo. Sed effectum, quem habent universaliter in generatione, docebimus in libro secundo peri geneleos. Sed effectum, quem habent in particulari generatione, tangemus in generatione singulari in libris de plantis et animalibus. Sed qualiter formae separatae non relatae ad materiam generabilium se habent

⁴⁹⁰ *Physica* 2.1.1, p. 77 ll. 25-28.

⁴⁹¹ *Metaphysica* 5.1.5, p. 218 ll. 26-34.

in se consideratae et quid sint et quot numero et in quo ordine, opus habet determinare prima philosophia⁴⁹².

Universale autem est quod, cum sit in uno, aptum est esse in pluribus, ut in antehabitis ostensum est. Et per hoc quod in multis per aptitudinem est, praedicabile de illis est. Et sic universale est quod de sua aptitudine ‘est in multis et de multis’. Et hoc modo, prout ratio est praedicabilitatis, ad logicum pertinet de universali tractare, quamvis secundum quod est natura quaedam et differentia entis, tractare de ipso pertineat ad metaphysicum⁴⁹³.

Moreover, different considerations of the same objects may result in (apparently) opposite conclusions about them. In *Physica* 5.1.8, for example, Albert wants to claim that there is motion in the category of quantity; to this end, he must admit that there is contrariety in quantity. Yet in the *Categories* Aristotle denies the last point. Albert thus distinguishes between three different considerations of quantity belonging to three different sciences, namely logic, mathematics, and physics:

Est autem motus et in quantitate secundum physicam eius considerationem. Duplex enim est consideratio quantitatis; potest enim considerari esse quantitatis secundum rationem simplicem et potest considerari quantitatis esse, prout est terminus et mensura corporum physicorum. Et primo quidem modo consideratur dupliciter; uno enim modo accipitur quantitas secundum simplicem intentionem quantitatis, cuius communitate clauditur omnis inferior quantitas, et haec consideratio est logica, alio autem modo accipitur, prout est multiplicabilis ab unitate vel terminabilis a linea vel lineis in continuo, et sic consideratur in mathematicis, et neutro modo habet contrarium; [...] et ideo dictum est in Praedicamentis, quod est proprium quantitatis non habere contrarium. Si autem accipiatur quantitas secundum esse, sicut est mensura et terminus corporum physicorum, quae omnia determinatam habent rationem magnitudinis suae [...]⁴⁹⁴

In some other cases yet, the different considerations of the same objects result in different demonstrations of the same conclusions. For example, the fact that the earth is spherical is demonstrated in both physics and mathematics. Yet the mathematical demonstration is only “*quia*”, while the physical demonstration is “*propter quid*”. It also happens that physics makes use of the mathematical demonstration and vice versa:

Sicut autem scientiae istae conveniunt in quibusdam, ita probationes suas nonnunquam permiscunt, sicut est videre de hoc, quod terra sit sphaerica; de hoc enim aliquando geometrica probationem facit physicus dicens, quod si non esset sphaerica, non diversificaretur in ea ortus et occasus astrorum. Haec enim probatio astrologica est et accomodata a physico, et ideo non dicit nisi ‘quia’, quia causam, propter quam terra est sphaerica, non habet dicere astrologus. Aliquando autem astrologus de eodem probationem facit physicam, sicut quando dicit, quod terra est simplex corpus et simplici corpori competit figura simplex, figura autem simplex non est, quae in una parte habet angulum et in alia lineam, sed potius quae omnino est sine angulo; haec enim probatio physica est. Vel etiam quando dicit, quod terrae partes sunt graves, partes autem graves aequaliter festinant cadere circa centrum et ideo cadunt in circulum. Tales enim probationes dicunt causam, propter quam terra est sphaerica, et sumuntur in doctrinalibus ad faciliorem doctrinam. Omnes enim scientiae disciplinales, quae in questionibus suis subiecta habent physica, passionem mathematicam circa ea inquirunt per causas mathematicas, et ideo etiam mathematicae potius quam physicae sunt subalternatae⁴⁹⁵.

⁴⁹² *Physica* 2.1.11, p. 96 ll. 24-35.

⁴⁹³ *De quinque universalibus* 1.1, p. 17 ll. 39-47.

⁴⁹⁴ *Physica* 5.1.8, p. 418 ll. 9-30.

⁴⁹⁵ *Physica* 2.1.8, p. 91 ll. 4-28.

Concluding remarks

To sum up, it is plausible that Albert would deem overlapping between sciences impossible strictly speaking. Yet sciences seem to overlap, which requires an explanation. Albert actually provides two main kinds of justification for the several cases of apparent overlapping (henceforth simply “overlapping”). A) First, one science may include an investigation which would normally belong to another science⁴⁹⁶; B) second, different sciences can investigate into the same objects from different points of view.

The possibility of overlapping cannot be altogether identified with the other relations obtaining between sciences. This notwithstanding, some specific cases of overlapping are closely related to other kinds of relations. For example, cases falling under (A.1) are connected with the posteriority of metaphysics in the *ordo doctrinae*; cases falling under (A.2) often presuppose the view that metaphysics provides the foundation of particular sciences; cases falling under (B.1) are basically expressions of the priority of metaphysics in the *ordo rei*.

Finally, I should point out to the fact that some cases of overlapping are more complex to analyse, inasmuch as they cannot be traced back to only one of the classes distinguished above. One of these cases concerns the scientific investigation into causes, which belongs to more than one science. In several places of his works, Albert justifies in different ways this case of overlapping. Different sciences enquire into different causes; different sciences enquire into the same causes with a different extensional scope; different sciences enquire into the same causes according to the same extension, but from different points of view (intensional difference). A closer analysis of Albert’s conception of the scientific investigation of causes would thus be instructive about the phenomenon of overlapping, in addition to being of great interest in itself.

⁴⁹⁶ I would just mention the fact that this justification – and in particular (A.2) – has an antecedent in Avicenna’s *Philosophia prima* I 1 concerning the physical demonstration of the existence of God. *Philosophia prima* I 1, p. 5 ll. 91-93: “[...] et quod de hoc apprehendisti in naturalibus erat extraneum a naturalibus quia quod de hoc tractabatur in eis non erat de eis [...]”.

PART THREE

JOHN DUNS SCOTUS

Introduction

The subject of metaphysics in Scotus' *Quaestiones super Metaphysicam*

Scotus' conception of metaphysics as a philosophical science has deserved much scrutiny by scholarship – and with good reason. For one thing, Scotus introduces highly original elements into the discussion on the epistemological status of metaphysics and opts for distinctive solutions, which would have great influence on subsequent metaphysics.

It is undeniable, on the other hand, that Scotus carries on traditional reflections on the nature of metaphysics, as they were developed by Latin authors – Thomas Aquinas and Henry of Ghent *in primis*, but also, for example, Albert the Great and Godfray of Fontaines – on the basis of the Latin translation of Aristotle's works (especially the *Metaphysics* and the *Posterior Analytics*), as well as of Avicenna's and Averroes' works.

The fundamental role played by Avicenna and Averroes in the development of Scotus' position emerges in a particularly clear way as far as the determination of the subject of metaphysics is concerned. In this respect, Scotus' position is commonly outlined with special reference to his theological works. The main doctrinal points defended there – and which constitute what we may call Scotus' "standard position" on the subject of metaphysics – are the following: the subject of metaphysics is being *qua* being; being is a logically univocal concept, common both to substance and accidents and encompassing both finite and infinite being; metaphysics enquires into the transcendental properties of being. Roughly speaking, Scotus endorses an ontological position concerning the subject of metaphysics. In so doing, he expressly contrasts the ontological conception with the theological one and associates them with the names of Avicenna and Averroes, respectively. To state his doctrinal allegiance in his own words: "*Sed Avicenna bene dicit et Averroes valde male*"⁴⁹⁷.

This being the case, the picture which is found in Scotus' *Questions on the Metaphysics* is quite striking. First of all, Scotus seems to endorse different conceptions about the subject of metaphysics in his *Questions*, and even within one single *quaestio*. Moreover, his longest and most detailed discussion of the problem – i. e. *QM* I 1, which perhaps is also the most sophisticated discussion on the subject of metaphysics in Latin medieval philosophy – apparently ends with a defence of the theological conception of metaphysics. It is true that this conception differs from Averroes' in at least two points, as Scotus himself indicates; in any case, Avicenna's position is straightforwardly rejected.

⁴⁹⁷ *Rep. Par. Prol. Q. 3 a. 1.*

In what follows, I shall analyse Scotus' position on the subject of metaphysics with a special focus on the *Questions on the Metaphysics* – which, with their peculiar treatment of the topic, preserve a richness of reflections and arguments otherwise unavailable. My exposition will fall into two chapters. In the first chapter, I shall provide a commentary on *QM I 1* – the *quaestio* expressly devoted to the subject of metaphysics, which is, as said, Scotus' longest discussion of the topic. In the second chapter, which presupposes the analysis of *QM I 1* as given in the commentary, I shall outline the development of Scotus' views on the subject of metaphysics as it emerges from a comparison between *QM I 1*, *QM VI 4*, and relevant passages from Scotus' theological works.

The remaining part of this introduction, which is preparatory to the analysis carried out in the two chapters, is divided into three sections. . The first section is a very brief introduction to the *Questions on the Metaphysics* and provides an overview of Scotus' treatment of the problem of the subject of metaphysics therein. The second section is a survey of the scholarly interpretations of Scotus' peculiar statements on the subject of metaphysics in the *Questions*. In the third section, I shall report the text of *QM I 1* as it is found in the critical edition of Scotus' work.

1. On the *Quaestiones super Metaphysicam*

Scotus' *Questions on the Metaphysics* extend only as far as Book 9. They are not a polished work, as it were, ready for publication. As the editors of the text state: "This work of the Subtle Doctor has come down to us in a disorderly state, perhaps because of his untimely death"⁴⁹⁸. Just to report some examples mentioned by the editors: some arguments seem to be only sketched, rather than fully developed; *QM VII 15* was likely meant to supplant *QM VII 14* (in other words, they should not have been both present in the final version of the work); different manuscripts present different order of paragraphs or questions, omissions, and repetitions⁴⁹⁹. The disorderly state in which the *Questions* are found is partly due to the fact that Scotus used to revise his works over time, cancelling portions of text, making additions, substituting one passage with another, or simply juxtaposing old and new sections.

In this respect, it is impossible to individuate a date of composition for the *Questions* as a whole. The editors of the text reject two common assumptions about the composition of this work: first, that they are one of Scotus' earliest works, and second, that they were composed over a brief period of time. Quite the opposite, the editors suggest – on the basis of evidence of various nature – that the *Questions* were composed and revised over a long period of time. Moreover, they claim that some of the *quaestiones* – especially Books VIII-IX, and plausibly Book VII – originated quite late in Scotus' career. In particular, for present purposes it is important to underscore one point defended

⁴⁹⁸ *QM*, Introduction, p. xxxii.

⁴⁹⁹ For a full account, see *QM*, Introduction, pp. xxxii-xxxvii.

by the editors of Scotus' *Questions*: parts of the work might very well be posterior to passages of Scotus' *Ordinatio*, and even of his *Reportatio Parisiensis*, to which they apparently refer⁵⁰⁰.

As for Scotus' revisions and additions, fortunately there are some clues in the tradition of the text which advise us of their presence. Such clues are of various nature, and are found both in the manuscripts (passages marked as "*additio*" or "*extra*", transposition of paragraphs, etc.) and in one of the earliest editions of the work, by Mauritius de Portu Hibernico (his *adnotationes*)⁵⁰¹.

Understanding the relative chronology of the several sections of the *Questions* and of other works by Scotus is extremely relevant from the point of view of doctrine. For one thing, some views expressed in the *Questions* sharply contrast with the positions held by Scotus in his theological works and often considered his "standard positions". This is not only the case of the question of the subject of metaphysics. A famous example is given by the solution of *QM* IV 1: here Scotus maintains that being is "logically equivocal", which is at odds with his "standard" conception of being as univocal. If the *Questions* were not written entirely prior to the theological works, the doctrinal divergences oblige us to ask the following questions: which position did Scotus endorse first? Is the "standard position" Scotus' last word on a given topic?

On the other hand, Scotus holds contradictory views within the *Questions* themselves. There are examples of *quaestiones* contradicting each other, and even of contradictory statements within one and the same *quaestio*. In the first case, the contradiction is not problematic if the *quaestiones* stem from a different period of Scotus' career, and one should try to understand the order in which they were written. In the second case, the contradiction is not problematic if the statements are found in different layers of the stratification caused by Scotus' revisions; one should try to separate such layers from each other and understand the order in which they were written.

The last task is generally difficult. Its first step consists in individuating the original core of the *quaestio*, eliminating all passages which should be considered to be *additiones*; in this respect, the hints in the manuscripts and Mauritius' notes are, of course, fundamental. Afterwards one should also take into account the possibility that the *additiones* might not stem from a single period. In other words, there might be more than two chronological layers in a single *quaestio*. Ideally, the separation of these layers would reflect more than two stages in the development of Scotus' thought. Practically, the separation of layers within the *additiones* can hardly rely on strong textual evidence and is in principle less certain than the separation of *additiones* from the original redaction of a *quaestio*.

In any case, even the identification of *additiones* is not straightforward, given the lack of a constant agreement between the several clues provided by manuscripts and by Mauritius' notes. The critical edition provides us with a large amount of data and a careful evaluation thereof, but cannot

⁵⁰⁰ *QM*, Introduction, pp. xlii-xlvi.

⁵⁰¹ *QM*, Introduction, pp. xxviii-xxxii for a discussion of Scotus' later additions, on the evidence provided by the tradition, and on the further presence of *textus interpolati / adnotationes interpolatae*.

be considered conclusive. The work of Giorgio Pini on *QM IV 1* can be taken as an example of what has been said so far about the chronological layers within a single *quaestio*⁵⁰². As it has come down to us, the structure of *QM IV 1* is quite confuse and its views seem to be inconsistent. On the basis of textual evidence, Pini has been able to identify the passages in *QM IV 1* – some of which not marked as *additiones* in the critical edition – which should be considered as later additions. Removing the additions from the text, one is left with the original version of the *quaestio*, which presents a clear and ordered structure and maintains the equivocity of being in its *solutio*. On the other hand, nearly all the additions are arguments in support of the univocity of being, namely the position held by Scotus later in his career; Pini has also shown that the additions were probably written after the theological works. To sum up, what seems to be an inconsistency in *QM IV 1* eventually turns out to be a witness of the development of Scotus' thought.

As for the issue of the subject of metaphysics, *QM I 1* is by far the longest and most important treatment of the topic within the *Questions*. In the opening lines, Scotus recalls a conclusion reached in the *Prologue*: metaphysics enquires into transcendentals and into the highest causes. This being the case, the following problem arises: is the subject of metaphysics being *qua* being (corresponding to “transcendentals”), as Avicenna believes, or God and Intelligences (corresponding to “highest causes”), as Averroes maintains? Scotus deals extensively with this problem in *QM I 1*, which takes more than 57 pages in the critical edition. As it has come down to us, it is also a complicated text, with a complex structure and unclear passages, and including a large amount of revisions and additions according to the evidence provided by the tradition.

Strangely enough, the long, difficult, and revised *QM I 1* is not even the only *quaestio* devoted to identifying the subject of metaphysics: in *QM VI 4* it is asked whether metaphysics is about being. The thematic overlapping of *QM I 1* and *QM VI 4* is furthermore confirmed by the fact that *QM VI 4*, just like *QM I 1*, starts with an opposition between two positions on the subject of metaphysics, ascribed to Avicenna and Averroes respectively. Why then did Scotus write two *quaestiones* on the subject of metaphysics?

The similarities between *QM I 1* and *QM VI 4* are accompanied by two remarkable differences. First, *QM VI 4* is extremely shorter than *QM I 1*, being slightly more than three pages long in the critical edition. Second, they do not maintain the same view. As a matter of fact, *QM I 1* alone seems to maintain at least two different positions: at a given point Scotus argues that the subject of metaphysics is substance, while the *quaestio* apparently ends with a defence of the view that it is God. On the other hand, *QM VI 4* definitely maintains that being is the subject of metaphysics: “*Tenetur ergo Avicenna*”; in so doing, it basically agrees with the relevant passages in Scotus' theological works. Thus, in order to understand the presence of two *quaestiones* on the subject of

⁵⁰² See [Pini 2002], [Pini 2005].

metaphysics, it is essential to clarify how they relate to each other from the points of view of chronology and doctrine. How can Scotus defend in three pages the same position he apparently rejects throughout nearly sixty pages? Is it possible to determine which text was written earlier?

It should be clear that answering these questions is not only a matter of solving a marginal issue in the interpretation of Scotus' views. Indeed, the *Questions* provide us with such rich material on the subject of metaphysics that they ought to be considered the fundamental access into Scotus' reflections on the topic. The range of considerations they offer enables us to investigate in depth into the motivations behind Scotus' doctrinal choices, and to highlight themes which do not emerge from Scotus' expositions of his "standard position" in the theological works.

Moreover, the *Questions* would allow us to detect a development in Scotus' thought if the several positions expounded there should be deemed truly distinct. This would be possible both in the sense of a passage from one *quaestio* to another (from *QM I 1* to *QM VI 4* or vice versa) and in the sense of a development internal to *QM I 1*. In this respect, it has been mentioned Pini's conclusion that the additions in *QM IV 1* were probably written after the theological works. Accordingly, we cannot rule out *a priori* the possibility that the "standard position" was eventually overcome and replaced by a new conception of the subject of metaphysics – for example, the view that God is the subject of metaphysics as defended in *QM I 1*. Let it be noticed that Scotus' "standard position" is also maintained in quite a late work such as the *Reportatio Parisiensis*. Any reconstruction of an alleged development of Scotus' views is thus intimately connected with a distinctive assessment of the possible date of composition of single sections of the *Questions*.

To conclude, the study of the *quaestiones* on the subject of metaphysics is of utmost importance to reach a full understanding of Scotus' conception of metaphysics as a philosophical science. In addition to this, it must be said that the ideas and the reasonings put in place in *QM I 1* are worth a close scrutiny for their inherent theoretical interest, regardless of the position eventually endorsed by Scotus. Accordingly, a careful analysis of *QM I 1* is to be considered a major goal for present purposes. It will be essential to understand precisely the purport of the single sections of *QM I 1*, to assess the presence of significant developments therein, and to evaluate how *QM I 1* relates to *QM VI 4*.

2. Status quaestionis

As already said, the *Questions* present us with the following scenario. The first part of *QM I 1* seems to maintain that substance is the subject of metaphysics; its second part seems to maintain that God is the subject of metaphysics; finally, *QM VI 4* and, I should add, *QM VI 1* maintain that being is the subject of metaphysics, in accordance with Scotus' theological works. This scenario has been the object of different interpretations, which I would divide into two classes.

One part of the scholarship has maintained that Scotus' statements about the subject of metaphysics are consistent with each other. More precisely, some scholars have tried to explain why both being and God may be said to be the subject of metaphysics without contradiction; Scotus' endorsement of the view that substance is the subject of metaphysics is left aside⁵⁰³. This is the approach, for example, of A. Zimmermann and L. Honnefelder⁵⁰⁴, followed by others⁵⁰⁵. Their strategy consists in drawing a distinction between two meanings of the expression "subject of science": on one hand, the word "subject" would have a strong epistemological sense; on the other, it would have an improper sense, meaning the goal of a science. Moreover, they maintain that Scotus himself clarifies the presence of an improper meaning of "subject" explicitly, connecting the goal of a science with its subject. This being the case, they continue, one may very well explain how both being *qua* being and God can be said to be subjects of metaphysics without contradiction: being *qua* being in the proper sense, God in the improper one. In other words, Scotus would not deny that metaphysics has only being *qua* being as its subject; in stating that God is the subject of metaphysics, he simply means that God is the goal of metaphysics. Moreover, it would be no coincidence that Scotus, having clarified the strong meaning of "subject" in *QM* VI 1, goes on to identify the subject of metaphysics with being *qua* being throughout *QM* VI.

The second class of interpretations, on the other hand, is characterised by a developmental point of view: scholars have maintained that Scotus' different statements on the subject of metaphysics must be ascribed to different stages of his career. If Scotus claims that being is the subject of metaphysics in one passage, but he also states on other occasions that the subject of metaphysics is God, these opposite claims are neither an inconsistency in Scotus' thought nor traceable to two distinct meanings of "subject": rather, they point to a diachronic development in his view on the subject of metaphysics. So far for the common feature of the interpretations in this second class. Going into their details, however, these interpretations diverge in many respects.

1. *Number and identity of the different positions maintained by Scotus.* Some scholars list just two different positions which would be maintained by Scotus throughout his works. For example, according to Noone⁵⁰⁶, Scotus maintained both that "being" is the subject of metaphysics and that "substance" is; Hoffmann⁵⁰⁷, on the other hand, lists "God" and "being". Other scholars, such as Demange and Wood⁵⁰⁸, believe that Scotus maintained three different positions: "God", "being", and "substance".

⁵⁰³ Perhaps because it is expounded in the middle of *QM* I 1, which then goes on to maintain that God is the subject of metaphysics.

⁵⁰⁴ [Zimmermann 1998], [Honnefelder 1979].

⁵⁰⁵ See for example [King 2003].

⁵⁰⁶ [Noone 2003].

⁵⁰⁷ [Hoffmann 2011].

⁵⁰⁸ See [Demange 2008], [Wood 2010], [Wood 2013]. See also [Pini 2014].

2. *Chronological order in which the different positions were maintained by Scotus.* According to Noone, Scotus' endorsement of the position "substance" preceded his endorsement of the position "being"; similarly, Hoffmann states that Scotus moved from the position "God" to the position "being". On the other hand, Demange and Wood believe that Scotus maintained the three positions in the following order: "substance", "being", "God". In particular, Noone and Hoffmann deem the position "being" as Scotus' final view; by contrast, the position "God" would be Scotus' last word according to Demange and Wood. In this respect, it is important to notice that Scotus definitely asserts the position "being" in his *Reportata Parisiensia*, quite a late work. Accordingly, in order to defend their view, Demange and Wood coherently suggest that the second half of *QM I 1*, where Scotus maintains the position "God", should be considered posterior to *Reportata Parisiensia*; even more, they try to substantiate such suggestion on the basis of other doctrinal aspects of the texts.

3. *Reasons behind Scotus' doctrinal developments.* Both Hoffmann and Demange point to Scotus' change of mind on the univocity of being as relevant to the question of the subject of metaphysics. However, their opinions diverge on the exact role of univocity in the development of Scotus' position. This is partly obvious due to the divergences on the chronological order highlighted above. For example, Hoffmann believes that Scotus' endorsement of the univocity of being accounts for the passage from the position "God" to the position "being"; Demange could never state the same, for he claims that the position "God" was maintained after the position "being". Less obvious, however, is the fact that Demange expressly denies the relevance of the univocity of being for the position "God". In his view, the univocity of being is only relevant as far as the positions "substance" and "being" are concerned: Scotus' endorsement of the univocity of being would be the reason behind the passage from the former to the latter.

4. *Quality of Scotus' doctrinal developments.* Wood and Demange maintain that the position "God" is not really incompatible with the position "being"; rather, they claim that the former is just a more mature and refined version of the latter. In other words, the two positions are not truly opposite to each other. By contrast, the passage from the position "substance" to the position "being" would be due to a genuine change of mind. The other scholars mentioned so far do not try to attenuate the significance of the developments in Scotus' views; accordingly, we must assume that they see the positions they individuate in Scotus' development as truly distinct.

The interpretations of the first class, with their distinction between subject and goal of metaphysics, presuppose a structure of science which, in the case of metaphysics, is actually made explicit in some passages of Scotus' works. For example, in the *Reportatio Parisiensis* Scotus establishes that being is the subject of metaphysics, on one hand, and that metaphysics deals with God as its final cause, on the other. Nonetheless, the textual evidence provided by the critical edition of Scotus' *QM* – which, it must be said, postdates Zimmermann's and Honnefelder's works – is

sufficient to show the presence of a chronological stratification in the composition of *QM I 1*. Since the different stages of composition of the *quaestio* correspond to doctrinal variations on the question of the subject of metaphysics, *QM I 1* is a definite sign of a development in Scotus' views. The exact reconstruction of this development is difficult to outline, though, especially as far as the relation of *QM I 1* with other texts is concerned.

In what follows, I shall argue for the following points:

0. The interpretations of the first class are untenable. In particular, Scotus never distinguishes between two meanings of "subject of science". The two statements "God is the subject of metaphysics" and "being is the subject of metaphysics" employ the term "subject" in its proper, epistemological meaning. Rather, the presence of a development in Scotus' views is beyond doubt. The two statements mentioned above belong to different stages of the development in question.
1. Scotus maintained three different positions on the subject of metaphysics, identifying it with God, with being, and with substance at different stages of his career.
2. The three different positions were maintained by Scotus in the following chronological order: "substance", "God", "being". In particular, Scotus' final position is that being *qua* being is the subject of metaphysics.
3. The endorsement of the univocity of being is not the reason why Scotus abandoned his first position, namely "substance" (it cannot be, according to the chronological order proposed above). Moreover, the univocity of being is not the reason why Scotus abandoned the position God either. In other words, the univocity of being does not itself explain the transition from "God" to "being". Yet the univocity of being plays an essential role in Scotus' final endorsement of the position "being". In Scotus' view, the univocity of being is a necessary, though not sufficient, condition for the position "being" to be held. More precisely, it would be a sufficient condition to prefer the position "being" over the position "substance"; it is not sufficient to prefer "being" over "God".
4. The position "being" and the position "God" are truly distinct. It is not the case that one of them is a more refined version of the other. Rather, when Scotus holds the position "being" he has realised that the position "God" is not tenable at all.

Now, in my description of the development of Scotus' thought there are two transitions to be explained: the shift from "substance" to "God" and the shift from "God" to "being". As said, the univocity of being, which is necessary to hold the final position "being", does not itself explain any of the two transitions. I think it is possible to identify precisely the reasons behind the two transitions, and thus to understand the development of Scotus' views properly. Most importantly, I believe that, once the reasons behind the two transitions are individuated, not only is the chronological order "substance, God, being" confirmed, but also the relative chronology of *QM I 1* and other texts on the

subject of metaphysics is clarified. In particular, I shall argue that *QMI* 1 is entirely prior to the other *quaestio* on the subject of metaphysics, namely *QM* VI 4.

3. The text of *QMI* 1

In this section I report the text of Scotus' *QM* I 1 as it is found in the critical edition of the work⁵⁰⁹. The passages which are considered *additiones* by the editors are included within the following signs: >>> [text] <<<.

De isto autem obiecto huius scientiae ostensum est prius quod haec scientia est circa transcendentia; ostensum est autem quod est circa altissimas causas. Quod autem istorum debeat poni proprium eius obiectum, variae sunt opiniones. Ideo de hoc quaeritur primo utrum proprium subiectum metaphysicae sit ens in quantum ens (sicut posuit Avicenna) vel Deus et Intelligentiae (sicut posuit Commentator Averroës.)

[1] Quod neutrum, probatio:

De subiecto scientiae oportet notum esse 'si est' et 'quid est', secundum Philosophum I *Posteriorum* a et infra cap. illo "Difficile autem est nosse". Sed in ista scientia nec de Deo notum est si est vel quid est, nec de ente quid est; ergo etc.

[2] Minor habet tres partes. Probatio primae dupliciter:

Primo, sicut probat eam Avicenna, I *Metaphysicae* cap. 1 b, 'quia Deum esse non est per se notum', cum concludatur ex effectibus – VIII *Physicorum*, et XII *Metaphysicae* – 'nec est desperatum cognosci, quia signa habemus de eo'. Et etiamsi sit desperatum, tunc non praecognoscitur nec inquiritur eius esse in alia scientia, nec morali nec doctrinali, et sic de aliis. Igitur inquiritur eius esse in ista scientia.

[3] Secundo probatur eadem pars minoris sic: in II huius, probat Aristoteles statum esse in causis efficientibus. Probat igitur primam causam efficientem esse; illa est Deus.

[4] Probatio secundae partis minoris dupliciter: tum quia Deus non habet quid, secundum Avicennam VIII *Metaphysicae*, cap. illo "Opus est ut repetamus. Sed primus non habet genus nec quiditatem, nec definitionem, qui est altissimus et gloriosus"; – tum quia si haberet quiditatem, illa non est praecognita in hac scientia, quia secundum Philosophum II huius cap. 1: "Sicut oculus nycticoracis ad lumen diei, sic animae nostrae intellectus ad ea quae sunt omnium naturae manifestissima".

[5] Probatio tertiae partis minoris dupliciter: tum quia ens est aequivocum, sicut dicit Porphyrius cap. 'De specie': "Si quis omnia entia vocet, aequivoce nuncupabit" (et de hoc amplius infra, quando quaeritur de univocatione entis, IV huius); – tum quia si sit univocum, est communissimum, nec habens genus, nec differentiam, et per consequens nec definitionem (definitio enim indicat quid).

[6] Item, ad principale: omne subiectum habet passiones de ipso demonstrabiles, secundum Philosophum I *Posteriorum*, ubi supra; nec Deus nec ens est huiusmodi; ergo etc.

[7] Probatio primae partis minoris: tum quia passio est extra essentiam subiecti; nihil est in Deo quod non est eius essentia; – tum quia Avicenna VIII *Metaphysicae*, ubi prius: "Primus non habet qualitatem nec quantitatem" etc., "et non potest fieri demonstratio de eo".

[8] Probatio secundae partis minoris: tum quia, ut prius, passio differt essentialiter a subiecto; ens est de essentia cuiuslibet; – tum quia passio praedicatur denominative de subiecto, et subiectum de passione non nisi per accidens; ens praedicatur in quid de quolibet, ex IV huius.

[9] Item, ad principale: subiectum cuiuslibet scientiae habet propria principia et partes secundum Philosophum I *Posteriorum*, cap. illo "Certior autem est scientia"; nec Deus nec ens est huiusmodi; ergo etc.

[10] Prima pars minoris patet, cum Deus sit primus et simplicissimus. Probatio secundae partis: quia si ens, in quantum ens, haberet principia, igitur quodlibet ens haberet principia, sicut arguit Philosophus I *Priorum* cap. "De reduplicatione": si iustitia esset bonum in eo quod bonum, iustitia esset omne bonum.

⁵⁰⁹ B. Ioannis Duns Scoti *Quaestiones super Libros Metaphysicorum Aristotelis, Libri I – V*, The Franciscan Institute, St. Bonaventure University, St. Bonaventure N. Y., 1997.

[11] Ad oppositum pro ente est Aristoteles IV huius in principio, ut videtur manifeste ex intentione, quod “aliqua scientia speculatur ens in quantum ens”, et illa non est aliqua particularis. Avicenna libro I *Metaphysicae* cap. 2 d: “Primum subiectum huius scientiae est ens in quantum ens”.

[12] Ad oppositum pro Deo est Commentator I *Physicorum* commento ultimo, dicens: “Qui dicit quod prima philosophia nititur probare entia separabilia esse, peccat: genus enim entium separatorum esse non declaratur nisi in scientia naturali. Haec enim entia sunt subiecta primae philosophiae. Et impossibile est aliquam scientiam probare suum subiectum esse, sed concedit ipsum, aut quia est manifestum per se, aut quia est demonstratum in alia scientia. Unde peccavit Avicenna qui dixit philosophum primum demonstrare primum principium esse”.

[13] Ad quaestionem istam patet quod sunt opiniones.
Una est Commentatoris, quod substantiae separatae, scilicet Deus et Intelligentiae, sunt hic subiectum.

[14] Quod confirmatur primo auctoritatibus Aristotelis. Hic in proemio probat quod sapientia est speculativa circa prima principia et primas causas ex descriptione sapientiae. Et infra, cap. 3: “Haec scientia maxime divina est, quia est divinorum”. Et infra in VI huius cap. 1, distinguit Aristoteles tres partes scientiae speculativae, dicens: “Physica circa inseparabilia et mobilia; mathematica circa immobilia et inseparabilia; prima vero philosophia circa separabilia et immobilia”, cuiusmodi sunt substantiae separatae. Si igitur haec distinctio scientiarum speculativarum sit conveniens, videtur quod sit circa propria subiecta ipsarum. Quia secundum Philosophum III *De anima*: “Scientiae secantur ut res”, hoc est, sicut subiecta considerata in scientiis.

[15] Item, ibidem in VI, vocat hanc scientiam ‘theologiam’, et probat dupliciter: “quia si alicubi divinum existit, in tali natura existit”, hoc est, in immobili et separabili, quam dixit istam scientiam considerare.

[16] Secundo probat sic: quia “honorabilissimam scientiam oportet circa honorabilissimum genus esse”; haec est honorabilissima, ut probatum est in I, et genus substantiarum separatorum honorabilissimum; ergo etc.

[17] Praeterea, confirmatur positio Commentatoris ratione sic:
Substantiae separatae non sunt nobis omnino ignotae, cum de ipsis “multa signa habeamus”; igitur cognitio earum traditur in aliqua scientia; non naturali vel mathematica, igitur in ista, cum sint tantummodo tres partes scientiae speculativae, ex VI huius.

[18] Item, omnis scientia considerans aliqua multa attributa ad aliquid unum primum, maxime considerat illud primum tanquam proprium subiectum ad quod alia attribuuntur, ut dicit Philosophus IV huius cap. 1: “Ubique primi proprie est scientia, ex quo alia dependent, et propter quod dicuntur”; sed prima causa est ad quod omnia entia attribuuntur; igitur de primo maxime proprie est ista scientia, ut de subiecto.

[19] Secundum istam opinionem respondetur ad rationes.
Ad primam: quod minor est falsa quoad utramque partem. De Deo enim naturaliter et secundum se notum est si est. Et ad probationem in contrarium, dicitur quod Deum esse desperatum cognosci non est, nec quaesitum in alia scientia, nec in ista secundum se, quamvis quoad nos fiat notum ex effectibus, sicut procedit ratio. Potest enim aliquid secundum se notius, fieri nobis notum ex aliis nobis notioribus.
Per hoc ad secundam probationem patet. Illa enim demonstratio in II non procedit nisi ab effectu, sive ille effectus sit medium naturale sive metaphysicum. – Aliter ad secundam probationem dicitur quod in II huius non ostenditur ‘esse’ de Deo, sed ostenditur status de causis efficientibus. Et quamvis haec duo convertantur, tamen unum potest esse praecognitum in scientia et aliud ostensum, sicut definitio et passio subiecti convertuntur, et tamen unum est medium demonstrandi aliud.

[20] Aliter videtur Commentator respondere, commento ultimo I *Physicorum*, quod Deum esse non ostenditur nisi in scientia naturali. Et si ad hoc ostendendum fiat aliqua ratio in ista scientia, hoc non est nisi assumendo aliqua ex ostensis in scientia naturali, sicut per expositionem eius patet II huius, commento 6, ubi exponit demonstrationem Aristotelis de statu in causis efficientibus, ubi dicit: “Declaratum est in naturalibus quod omne motum habet motorem”, et totam rationem pertractat de movente et moto.
Per hoc patet ad primam probationem, quia Deum esse quaesitum est in scientia naturali, non in ista. – Et ad secundam: quia illa demonstratio II huius procedit ex medio naturali, videlicet ex ratione moventis et moti, non autem ex medio metaphysico.

[21] Tertio modo responderi potest ad istas duas probationes quod bene potest aliqua scientia demonstrare suum subiectum esse, et hoc a posteriori, sicut in libro *Elenchorum* demonstratur syllogismum sophisticum esse per simile. Et similiter Priscianus libro *Constructionum*, ostendit orationem constructam esse per similem modum habendi syllabarum ad dictiones, et dictionum ad orationes. Tamen nulla scientia demonstrat suum subiectum esse demonstratione propter quid et a priori.

[22] Ista tertia responsio concordat cum prima; declarat enim secundam partem eius. Similiter, non videtur facere nisi ad secundam probationem. Unde cum requiratur praecognitio subiecti ante totam scientiam, – quam praecognitionem nulla responsio ponit nisi prima –, sola illa est sufficiens ad utramque probationem. Commentator enim tantum fugit, si ponit Deum esse tantum nobis praecognitum ex aliquo medio naturali. Si autem ponit Deum esse simpliciter praecognitum ex tali medio, et hic praesuppositum in quantum sit cognitum, igitur scientia naturalis simpliciter erit prior ista, quia notissimo hic est aliquid ibi simpliciter notius.

[23] Ad aliam partem minoris de ‘quid est’ dici potest quod licet non habeat “quid” quod exprimitur per definitionem, quia tale ‘quid’ est limitatum (cum omnis differentia definiens habeat differentiam oppositam – omne autem habens oppositum est limitatum), tamen sicut Deus habet essentiam illimitatam, ita habet ‘quid’ illimitatum. Primo modo potest exponi auctoritas Avicennae praeallegata, cum dicat “nec quiditatem” etc., et subdit: “non habet definitionem”, et hoc loquendo de definitione proprie dicta, quae est ex genere et differentia, quae a Deo removetur superius in eodem capitulo. Per hoc patet ad primam probationem.

[24] Ad secundam probationem, sicut prius de ‘si est’ secundum primam responsionem: esse Dei est naturaliter praecognitum in ista scientia secundum se, licet non quoad nos; ita de quid est. Potest tamen utrumque a posteriori in hac scientia manifestari, sicut dicit tertia responsio. Illa autem propositio II huius “sicut oculus nycticoraci” etc. concludit de notitia quiditatis quoad nos, non simpliciter. Utrum tamen illa similitudo debet intelligi quoad impossibilitatem, sicut quidam exponunt, vel quoad difficultatem, sicut dicit Commentator, dicetur loco suo. Unde sicut ipse exponit eam, non est multum hic contra opinionem eius.

[25] Ad secundam rationem principalem dicitur quod Deus habet multas proprietates, ut esse appetibile, esse immobile, esse perpetuum, et primum movens et huiusmodi. Haec autem posterius aliquo modo concipiuntur secundum se quam essentia Dei absolute, quia dicunt respectum ad extra.

[26] Ad primam probationem: quod non oportet semper proprietatem esse aliud essentialiter ab illo cuius est, licet hoc semper sit in creaturis, ubi, propter imperfectionem, habens non est quidquid habet; unde est in eo compositio actus cum potentia. In Deo autem omnes perfectiones, existentes illimitatae, sunt idipsum quod essentia eius, propter summam simplicitatem, tamen quaelibet ratione differt ab essentia. Et talis differentia sufficit ibi inter proprietatem et subiectum, sicut in creaturis differentia realis. – Ad auctoritatem Avicennae “non est de Deo demonstratio”, potest exponi: quia non per causam priorem. Vel sic: non per definitionem eius quae sit medium, quia “non habet definitionem”.

[27] Ad tertiam rationem principalem. Ad maiorem dicendum quod non oportet quodlibet subiectum habere principia priora se, sed principia proprietatem per quae suae proprietates sibi inhaereant, si de ipso sit demonstratio propter quid. De Deo solummodo est demonstratio quia. Et ideo loco talium principiorum sumuntur effectus pro medio, per quos concludimus perfectionem Dei de Deo tanquam per medium notius nobis.

[28] Quod autem dicit Philosophus subiectum habere principia et partes, verum est ut in pluribus, non tamen est de necessitate subiecti scientiae. Posset enim forte de unitate esse demonstratio mathematica, quamquam sit primum in genere suo et indivisibile, et ita in illo genere nec habens principia nec partes.

[29] Aliter potest dici quod ‘subiectum scientiae debet habere principia’ intelligendum est de principiis complexis, cuiusmodi sunt praemissae demonstrationis. De omni enim subiecto scientiae potest aliquid probari in aliqua propositione quae potest sumi pro praemissa in demonstratione de tali subiecto. Et de tali principio primo oportet praecognosci quia est, hoc est, quia verum est, I *Posteriorum a*. Et infra, cap. illo “Non est ex alio genere”, enumerat subiectum et passionem. Et prius dicit: “Unum autem dignitates”. Et idem vult cap. illo “Difficile”: “Omnis scientia demonstrativa circa tria est: genus et quae communes dicuntur dignitates et tertium passiones”. Talia autem principia possunt habere effectus illius subiecti de quo est demonstratio pro terminis suis. Sufficit enim ad tale principium quod statim cognoscatur cognitio terminis. Et tale principium potest esse aliquod ad demonstrandum aliquid de Deo.

[30] Contra istam positionem. Secundum Philosophum I huius in proemio: sapientia est certissima scientia; certior autem est scientia ‘propter quid’ quam ‘quia’, ex I *Posteriorum*; ergo metaphysica, quae est proprie sapientia, secundum Philosophum hic in I, est scientia propter quid. De Deo autem non est scientia propter quid ut de primo subiecto, et nulla scientia considerat Deum ut causam, cum nihil causat necessario secundum veritatem, – quidquid sit de Aristotele; igitur neutro modo consideratur Deus in aliqua scientia, nec ut effectus, nec ut principium complexum, certum est; igitur nullo modo, ut concedit responsio ad tertiam rationem.

[31] Et hoc probatur: certum est quod nihil de Deo scitur per causam priorem ipso. Si autem causa accipiatur pro medio respectu alicuius concludendi de Deo, aut illud concludendum est proprietas absoluta Dei, ut sapientia, potentia, aeternitas, immutabilitas et huiusmodi; aut dicens respectum ad extra, ut appetibile, primum movens, prima causa et huiusmodi. Sive sic sive sic, oportet illud demonstrabile de Deo esse idem essentialiter ei, eo quod nihil aliud est verum de ipso. Sed illud quod est idem essentialiter Deo, non habet aliquid aliud a se prius naturaliter ipso – causa autem est aliud a causato et prius naturaliter ipso –, igitur nihil quod est in Deo potest de ipso aliquo modo per causam ostendi, nec

per causam quae sit causa in essendo, nec inhaerendo, quia neutro modo potest esse aliud ab ipso et prius naturaliter. Sed si aliquid tale demonstratur de Deo per effectum, non est demonstratio propter quid, sed quia, ex I *Posteriorum*.

[32] >>> Sed ista ratio non movet. Si enim prius naturaliter et aliud potest esse medium sciendi posterius naturaliter et aliud, hoc non est in quantum ‘hoc aliud’, quia hoc accidit, sed in quantum ‘hoc’, sicut est aliud, ita prius naturaliter et prius notum secundum se, et illud posterius. Sed ita est invenire in proprietatibus vel attributis diuinis, igitur etc.

[33] Alia responsio: una proprietas Dei est prior alia ratione. – Contra: haec differentia non sufficit ad rationem causae, nec ad prioritatem, nec ad medium demonstrationis. Prima duo patent ex dictis; tertium propter petitionem, quia idem respectu sui diversimode consideratum potest esse prius et posterius ratione. <<<

[34] Item contra Commentatorem: Deo et Intelligentiis non videtur esse aliquid commune univocum, quia tunc illud in eis distingueretur differentiis, et ita Deus posset definiri. Igitur non potest una scientia esse de Deo et de Intelligentiis, ut de subiecto, quia “una scientia est unius generis”, I *Posteriorum* cap. illo “Certior” etc.

[35] Item, aliud subiectum ponendum est in metaphysica, sicut ostenditur etiam per Commentatorem quando tangitur opinio Avicennae. Non igitur Deus, quia non possunt esse duo prima subiecta eiusdem scientiae.

[36] Ad illa igitur quae videntur facere pro Commentatore solvenda, notandum quod scientia non solum dicitur esse circa aliquid tanquam circa subiectum principaliter consideratum, sed etiam circa causas subiecti. Sicut in *Physica* tractatur de natura, quamvis nec Commentator nec Avicenna ponat naturam esse subiectum illius scientiae, sed aliquid cuius natura est principium. Similiter, in libro *De anima* tractatur de definitione animae et passionibus et partibus eius, quamvis subiectum illius scientiae ponatur corpus animatum cuius anima est principium. Similiter, in logica tractatur de multis quae sunt principia syllogismi, quamvis syllogismus ponatur ibi subiectum principale. Et in libro *Perihermenias* tractatur de nomine et verbo et oratione, quae sunt principia enuntiationis, quae ponitur subiectum illius libri. Ita in aliis.

[37] Consimiliter in proposito: circa causas altissimas est consideratio istius scientiae tanquam circa principia subiecti, non autem tanquam circa subiectum principale. Unde habetur in principio VI huius: “Principia et causae quaeruntur entium in quantum entia”. Et Philosophus, in principio IV huius, ostendit hanc scientiam esse circa ens ex hoc quod est circa primas causas, quia illae causae sunt causae secundum se effectus primi quod est ens in quantum ens.

[38] Contra istud: Intelligentiae nihil producant nisi per motum. Igitur non habent rationem causae nisi moventis proprie dictae. Igitur non dicuntur considerari ut causae nisi solum in scientia naturali.

[39] Item, tantum per causam necessariam in causando scitur aliquid de effectu. Deus nullius effectus est talis causa, sed tantum voluntaria, libere agens.

[40] Primum argumentum potest concedi. – Item, secunda ratio accipit falsum secundum intentionem Philosophi qui posuit Deum esse agens ex necessitate naturae, ut dicit Rabbi Moyses.

[41] >>> Contra hoc: in hoc I inferius dicitur: ‘Si Deus est invidus, omnes reliqui ab ipso erunt infortunati’. Hoc non sequitur nisi bonum reliquorum sit ab ipso voluntarie agente. Si enim necessario agit, quantumcumque invidet, aget. <<<

[42] Aliud est notandum quod substantiae immateriales et immobiles non pertinent ad considerationem alicuius scientiae particularis. Non naturalis, quia non sunt mobilia; nec mathematicae, quia non quanta. Sed pertinet earum consideratio ad aliquam scientiam superiorem, cuius consideratio abstrahit a motu et a quanto. Unde in ista scientia considerantur non solum tanquam subiecti causae, sed tanquam principales partes subiecti, quae sunt secundum esse abstracta, illa abstractione quae propria est huic scientiae, quae etiam abstractio secundum rationem competit aliis consideratis in hac scientia. Consideratur enim quidquid hic consideratur, non in quantum ‘quantum’, nec in quantum ‘mobile’; et ita quodlibet consideratum abstrahitur, secundum considerationem, et a quanto et a motu. Et per consequens praecise considerantur hic illa quae secundum esse abstrahuntur ab utroque; huiusmodi sunt substantiae separatae.

[43] Secundum hoc patet ad auctoritates Philosophi.

Dicitur enim haec scientia esse circa altissimas causas et divina, quia de Deo non tanquam de subiecto sed tanquam de causa subiecti; ita quod de Intelligentiis est tanquam de principalibus partibus subiecti et non causis, quia non causant nisi movendo; de Deo autem tanquam de causa et non de parte subiecti, quia in nullo univocatur cum aliis.

[44] >>> Contra: si Deus nihil causat, secundum intentionem Aristotelis, nisi movendo, igitur non considerabitur hic de Deo, ut de causa.

[45] Responsio: Deus est causa substantiarum separatarum non per motum; et omnium aliorum, non tantum in quantum mobilia vel quanta, sed in quantum entia, licet non sine motu, secundum Aristotelem. Intelligentia nullius est causa nisi in quantum mobile.

[46] Notandum vero quod in quaestione 8 infra, qui diceret partem affirmativam illius quaestionis quod tantum ad metaphysicum pertinet considerare quidditates rerum etiam in particulari, deberet dicere quod non tantum hic consideratur Deus ut causa, sed angelus, sol, ignis, et omnia agentia, si sint causa alicuius secundum entitatem. Quod quidem oportet ponere, quia aliter nihil causant, ut arguitur in illa quaestione de cognitione, sic arguo de creatione.

[47] Responsio: Deus in quolibet causat entitatem; quodlibet aliud agens talitatem entitatis. De hoc alibi.

[48] Si teneatur in quaestione 8 pars negativa, tunc nulla causa particularis entitatis est hic consideranda, sicut nec hoc ens secundum quod hoc ens. Sed sicut tantum consideratur hic ens secundum quod ens in communi, ita tantum illud consideratur pro causa subiecti quod est causa entis in communi; illud est tantum Deus. Hoc tenes nisi forte ponas Intelligentias non tantum in quantum entia, sed in quantum Intelligentias hic considerari, ut praedictum est ibi: 'Aliud est Notandum' etc.

[49] Si enim de Intelligentiis, in quantum Intelligentiae, est aliqua scientia possibilis, et non ista – nec naturalis, nec mathematica ut patet –, igitur insufficiens est divisio Philosophi, in VI huius, scientiae speculativae in tria membra. Et ita videtur quod Intelligentiae, in quantum huiusmodi, pertineant ad considerationem metaphysicae.

[50] Sed contra: ens secundum se ita abstrahit ab immaterialibus sicut a materialibus; ergo ista scientia, quae per se est de ente in quantum ens, non magis est de istis secundum propriam rationem quam de illis.

[51] Confirmatur: quia omnis conclusio propria huius scientiae est praemissa ita ad concludendum de immaterialibus sicut de materialibus; ergo ista subalternat sibi aequaliter utramque scientiam. Nec valet illa ratio quae ponitur prius ibi 'Aliud est notandum', quia ista scientia, sicut considerat aliqua in quantum abstracta a materia, ita etiam in quantum abstracta ab immaterialitate; ergo 'considerabit illa quae in existendo habent hanc abstractionem ab immaterialitate' non sequitur.

[52] Confirmatur hoc: quia substantia, quam tu ponis subiectum, dividitur in materialem et immaterialem, sicut in species oppositas; scientia autem de genere aequaliter videtur esse de duabus speciebus proximis.

[53] Conceditur secundum illud quod tenes ad 8 quaestionem, quod non plus est haec scientia de Intelligentia in quantum Intelligentia quam de igne in quantum ignis, nec ut de causa, nec ut de subiecto, quia secundum te de neutro. Sicut, secundum oppositum quaestionis 8, de utroque est utroque modo si utrumque causat aliquid in quantum ens.

[54] Sed quomodo tunc salvas divisionem in VI de triplici scientia speculativa?

[55] Item, quomodo est circa altissimas causas, si tantum est circa Deum ut circa causam? – Responsio: Deus dicitur 'causae' propter multiplicem rationem causalitatis in ipso.

[56] Ad Philosophum patet responsio inferius de divisione scientiarum speculativarum. Tenet enim de illis quae a nobis per rationem naturalem possunt tradi, non de omnibus possibilibus ex parte naturae scibilium.

[57] Evasio: quod scientia de genere est de prima specie sub propria ratione, non de secunda specie. Tunc haec est de Intelligentia ut de prima specie substantiae, non ut de causa. <<<

[58] Ad auctoritatem primam VI huius dicitur quod secundum Philosophum I *Posteriorum* cap. illo "Certior autem": "Scientia altera est ab altera, quorumcumque principia neque ex eisdem neque ex alteris sunt". Distinguuntur ergo scientiae non solum penes diversa subiecta, sed etiam penes diversa principia. Et forte haec distinctio per principia est prior et essentialior, quamquam per subiecta aliquando fiat distinctio, sicut probat auctoritas illa III *De anima*. Sic igitur potest intelligi illa distinctio trium scientiarum speculativarum, VI huius, quod licet duarum, naturalis scilicet et mathematicae, ponantur ibi subiecta distinguentia – vel forte principia – tamen huius scientiae ponuntur ibi principia, non subiecta, per quae ab aliis distinguuntur.

[59] Aliter potest dici quod ista scientia considerat omnia illa quae et aliae scientiae particulares, licet sub ratione communiore et magis abstracta. Aliqua tamen considerat quae in aliis non considerantur, quibus convenit tanta abstractio in essendo quanta non convenit consideratis in aliis scientiis. Et ideo quando distinguitur haec scientia ab aliis, convenienter hoc fit per illa considerabilia in quibus non convenit cum aliis scientiis, sed in quibus distinguitur. Unde haec scientia est "circa separabilia et immobilia", non tanquam circa subiecta, sed tanquam circa principales partes subiecti, quae non participant rationem subiecti alicuius alterius scientiae.

[60] Respondetur tertio modo sic: haec scientia est circa "immobilia et separabilia". Hoc est, circa quaecumque sit, circa illa est considerata sub istis rationibus, abstractione scilicet a motu et a materia naturali quae est principium generationis et corruptionis. Sicut mathematica dicitur esse circa immobilia, non quia quanta in essendo sint omnino immobilia, sed quia scientia mathematica considerat illa sub ratione priori, abstrahendo a motu.

[61] Ad alias auctoritates VI patet quod haec scientia potest dici theologia, non a subiecto sed a causa, – sicut naturalis scientia dicitur a natura, quae non est subiectum illius scientiae, sed principium subiecti.

[62] Ad primam rationem patet quod substantiae separatae hic considerantur et qualiter. Quia non ut causae, sed tanquam principales partes subiecti quae sic sunt abstracta in essendo, sicut omnia hic considerata abstrahuntur secundum considerationem.

[63] Ad aliam rationem. Ad maiorem dici potest quod scientia, quae est de multis attributis ad unum primum, maxime est de illo primo ut de subiecto si illud primum habet condiciones requisitas ad subiectum in tali scientia – puta si scientia sit propter quid et tale primum habeat aliquid demonstrabile de eo per causam. Ita non est in proposito, cum haec sit scientia propter quid, et de Deo nihil per causam demonstratur.

[64] Confirmatur illa ratio: quia quando aliqua attribuuntur ad alia, ut ad prius et posterius, simpliciter prima consideratio est de illis ut attribuuntur ad simpliciter primum. Accidentia omnia attribuuntur immediate ad substantiam, sed ad Deum ut ad prius, quia et ipsa substantia-genus attribuitur ad Deum; ergo simpliciter prima consideratio de entibus est de illis ut attribuuntur ad Deum, non ad substantiam. Ergo Deus est simpliciter primum subiectum.

[65] Responsio: simpliciter prima consideratio est de entibus, in quantum attributa ad Deum, non ut subiectum (quia non potest habere condiciones subiecti scientiae propter quid), sed ut ad causam.

[66] Aliter arguitur: simpliciter primum, cui omnia attribuuntur, est Deus; igitur illud est subiectum primae scientiae.

[67] Responsio: sequeretur si haberet alias condiciones subiecti scientiae. Sed quid sit illud primum ad quod omnia alia attribuuntur, quod sit hic ponendum subiectum principale, dicitur in consequentibus. Et Philosophus in IV, ubi allegatum est, concludit statim: “Ergo si hoc est substantia, substantiarum oportet principia et causas habere philosophum”. Unde illud primum ponit substantiam, non Deum. Et idem habetur in principio VII.

[68] Alia est opinio Avicennae quod primum subiectum huius scientiae est ens in quantum ens. Hoc videtur Philosophus probare in principio IV huius: “Est scientia quaedam” etc., ubi secundum Commentatorem intendit stabilire subiectum istius artis, ad quod innuitur ibi talis ratio: quia metaphysica considerat primas causas, ut probatum est in I huius, ideo debet considerare effectum secundum se primarum causarum. Primae autem causae sunt causae secundum se entium in quantum entia; ergo ens in quantum ens consideratur hic tanquam subiectum.

[69] Item, VI huius, postquam distinxit tres partes scientiae speculativae, movet dubitationem: “Utrum prima philosophia sit universalis aut circa aliquod genus”. Et videtur solvere quod universalis. Et in fine solutionis dicit: “De ente in quantum ens, huius erit utique speculari”.

[70] Item, ibidem dicit: “Si non est substantia altera praeter natura consistentes, tunc physica erit prima scientia”, quia physica esset tunc de omnibus entibus, sicut nunc est de omnibus naturalibus, quia tunc omnia entia essent naturalia. Sed nunc est ita de omnibus naturalibus quod primum subiectum eius est aliquod commune omnibus naturalibus, et non aliquod primum ad quod omnia alia attribuuntur, sicut patet per Avicennam I *Metaphysicae*, cap. 2 et I *Physicae* suae cap. 1, et Commentatorem IV huius, commento 1, et secundum alios loquentes de subiecto. Subiectum igitur primae scientiae est communissimum, alioquin non videtur valere consequentia Aristotelis.

[71] Item, hic dicit Commentator in prooemio III huius: “Subiectum utriusque scientiae est ens simpliciter”, huius scilicet et scientiae disputativae.

[72] Item, ad hoc videtur esse ratio: tum quia oportet esse aliquam scientiam per se considerantem communissima, sine quibus non possunt particularia cognosci. Tum quia passiones hic consideratae – puta unum et multa, potentia et actus, et similia – non videntur esse alicuius determinati primo, sed cuiuslibet in quantum ens. Illud autem videtur primum esse subiectum et proprium cuius primo sunt passiones quae per se considerantur in scientia.

[73] Item, si ista scientia esset de aliquo genere determinato, quod quidem genus haberet aliquid superius ad ipsum, tunc alia esset scientia superior et prior ista; consequens falsum ex VI huius. Probatio consequentiae: quia illud superius haberet aliquam passionem demonstrabilem de ipso in alia scientia. Ergo eadem passio esset demonstrabilis de subiecto illius scientiae, accipiendo pro medio illud cuius primo est. Et ita illa scientia de subiecto communiori demonstraret aliquid tanquam conclusionem, quod acciperetur hic pro principio, et ita illa scientia prior et superior ista.

[74] Secundum opinionem Avicennae ad argumenta responderi potest. Ad primum, quod minor est falsa. Ad probationem, cum arguitur de aequivocatione entis, hoc videtur negandum secundum Avicennam I *Metaphysicae* cap. 5, ut prius allegatum est in lectione ibi: “Nunc propositio ad propositum est applicanda” et cap. 2 *d*. Et ad auctoritatem Porphyrii et consimiles pro alia parte, respondetur in IV quando quaeretur de aequivocatione entis.

[75] Et ad aliam probationem, cum dicitur ‘ens non habet quid quia est transcendens’, – responsio: hoc concluderet aequaliter de omni generalissimo, quia nullum generalissimum habet quiditatem proprie dictam. Tamen quodlibet habet quid; tum quia habet essentiam; tum quia alias non praedicaretur in quid de aliquo. Unde probatio illa est insufficientis, scilicet ‘si non habet definitionem proprie dictam, non habet quid’; non sequitur nisi de quiditate speciei, cuius proprie est definitio.

[76] Ad aliam rationem responsio: ens in quantum ens potest habere passionem aliquam quae est extra essentiam eius in quantum est ens. Sicut esse unum vel multa, actu vel potentia, est extra essentiam cuiuslibet in quantum est ens sive quid in se. Tamen ens, acceptum secundum quamcumque rationem generaliter, praedicatur de quolibet ‘in quid’, et est de essentia cuiuslibet.

[77] Per hoc patet ad aliam rationem, quia ens praedicatur ‘in quid’ de quolibet accepto ut quid est, non tamen accepto secundum quamcumque rationem, secundum quam est passio entis.

[78] Ad tertiam rationem dicendum: cum dicitur ‘principia entis in quantum ens’, non intelligitur ly ‘in quantum’ reduplicative ita quod denotet causam, sed specificative, ut is sit sensus: entis in quantum ens, id est, entis secundum suam entitatem.

[79] >>> Sicut dicimus ‘hoc videtur in quantum album’, hoc est, secundum suam albedinem. Consequentia autem non valet ab ‘in quantum’ ad ‘universale’ nisi quando tenetur reduplicative. Entia enim non solum sunt causata secundum aliqua posteriora ipsa entitate, sed etiam secundum suam entitatem, ita quod ‘in creatis entitas est primum causatum’. – Per hoc tenet ratio in principio IV: “Quoniam autem”.

[80] Vel aliter tenet, quia hic consideratur causa entis in communi, scilicet Deus, cuius primus effectus est esse. Et nota quod primae causae sciendi sunt primae propositiones immediatae. – Alio modo primae causae, non tantum sciendi sed essendi, dicuntur media in demonstratione, quae causant passionem in esse et in cognosci de subiecto. – Alio modo dicuntur causae essendi, non tamen forte proprie sciendi aliquid de subiecto quia non sunt medium in demonstratione, sed principia intelligendi subiectum quia pertinent ad ‘quid’ subiecti. Ita quod intelligendo illud ‘quid’, illae causae intelliguntur sicut intrinsecae illi quiditati (ut materia vel forma); vel extrinsecae: illae prius intelliguntur subiecto, sed non intelliguntur intra quiditatem subiecti.

[81] Haec scientia est circa primas causas primis duobus modis, quia illi duo modi non differunt nisi penes totum et partem, propositionem et terminum. Et de communissimis fiunt propositiones primae, et communissima sunt prima media in demonstratione. Isto modo entis in quantum ens sunt principia, tenendo ‘in quantum’ reduplicative etiam licet ens sit univocum ad omnia.

[82] Aliis duobus modis non est ista scientia circa primas causas entis, in quantum ens tenetur reduplicative, quia non omnis entis sunt causae extrinsecae, ut patet; nec intrinsecae, quia non simplicium; sed sic oportet ‘in quantum’ teneri specificative.

[83] Ubi notandum quod quattuor causae, in quantum quaelibet in suo genere dat esse – circumscribendo rationem motus et mutationis –, pertinent ad metaphysicum:

Materia et forma in quantum sunt partes essentiae. Efficiens in quantum dat esse, circumscribendo motum – licet enim non ageret nisi movendo, tamen ratio dantis esse prior est ratione moventis. Finis in quantum res secundum sui entitatem ad illud ordinatur – licet non possit illud attingere nisi per motum vel operationem; prior tamen est ratio ordinis secundum esse quam secundum operationem. <<<

[84] Aliter dicitur ad hoc, quod cum dicitur ‘entis in quantum ens sunt principia’, non intelligitur nisi de ente creato. Et si concludatur ‘ergo cuiuslibet entis talis sunt principia’, nihil mali accidit de tali ente.

[85] Contra responsionem ad primum. Supponatur quod ens non possit habere conceptum communem ad decem genera propter auctoritates Philosophi et rationes quae tanguntur in principio IV. Tunc cum unius scientiae sit unum subiectum, ex I *Posteriorum*, – et probatur sic: secundum unum habitum convenit operari uno actu; unus autem actus intelligendi non potest esse nisi circa unum obiectum (non enim potest esse unus actus intelligendi circa omnia attributa ad unum, quia tunc unum esset intelligere omnium entium, cum omnia attribuantur ad unum primum); sequitur ergo quod oportet ponere aliquod unum ens, cui alia attribuantur, proprium subiectum ex cuius unitate sit scientia una.

[86] Item, contra responsionem ad secundum: si ens secundum totam communitatem suam ad decem genera haberet aliquam proprietatem, puta *a*, sequuntur duo inconuenientia:

[87] Unum quod ens secundum totam communitatem suam sit extra essentiam illius *a*, sicut subiectum extra essentiam illius passionis, cum cadat in definitione passionis tanquam additum, ex VII huius. Et ita ens secundum totam communitatem suam non praedicatur in quid de quolibet.

Aliud inconueniens: quod *a* esset passio sui si ens aliquo modo praedicaretur in quid de *a*; quidquid enim est passio superioris, et inferioris, licet non primo. Et per consequens *a* esset demonstrabile propter quid de se ipso per ens tanquam per medium. Quia passio, quae est primo superioris, est demonstrabilis propter quid de quolibet inferiori per illud superius tanquam per medium. Ergo *a* esset simpliciter notius de ente quam de se ipso, et esset proprie quaestio: ‘propter quid *a* est *a*?’, quia esset terminabilis per demonstrationem propter quid, quod est contra Philosophum VII huius, cap. ultimo. Videtur ergo quod ens secundum totam communitatem ad decem genera non sit subiectum alicuius scientiae.

[88] Si dicatur ad hoc quod ens in communi, secundum quod ens, dicitur habere in communi aliquam passionem, quia quodlibet ens in quantum ens habet aliquam passionem extra essentiam suam; (aliud est enim in quolibet entitas eius, aliud unitas vel actualitas), – contra istam responsionem dupliciter:

Primo, videtur concedere propositum quod ens secundum totam communitatem sui non sit subiectum, quia non habet sic passionem, licet quodlibet particulare ens consideratum secundum quiditatem suam habeat aliquam passionem.

Secundo, quia sequitur idem esse passionem sui, vel circulariter idem esse passionem et subiectum, quorum utrumque est impossibile. – Probatio consequentiae: cum omnia entia sint finita (accipiantur, gratia exempli, tria *a b c*), secundum responsionem quodlibet illorum habet passionem. Sit ergo *b* passio *a*, et *c* passio *b*. Si *c* habet aliquam passionem, aut igitur se ipsum, et hoc est unum inconueniens; aut *a* vel *b*, et ita est circulus, et ita est aliud inconueniens.

[89] Responsio ad haec: Sit *a* unitas, *b* actualitas: neutrum sequitur inconueniens. Unitas enim est aliquod ens in actu denominativa praedicatione. Similiter actualitas est aliquod unum denominativa praedicatione. Nec est hic circulus, quia unitas in universali denominatur ab actualitate aliqua, et ita actualitas in communi non denominatur ab unitate in communi, sed actualitas in communi aliqua unitate.

[90] Contra: si unitas in communi denominatur ab aliqua actualitate sicut a passione, ergo et quaelibet unitas, licet non primo, quia passio communioris est passio cuiuslibet inferioris, licet non primo. Et actualitas in communi denominatur ab aliqua unitate sicut a passione, secundum responsionem. Ergo aliqua eadem unitas respectu actualitatis est subiectum et passio.

[91] Propter istas rationes videtur concedendum quod ens, secundum totum ambitum suum prout dicitur de decem generibus, non sit hic subiectum. Tum quia nullam unitatem habet maiorem quam habeant decem praedicamenta, cum non habeat conceptum communem ad illa, licet accidentia attribuuntur ad substantiam. Tum quia secundum totam communitatem suam non potest habere aliquam proprietatem – ut probatum est dupliciter – propter diversitatem essentialem passionis a subiecto, et quia idem foret passio sui vel circulus foret in passionibus et subiectis, quod est contra Philosophum I *Posteriorum*, cap. ‘De statu principiorum’: “Non est hoc huius qualitas et illud huius”, ubi sequitur de qualitate: “Nullum aliorum”, scilicet subiectorum, “nisi secundum accidens praedicabitur”.

[92] Ex his sequitur quod oportet ponere aliquod unum, quod potest habere proprias passiones de ipso demonstrabiles propter quid, esse subiectum huius scientiae, quia haec est scientia una et scientia propter quid. Oportet etiam illud unum esse primum ens ad quod omnia alia attribuuntur, alioquin non considerat ista scientia de omnibus entibus. Probatio consequentiae: omnis enim scientia considerans multa per se – non ut passiones vel causas –, vel est de communi ad illa ut de subiecto, vel de primo ad quod alia attribuuntur. Consequens autem probatum est esse contra intentionem Philosophi supra, quando arguitur pro opinione Avicennae. Illud autem quod habet omnes illas condiciones non est nisi substantia; illud ergo ponendum est hic proprium subiectum.

[93] Istud confirmatur per Philosophum in IV, ubi postquam distinxit ens, et qualiter ista scientia considerat omnia entia, quia una scientia est omnium dictorum ad unum, subdit: “Ubique vero primi proprie est scientia, ex quo alia pendent et propter quod dicuntur”. Et concludit ex hoc: “Ergo si hoc est substantia, substantiarum oportet principia et causas habere philosophum”.

[94] Item, in principio VII, postquam probavit substantiam esse primum entium cognitione, definitione et tempore, concludit: “Quapropter nobis maxime et primum et solum, ut est dicere, de sic ente”, scilicet de substantia, “speculandum est”. Bene autem dicit “solum ut est dicere”, quia non solum considerat ista scientia de substantia, quamvis illud solum sit principale subiectum, sed considerat etiam de omnibus aliis in quantum attributa sunt ad substantiam.

[95] Item, in IV, cap. 2, dicit Philosophus quod “tot partes sunt philosophiae, quot substantiae”, innuens per hoc quod secundum distinctionem substantiae, ut principalis subiecti, distinguitur scientia haec.

[96] Omnes autem auctoritates, quae adductae sunt prius, quod haec scientia est de ente in quantum ens, concedendae sunt hoc modo: quia scientia quae est de primo aliquo tanquam de proprio subiecto, considerat etiam de attributis ad primum, non tanquam de principali subiecto, sicut exemplificat Philosophus, IV de sano. Unde in principio IV, ubi principaliter praefigit subiectum secundum Commentatorem, postquam dixit hanc scientiam esse de omnibus entibus, subdit exponendo se quid sit proprium subiectum, quia primum “ex quo alia dependent”, ut praeallegatum est. Non solum autem est substantia primum, sed et passiones hic consideratae communes primo ei insunt, et per naturam eius attribuuntur aliis posterioribus. Alia etiam a substantia non solum hic considerantur tanquam passiones demonstrabiles de substantia, sed etiam in quantum quaedam entia in se habentia passiones; unde et passiones ipsorum de ipsis in hac scientia possunt

demonstrari. Non est enim inconueniens passionem alicuius subiecti prioris posse esse subiectum alicuius passionis posterioris, sicut apparet in accidentibus ordinatis; duplici enim ratione considerantur accidentia in ista scientia. – Unde omnes rationes ad utramque partem adductae concludunt unam veritatem. Primae quod haec est de omnibus entibus. Aliae quod non de omnibus istis tanquam de uno, nec de aliquo communi omnibus istis, sed de aliquo primo ad quod alia attribuuntur.

[97] >>> Sed contra praedicta instatur: si enim substantia ponatur subiectum in metaphysica, de qua passiones metaphysicales ostenduntur, dic ubi demonstratur aliqua conclusio de substantia? Dices quod in principio VII, ubi ostenditur quod substantia est primum ens tripliciter.

[98] Contra: cuius generis est ista passio demonstrata de substantia? Non quantitatis, quia quantitas non inest omni substantiae; nec alicuius generis posterioris, quia illa omnia praesupponunt quantitatem.

[99] Respondeo quod haec passio, scilicet ‘primum omnium’, est relatio; et relatio non praesupponit quantitatem. Quia substantia, si non est prima nisi ut est sub quantitate, ergo non est prior quantitate, sicut homo albus non est prior albedine.

[100] Contra: in V huius ponuntur tres modi relationum tantum, qui praesupponunt quantitatem.

[101] Item, per quod medium fiet demonstratio demonstrans passionem de substantia in communi? Non per definitionem, quia eam non habet – et tamen ponitur quod potissima demonstratio est per definitionem –, ergo haec non est certissima scientia.

[102] Item, per differentiam, ut medium, nihil videtur demonstrari de substantia. In qua enim figura hoc fieret?

[103] Ad hoc potest dici quod forte de subiecto scientiae proprie dictae sunt multa vera, quae accipiuntur de libro *Posteriorum*. Illud enim est subiectum conclusionis demonstrationis qua concluditur passio eius de ipso. Sed accipiendo scientiam aliter, prout est una aggregatio tradita de cognitione multorum cognoscibilium, simplicium et complexorum, principiorum et conclusionum – sicut geometria dicitur una scientia –, sic subiectum scientiae dicitur unum commune ad omnia illa subiecta scientiae proprie dictae, vel unum primum ad quod omnia alia attribuuntur. Pone enim unam scientiam demonstrantem de figura omnes passiones eius in communi; aliam quae demonstret omnes passiones specierum figurae de ipsis. Haec videtur subalterna primae, nec in hac aliqua passio ostenditur de figura in communi, et tamen huius subiectum videtur esse figura in communi, quia illud solum est commune ad omnia considerata in illa scientia. Si haec distinctio est bona, Deus potest poni hic subiectum sicut in theologia, licet nulla passio de se sit demonstrabilis, quia omnia considerata hic reducuntur ad ipsum ut ad simpliciter primum.

[104] Sed sive Deus sive substantia ponatur hic subiectum, numquid de aliis posterioribus hic consideratis sunt aliqua principia simpliciter?

Videtur quod non:

Quia omnia posteriora, quoad quodlibet quod inest eis, habent causam.

[105] Responso: de posterioribus vere sunt principia complexa, propositiones scilicet immediatae. Ita enim immediate inest definitio numeri numero sicut anguli angulo. Unde in V, cap. ‘De per se’: “Hominis multae sunt causae”, sed quare homo est homo, nulla. Tunc concedo quod posteriora sunt causata secundum se, et quidlibet sui simpliciter; tamen compositiones aliquae de eis non habent alias compositiones priores causas veritatis per quas possunt demonstrari, alioquin esset tantum unum principium proprium in una scientia, in quo definitio subiecti de ipso praedicaretur.

[106] Contra: per principium aliquod de quantitate demonstrantur passiones quantitatis sicut per principium de substantia passiones substantiae. Igitur si principia sint aequae prima, quia nullum est causa alterius, et conclusiones erunt aequae primo scibiles, et ita aequae primo est scientia haec de substantia et quantitate.

[107] Item, numquid aliqua veritas complexa increata est causa veritatis complexae creatae, sicut incomplexa incomplexae, cum nulla sit Deus?

[108] Ad primum: quod principia non sunt aequae prima, licet nullum alterius veritatis sit causa, sicut patet de unitate et puncto. Nec etiam ambo secundum se aequae nota, quia principia sunt notiora quae habent terminos notiores, et termini unius sunt notiores naturaliter terminis alterius; ita etiam una est verior alia. Unde immediatorum est ordo in veritate, licet non causalitas. Sic etiam est de articulis fidei, quorum non omnes sunt aequae primi, quia non sunt de Deo immediate. Et tamen omnes simpliciter sunt principia theologiae et simpliciter indemonstrabilia.

[109] Ad secundum: veritas complexa causatur a Deo, quia termini causantur a Deo, qui sunt causa veritatis complexae. Sed non quia ‘Deus est Deus’ ideo ‘homo est homo’, licet a Deo sit homo.

[10] Tenendo quod Deus sit hic subiectum, aliter est hoc ponendum quam ponit Averroës.

Circa quod duo sunt facienda. Primo ostendetur quomodo peccant Averroës et Avicenna in opinionibus suis, et secundo dicitur modus quo Deus potest poni subiectum in metaphysica.

[111] Circa primum sciendum quod Avicenna et Averroës habent hanc propositionem communem: ‘nulla scientia probat suum subiectum esse’. – Secundo, Avicenna dicit tantum philosophiam primam posse probare Deum esse, non naturalem. – Tertio, Averroës ponit e contra quod tantum in scientia naturali hoc declaratur, non in prima philosophia. – Quarto, Avicenna ponit Deum non esse subiectum in metaphysica. – Quinto, Averroës ponit genus entium separatorum ibi esse subiectum.

[112] Contra primum istorum arguitur sic: scientia quia demonstrat suum subiectum esse, quia per effectum demonstratur aliquid de causa sic: ex hoc enim quod effectus non potest esse sine tali condicione in causa, effectus non potest esse sine esse causae; ergo causa est. Patet etiam quod primum conclusum de causa per effectum est esse; sed scientia quia praesupponit conceptum aliquem apud intellectum de subiecto, et de illo conceptu arguit primo quod sit, secundo quod alia sibi insunt.

[113] Contra secundum et tertium simul: omnis proprietas considerata de effectu, quam impossibile est sibi inesse nisi talis causa sit, concludit causam esse ‘quia’; sed tam proprietas considerata in scientia naturali quam in ista de effectu non potest sibi inesse nisi primum movens sit et nisi primum ens sit; ergo utraque scientia potest probare ipsum esse. Tamen ista immediatius, quia generales proprietates entis creati, secundum quod considerantur hic, magis ducunt in cognitionem positivam perfectionum primi entis per excellentiam quam speciales condiciones consideratae in aliis scientiis. Quia illae magis ducunt in cognitionem privativam vel aliquam positivam minus excellentem; minus enim excellens videtur primitas movendi tantum quam esse primum ens simpliciter. Unde uterque negetur quoad secundum et tertium, sed magis Averroës. – Hoc etiam probatur specialiter contra ipsum, quia tunc illa quae est simpliciter conclusio in physica, esset hic simpliciter prima propositio omnino indemonstrabilis, et ita physica esset prior ista.

[114] Si dicas: hic non demonstratur propter quid, – nihil ad *b*. Nec in physica. Igitur aequaliter negatur hoc posse demonstrari ibi, sicut hic.

[115] Contra quartum sunt ratio fundata super auctoritatem Philosophi VI *Metaphysicae* et ultima ratio adducta pro opinione Averrois cum confirmatione illius rationis posita in responsione ad eam.

[116] Item, contra ipsum arguitur sic: Avicenna concedit quod metaphysica est de Deo cum consideret de ipso, et quod est de ente in quantum ens. Sed metaphysicus non intendit considerare de Deo propter considerationem entis in quantum ens, quia Deus non est principium cognoscendi ens in scientia quia.

[117] Similiter, tunc ultimus finis huius scientiae non esset speculari causas altissimas et primas, nec in actu sapientiae principali esset felicitas naturalis; ergo metaphysica principaliter considerat de ente propter primum ens. Sed illud est subiectum in scientia, cuius cognitio principaliter quaeritur quantum ad proprietates et perfectiones eius, et etiam quantum ad esse in scientia quia; ergo etc.

[118] Ex hac ratione patet quod Deus non consideratur hic ut principium subiecti; sic enim non consideratur aliquid in aliqua scientia nisi sit principium sciendi subiectum in illa, cuiusmodi est nomen respectu propositionis, et natura respectu entis naturalis. Unde glossa ad dicta Aristotelis de VI *Metaphysicae*, adducta pro opinione Averrois, parum valet.

[119] Rationes etiam pro Avicenna principales, de ‘quia est’ et ‘quid est’, nihil valent, cum metaphysica necessario sit scientia quia de Deo, secundum omnes, quia Deus non est aliter a nobis cognoscibilis.

[120] Rationes vero de passione et principiis bene solutae sunt prius in sustinendo opinionem Commentatoris.

[121] Ratio vero pro Avicenna, facta contra Commentatorem superius, non valet. Licet enim metaphysica, considerata a parte scibilium, hoc est, si sic sciretur sicut scibilia nata essent sciri, esset scientia propter quid, tamen metaphysica, ut est a nobis scibilis, est necessario scientia quia de Deo, ut patebit. Primam depingit Philosophus; vix secundam tradit.

[122] Ad illud etiam quod arguit Henricus in *Summa*, XIX, 1, quod “subiectum in scientia debet esse primum scitum”, sub cuius ratione omnia alia sciuntur, sicut obiectum respectu potentiae; Deus autem non cognoscitur hic nisi ex effectibus, quia non ex eius cognitione cognoscuntur alia, – respondeo quod est verum de primo scito, primitate principalitatis et intentionis, non executionis. Patet de nomine et verbo in *Perihermenias*.

[123] Item, potest sic argui: notitia scientiae et habitus scibilis virtualiter includitur in notitia subiecti primi et formalis illius habitus, quia in eius notitiam omnia posteriora reducuntur secundum eorum cognitionem. Si ergo ens, et non Deus, ponitur subiectum in metaphysica, sequitur quod notitia sapientialis, quae habetur in metaphysica, virtualiter includitur in notitia entis. Sed impossibile est cognitionem perfectiorem includi virtualiter in cognitione imperfectiori. Ergo cognitio entis perfectior est quam cognitio circa Deum et substantias separatas. Cum igitur in cognitione Dei et substantiarum separatarum ponatur felicitas naturalis, ut patet X *Ethicorum*, sequitur quod felicitas consistit in cognitione entis in

quantum ens, quod falsum est, cum illa sit imperfectissima. Sic igitur patet improbatio quarti, et quomodo positio contraria sustineretur, de quo magis patebit inferius, et quomodo ad illa pro quarto respondetur.

[124] Sed contra positionem contrariam sunt dubia alia a praedictis, quae inferius tanguntur post responsionem ad quaestionem.

[125] Contra quintum superius argutum est de univocatione, quoniam Deo et Intelligentiis non videtur esse aliquid commune univocum secundum communem opinionem; ergo non potest esse aliqua una scientia de aliquo communi Deo et Intelligentiis.

[126] Confirmatur: quia in nullo speciali magis uniuntur Deus et substantiae separatae quam Deus et substantiae corporeae. Ergo si propter aliquam unionem sit totum illud genus entium ponendum unum subiectum, pari ratione et genus substantiarum corporearum. – Et confirmatur: quia scientia communis non magis est de una specie quam de alia.

[127] Si vero dicatur quod sit una scientia de illis separatis propter unitatem attributionis, igitur primum erit per se subiectum, vel igitur non magis in speciali de Intelligentiis quam de corporalibus – nisi forte quia sunt nobiliora entia, et immediatius attribuuntur ad primum; aut nisi dicatur quod de cognoscibilibus de ipsis in speciali non est a nobis specialis scientia tradenda –, et ideo magis congrueret illud modicum, quod de eis est loquendum, dicere in scientia de primo. Tamen quantum est ex natura scibilis, ita esset diversa scientia a metaphysica sicut de substantia corporea.

[128] Et secundum hoc, divisio Philosophi de scientiis speculativis, VI huius, tenet de traditis et a nobis rationabiliter tradendis, non de omnibus ex parte naturae scibilium. Igitur Intelligentiae non sunt hic subiectum nec pars, sed hic sunt considerandae propter propinquitatem ad primum, cum hoc quod de eis modicum possumus habere notitiam naturalem.

[129] Ad omnes auctoritates Philosophi pro quinto dicendum quod vocat Deum ‘primas causas’ propter multas perfectiones causalitatis, quia angeli secundum ipsum nihil causant nisi movendo. – Ad illud pro illo, patet ex dictis responsio.

[130] His sic pertractatis, videndum est de principali proposito, quomodo scilicet Deus potest esse subiectum metaphysicae.

[131] Et dicendum est quod, supposita distinctione scientiae prout dicitur habitus conclusionis et prout dicitur aggregatio multorum habituum, tam principiorum quam conclusionum, aliquam tamen convenientiam habentium – de qua distinctione patet, scilicet quaestione prima VI huius –, Deus potest esse subiectum huius scientiae primo modo propter quid, tam secundum responsionem ad secundam rationem principalem secundum opinionem Commentatoris, quam secundum illam additionem quae superius posita est ad impediendum rationem primam factam contra opinionem Commentatoris. Quoniam sicut ibi dictum est: “si prius naturaliter et aliud potest esse medium sciendi posterius naturaliter et aliud, hoc non est in quantum ‘aliud’, quia hoc accidit, sed in quantum ‘hoc’,” ut ibi patet. Et ideo non cogit illa ratio prima facta contra opinionem Commentatoris.

[132] Similiter potest esse subiectum primo modo in scientia quia. Supposito enim quid dicitur per nomen, si tale est causa talis effectus, ex effectu potest concludi tale, et esse, et hoc esse, et hoc tam quantum ad essentialia quam quantum ad proprietates, et hoc demonstratione quia. Sed nihil potest sic concludi de ipso ex effectu nisi illud sit sine quo non potest esse talis effectus.

[133] Potest etiam esse subiectum scientiae secundo modo dictae. Vel quae tantum aggregat conclusiones de Deo propter quid vel quia ostensas. Et talis scientia, si qua esset, esset una – maxime in illo genere – unitate subiecti.

[134] Vel quae aggregat multas conclusiones et principia de Deo et aliis attributis ad ipsum ut ad primum, in quantum ad ipsum attribuuntur. Et talis esset una ex unitate subiecti, non sicut prior, sed quia ad rationem subiecti alia attribuuntur, cum consideratio illa de aliquo sit simpliciter prima quae considerat ipsum sub prima ratione sub qua est considerabile. Et ens creatum, licet sit univocum sub ratione primi entis, considerari potest in quantum ad ipsum attribuitur. Et ita prima consideratio de omnibus entibus erit talis in quantum attribuitur ad primum ens, non ad substantiam. Igitur si metaphysica est prima scientia, erit de omnibus secundum hanc rationem. Aut igitur considerantur ibi in quantum attributa, quia ex notitia Dei ibi cognoscuntur; aut quia ex eorum notitia Deus cognoscitur. Primo modo esset illa de Deo, et esset scientia propter quid. Secundo modo, quia.

[135] Primo modo natae essent istae res cognosci, et haec scientia esset prima de eis, quia est de eis in quantum attribuuntur ad simpliciter primum. Non sic quod ibi non cognoscerentur res omnes secundum propriam essentiam (aliter enim non cognoscerentur), sed cognitio essentiae ipsarum haberetur in quantum attribuuntur ad ipsum Deum. Talem metaphysicam habet Deus, sed non est sibi scientia, quia non est ex notitia sui discursive de aliis acquisita; quamvis enim sciat alia esse per ipsum, non tamen scit ea quia scit se – quod requiritur ad scire. Talem metaphysicam imperfectam

potuerunt forte angeli habuisse si fuissent multo tempore viatores, et ex notitia naturali Dei potentes discurrendo aliorum notitiam acquirere.

[136] Secundo modo tantum potest homo nunc metaphysicam habere (quidquid sit de notitia naturali Dei beati vel in statu innocentiae), quia nunc 'omnis nostra cognitio oritur a sensu' tantum. Igitur sic potuit tradi a Philosopho. Potest igitur prima scientia possibilis homini per rationem naturalem acquiri, et poni scientia quia – et de Deo ut de subiecto primo, et de omni ente ut de materia in quantum attribuitur ad primum ens –, quae nec supponet Deum esse, nec ab eius notitia incipiet ad cognoscendum alia, licet utrumque oporteret si esset scientia propter quid. Sicut enim in scientia quia, proprie dicta, non praesupponitur de subiecto nisi tantum quid dicitur per nomen, et concluditur tam esse quam quid est, ut praedictum est, similiter potest esse in scientia quia aggregata. Quod enim in alia scientia posset probari Deum esse 'quia' et non in tali, esset inconveniens, cum talis consideret effectus ita immediatos eius, sicut aliqua alia. Quare etiam scientia quia non probat propter quid subiectum esse; quare etiam scientia propter quid praesupponit subiectum esse et quid est, cum hoc posset probare per principia subiecti, si habet principia.

[137] Sed circa hanc positionem sunt aliquae dubitationes.

Prima dubitatio est circa hoc quod ponitur Deum esse subiectum in metaphysica, et quod consideret entia ut attribuuntur ad Deum, quoniam consideratio entium in quantum entia videtur esse prior quam in quantum attribuuntur ad primum ens; igitur erit alia metaphysica prior, quae consideret entia in quantum entia, quam illa quae ponitur de Deo ut de subiecto. Antecedens probatur:

Tum quia absolutum est ante respectivum.

Tum quia praemissa est cognoscibilis ante conclusionem et ante rationem conclusionis; et ex esse entium in quantum entia, tanquam ex primo effectu, concluditur esse de Deo.

Tum quia ex quo entia, in quantum entia, videntur cognoscibilia absque illa attributione – cum sint absoluta, et respectus non est de essentia absoluti –, quae esset illa scientia quae consideraret entia in quantum entia sine tali attributione? Videtur enim quod sit ponenda alia metaphysica.

[138] Item, ita attribuuntur omnia entia in speciali ad primum, sicut in universali, sub ratione entis; ergo illa scientia una est de omnibus, et in universali et in particulari. – Confirmatur: quia Deus qui habet metaphysicam propter quid, ita per essentiam suam cognoscit omnia in particulari sicut in universali.

[139] Item, tertio sic: non attribuuntur ad primum ens nisi in triplici genere causae, et hoc non necesse secundum veritatem. Sicut igitur non posset esse metaphysica de eis in quantum attribuuntur primo modo, ita nec secundo.

[140] Ad primam rationem istius dubitationis dicendum est quod illa consideratio, qua considerantur entia in se, prior est prioritatem originis – sicut probant duae probationes –, sed non prioritatem intentionis. Et primum subiectum ponitur cuius cognitio principaliter intenditur; vel ad quod, ut ad principium, tota aggregatio multarum cognitionum principaliter ordinatur.

[141] Ad tertiam probationem, dicendum quod illa scientia esset pars metaphysicae. Sicut si traderetur cognitio de materia et forma, et relinqueretur completa traditio de ente naturali, esset physica imperfecta; vel de nomine et de verbo et nihil de enuntiatione, relinqueretur enim consideratio principalis considerabilis. Non enim esset simpliciter alia scientia, quia illa quae est de primo habet de illis tractare in quantum entia. Unde ubi considerantur in attributione, ibi in se; sed in se considerantur propter primum.

[142] Ad secundam rationem, dicendum quod condiciones principales concludendae de primo ente sequuntur ex proprietatibus entis in quantum ens. Speciales enim condiciones entis non concludunt primo aliquid de ipso, ideo tantum considerat de ente in communi. – Contra: quaecumque insunt enti in quantum ens, insunt Deo; igitur per illa non concluditur aliquid de Deo.

[143] Ad tertium: licet non sit necessaria causa respectu esse aliorum, tamen est necessaria causa quod proprietates aliorum insunt ipsis. Quia enim ipse est actus purus, ideo ens dividitur per actum et potentiam. – Contra: quomodo condiciones entis intelliguntur, cum non sint sensibiles?

[144] Item, secunda dubitatio: quae est illa ratio in primo ente secundum quam consideratur ut per se subiectum in metaphysica?

[145] Ad hoc dicendum quod non est ratio naturaliter cognoscibilis. Tum quia haec ratio est accidentalis, ita quod natura eius in se non considerabitur, sicut nec corpus sub motu. Tum quia illa pertinet ad modum scientiae, et ratio subiecti praesupponitur modo scientiae. Tum quia illa ratio communis est omnibus subiectis scientiarum. Tum quia ista ratio nihil ponit in natura eius, sed tantum forte circa cognoscentem vel respectum ad ipsum. Nec etiam est ratio ista primi moventis; nec de aliqua ratione ad quam pervenit naturalis. Quia quamvis in eodem concurrant primitas movendi et essendi, tamen ex ratione ipsorum non includitur contradictio quod non necessario eidem inessent. Et ita naturalis numquam ostendit primum ens esse nisi per accidens, ita quod non ostendit aliquod ens esse primum, sed aliquod movens esse primum; sic nec aliquod ens esse ultimum, sed aliquod ultimum motivum. Si vero nihil causaret primum ens nisi per mutationem –

quod forte non est verum, secundum Philosophum –, adhuc efficiens in quantum efficiens dicit rationem universalem respectu moventis, ut quo scilicet aliquid est. Finis etiam est, non tantum motus, sed entitatis. Unde forte non ponitur subiectum secundum rationem huius duplicis primitatis, sed secundum rationem primitatis unitivae continentiae excellentis, quae est primitas aliqua formalis. Et secundum istam rationem alia attribuuntur verissime ad ipsum.

[146] Contra: secundum istam rationem debet poni ‘subiectum’ quae primo concipitur et secundum quam demonstratur primo esse de ipso et omnes aliae proprietates. Sed talis non est haec primitas formalis, quia ista probatur, ut videtur, per alia prius ostensa ex effectibus.

[147] Item, tertia dubitatio est: quare non potest metaphysica ordinari principaliter ad cognitionem primi entis ut ad finem, et tamen esse circa ens in quantum ens, ut circa materiam, “cum materia et finis non coincidunt”?

[148] Respondeo quod hoc ideo est quia materia, circa quam principaliter agit scientia, est finis eius quantum ad cognitionem perfectam eius, praesupposito quid dicitur, sive quantum ad aliquem conceptum.

[149] Item, quarta dubitatio est: cum scientia de ente in quantum ens sit propter quid, quare scientia de Deo est tantum quia? Metaphysica est propter quid, quare etiam de Deo non est scientia propter quid? Nam habita prima proprietate eius de ipso, possunt aliae, ut videtur, propter quid de ipso ostendi.

[150] Respondeo quod tota illa scientia propter quid, quae est de ente in quantum ens, ordinatur ad quia de Deo. Metaphysica vero, ut est nobis possibilis nunc, non est principaliter scientia propter quid de Deo. Semper enim prima proprietates habetur quia. Et licet ex illa demonstretur secunda propter quid, tamen secunda non cognoscitur simpliciter propter quid, quia eius cognitio dependet ex cognitione quia primae passionis.

[151] Aliter potest dici quod passio prius conclusa quia de Deo semper est posterior et remotior ab eius essentia, quia propinquior effectui ex quo concluditur, ita quod semper in passionibus proceditur quia. Cuius signum est quia Trinitas, quae illi essentiae singularissimae inest, ex nullo effectu concluditur.

[152] Item, dubitatio quinta est: si ens est unius rationis Deo et aliis, quare non potest ens poni primum subiectum sub quo continentur omnia cognita, tam primum quam alia?

[153] Responsio: dato quod ens sit univocum, adhuc principale subiectum erit hic Deus, quia non traditur scientia propter cognitionem de ente in se habendam; tunc enim aequaliter intenderet cognitionem omnium sub ipso, quia propter cognitionem totam eius primo. Sicut in aliis scientiis, numquam principale subiectum ponitur genus, quando de ipso et aliis speciebus traditur scientia principaliter propter cognitionem unius speciei, sed tantum tunc quando aequae primo de omnibus propter cognitionem de genere habendam, quantum ipsum est cognoscibile.

[154] Item, sexta dubitatio est: quoniam nihil de quiditate Dei particularius ipso ente a nobis hic concipitur. Immo quaecumque particulatio est per modum descriptionis, ut ‘animal risibile’, sicut cum dicimus ‘ens primum’. Igitur si metaphysica sit de conceptu quem de Deo apprehendimus ut de primo ente – cuiusmodi conceptus est ut ‘animal risibile’ –, sequitur quod sit de ente per accidens.

[155] Item, demonstratio qua demonstratur ‘primum’ de ente, naturaliter praesupponit conceptum primi entis, ita quod non sit ratio in se falsa; sed hoc necesse est praesupponere de subiecto, quia alias ‘animal inanimatum’ posset poni subiectum. Hoc enim non tantum praesupponitur esse existentiae, sed ipsi esse quiditativo. Unde quod dicitur ‘per metaphysicam ostenditur Deum esse’, si intelligatur de actuali existentia, non est demonstratio, nec praemissa necessaria. Si autem intelligatur de esse quiditativo, verum est. Et sic praemissa non erit sumpta de existentia creaturae, sed de aliqua proprietate quiditative inhaerente, ex qua sequitur ‘primum’ inesse enti, vel ‘summum’, vel ‘perfectissimum’ vel ‘optimum’. Et ex hoc sequitur rationem illam, cui imponitur hoc nomen ‘Deus’, non esse rationem in se falsam, et ita alicuius quiditatis circumlocutivam, et ita Deum habere entitatem quiditative. Sed demonstratio concludens ‘primum’ de ente, cum sit particularis, non potest esse per naturam entis. Igitur demonstratio passionis transcendentis de ente prior est ista, sicut universalis particulari, sicut medium medio, sicut omnis demonstratio de numero in communi est ante illam qua probatur aliquis numerus esse primus. Igitur metaphysica transcendens erit tota prior scientia divina, et ita erunt quattuor scientiae speculativae: una transcendens, et tres speciales.

[156] Contra: eiusdem est demonstrare conclusionem universalem et particularem de eodem subiecto. Hoc conceditur. Sed quid medium huius demonstrationis? Omnis passio disiuncta inest communi primo et de omni – sed non praecise ut commune sed ut in pluribus; sic: ens primum vel secundum, quia entia sunt ordinata; igitur aliquod ens est primum. Sed si vis habere passionem disiunctam, da medium ad probandum omne ens esse primum vel secundum. Negabitur, si negetur ordo. Per quid probatur ordo nisi per speciales quiditates et ita non per ens? Ordo etiam praesupponit multitudinem. Per quid probatur multitudo de entibus?

[157] Aliter vero datur medium sic. Hoc non negatur: omne ens est primum vel non-primum. Ultra: hoc ens – ut lapis – non est primum, ergo est non-primum. Omne ens non-primum praesupponit ens primum. Sed unde hoc? Hoc enim ex primitate debet probari. – Dicitur quod primae passionis entis sunt indemonstrabiles et propositiones immediatae.

[158] Quomodocumque sit de hoc, si de ente primo ostendatur aliqua passio specialis, puta ‘unum’ vel ‘sapiens’, si non ponatur transcendens, videbitur exire metaphysicam, quia praesupponit cognitionem quidditatum specialium quarum haec sunt.

[159] Unde eiusdem scientiae est demonstrare passionem communem et simplicem convertibilem cum subiecto, et passionem disiunctam convertibilem cum subiecto, et alteram partem illius passionis disiunctae de subiecto, demonstratione particulari. Et ideo ipsius metaphysicae est demonstrare passionem entis, ut unum, verum etc. de ente, si possunt demonstrari de eo, et primum vel secundum de ente, et esse primum de ente. Demonstrare vero aliquid de Deo, ut Deus, et de aliis substantiis separatis considerare secundum se, ad aliam scientiam particularem pertineret quantum est ex parte scibilium.

[160] Contra: finis cognitionis metaphysicae est cognitio entis in summo, et hoc est in primo ente; ergo ad metaphysicum pertinet de primo ente considerare. – Item, felicitas est in actu cognoscendi metaphysicali et sapientiali, ex *X Ethicorum*, et est in cognitione primi entis, ergo etc.

[161] Ideo vitando quattuor esse scientias speculativas, et hanc ponendo de Deo, omnia naturaliter cognoscibilia de ipso sunt transcendentia. Finis huius est perfecta cognitio entis, quae est cognitio primi. Sed primo occurrens et notissimum intellectui est ens in communi, et ex ipso probatur primitas et alia, in quibus est consummatio.

[162] Notandum vero pro demonstratione demonstrante passionem disiunctam de subiecto aliquo, quod correlativa aliqua – ut causa et causatum, prius et posterius – ex praemissa quae dicit unum illorum inesse alicui, sequitur alterum inesse alii, non de existentia sed de esse quidditativo.

[163] Notandum etiam quod naturalis demonstrat aliquod movens esse primum, et ex illa ratione ostensa in se vera, movens primum ostenditur immobile, incorruptibile etc. Igitur metaphysica et naturalis scientia sunt de eodem per accidens. Sed de Deo est naturalis magis per accidens, quia summa descriptio ad quam pervenit de ipso quasi remotior est a quidditate Dei quam summa metaphysici. Sicut illa scientia est per accidens de homine, quae est de ipso in quantum complexionatus, ut medicina respectu illius quae esset de ipso in quantum homo. Tamen conclusiones eadem de eodem realiter, quod est ‘primum ens’, possunt probari per medium metaphysicum et physicum, sicut ‘terra rotunda’ per medium naturale et mathematicum. Et illa conclusio dicenda est metaphysica et naturalis, vel simpliciter talis, quale est medium immediatius sive magis per se respectu eius. Sicut ‘terra rotunda’ simpliciter est naturalis, quia medium propter quod simpliciter est naturale; medium mathematicum non est propter quid. Sed quis probabit quod idem est primum movens et primum ens? Metaphysicus in *IV Metaphysicae*: ‘Si idem homo et homo albus’ etc. <<<

I – Q. *super Metaphysicam*, L. 1 Q. 1: a commentary

The structure of L. 1 Q. 1 is as follows:

1) Introduction: Avicenna vs. Averroes	
2) Main arguments	1-12
3) Averroes' opinion	13-67
4) Avicenna's opinion	68-91
5) <i>Solutio</i> ¹ : substance	92-96
<hr/>	
6) Objections and answers – <i>solutio</i> ²	97-109
7) <i>Solutio</i> ³ : God	110-163

At the beginning of §97 Mauritius observes that in some manuscripts all the remaining part of the *quaestio* – from §97 until the end – is marked as “extra”, while other manuscripts would have the “extra” begin at §110. Extant manuscripts confirm the picture described by Mauritius. It is not easy to decide which of the two indications is correct, namely whether the original redaction of the *quaestio* goes as far as §96 or extends until §109. It is even possible that both the indications should be deemed as correct, in which case we would be before the following picture: first redaction of the *quaestio* until §96, first “extra” from §97 until §109, second “extra” from §110 until the end (this picture would explain the presence of two different indications in the manuscript tradition). To recapitulate, we have three possible scenarios:

- *Hypothesis 1*: first redaction until §96, one “extra” from §97 until the end;
- *Hypothesis 2*: first redaction until §109, one “extra” from §110 until the end;
- *Hypothesis 3*: first redaction until §96, an earlier “extra” from §97 until §109, a later “extra” from §110 until the end.

With regard to contents, there is no evident reason to reject immediately any of these hypotheses. What is immediately certain, by contrast, is that the *quaestio* is not a single unit, but the outcome of a stratification of at least two layers, for it exhibits at least one major doctrinal development: roughly speaking, in the first half of the *quaestio* substance is maintained to be the subject of metaphysics, while in the second half God is.

A more detailed analysis of the text, however, allows us to make some further remarks concerning the three hypotheses listed above. I state them here in advance, but they require the

commentary below to be justified. First of all, the part of the text arriving at §96 has the features of a *quaestio* complete in itself. Scotus states the problem dealt with in the *quaestio* in [1], puts forwards the arguments in [2], discusses at length, in [3] and [4], the two competing views which he had mentioned in [1] as possible solutions to the *quaestio*, and finally provides his own solution in [5]. This implies that the first redaction of the *quaestio* might extend just as far as §96. That it does extend only that far, however, is still not implied. For in [5] Scotus defends the view that substance is the subject of metaphysics, and only in [7] will he defend a completely different view, namely that God is the subject of metaphysics. In the first part of [6], by contrast, he puts forward some objections to his solution in [5] and answers them, while the second part of [6] is, as the editors describe it, a *quaestiuncula subordinata*, dealing with an issue posed by the view that either substance or God is the subject of metaphysics. Could [6] – or at least part of it – belong to the first redaction of the *quaestio*? I think not. First, there is no reason to split [6] in two parts belonging to different redactions; on the contrary, there seems to be a single view underlying all of its parts. Now, at the end of §103 Scotus opens to the possibility that God be the subject of metaphysics, so that, if [6] is a single unit, it cannot belong to the same stage as [5], in which the view that substance is the subject of metaphysics is definitely asserted. Even the first part of [6], however, in which Scotus defends his solution in [5] against some objections, does not seem to fit well with section [5]: actually, it seems that Scotus deems the objections in [6] as conclusive, and that he asserts here the view that substance can still be the subject of metaphysics on very different grounds than the ones on which [5] was based. For these reasons, the first redaction of the *quaestio* must have extended only as far as §96 and, accordingly, (Hypothesis 2) is untenable.

Deciding between (Hypothesis 1) and (Hypothesis 3) is more of a problem. At least, it can be said that we are not forced to endorse (Hypothesis 3), for [7] develops an idea mentioned in [6], namely that God can be the subject of metaphysics. On the other hand, [7] exhibits some traits which are quite distant from the picture emerging from [6]. I will highlight these traits in the commentary and discuss their significance. Suffice it to say now that this might very well indicate a stratification within [7], rather than pointing to the posteriority of the whole section [7] with respect to [6].

Until now I have only spoken of the fact that at least one “extra” is attached *at the end* of what I have been calling “first redaction of the *quaestio*” and mentioned the possibility of a stratification within this “extra”. The tradition of the text, however, also reveals the presence of “extras” within §1 – §96. In particular, the paragraphs which the editors of Scotus’ work considered to be later additions are the following: 32, 33, 41, 44-57, 79-83. I shall argue that §33 should be removed from this list, while part of §30 should be added. Moreover, the evidence concerning §79 is not univocal, and there is no obvious way to determine whether it should be considered an *extra* or not. Accordingly, I shall

consider additions the following paragraphs: 30 (part), 32, 41, 44-57, 80-83, and possibly 79. The real first redaction of the text would therefore be composed of all paragraphs except them, up to §96.

In what follows, I shall first comment upon the first redaction of the text, then I shall take into account the additions which are found within [1] – [5], and at last I shall move to [6] and [7].

1. The first redaction of *QM*, L. 1 q. 1

[1] Introduction

Scotus introduces the *quaestio* by stating the problem which it is meant to solve. He does so in three steps. First, he recalls two facts he had established in the prologue of the work: one, that metaphysics concerns transcendentals (*transcendentia*), and two, that it concerns the highest causes⁵¹⁰. Second, Scotus observes that there are different opinions on whether transcendentals or highest causes should be considered as the proper object (*proprium obiectum*) of metaphysics. This implies that the subject of a science is not simply whatever a science enquires into, even though it is something which is selected from among the things a science enquires into; moreover, it also suggests something that will become completely explicit later on, namely Scotus' endorsement of the principle of uniqueness of the subject of a science. The third step stems directly from the first two: since metaphysics enquires into transcendentals and highest causes, but it is not clear which of them is its proper object, here Scotus asks whether the proper subject (*proprium subiectum*) of metaphysics is being *qua* being or God and Intelligences (namely, created separated substances). The two alternatives are acknowledged by Scotus as Avicenna's and Averroes' positions, respectively, and clearly correspond to the pair transcendentals/highest causes: being is the first transcendental, and separate substances are the highest causes.

One should notice the rather strange shift in terminology *obiectum/subiectum*. No shift in meaning must be supposed, as confirmed by the following passage in the prologue of *QM*:

[...] sed loquimur de materia 'circa quam' est scientia, quae dicitur a quibusdam subiectum scientiae, vel magis proprie obiectum, sicut et illud circa quod est virtus dicitur obiectum virtutis proprie, non subiectum⁵¹¹.

It is striking that, after this statement, Scotus employs both the terms *obiectum* and *subiectum* in [1] and then goes on employing the term *subiectum* throughout the *quaestio*.

⁵¹⁰ *QM*, Prologus, §§16-18 and §21.

⁵¹¹ *QM*, Prologus, §32, p. 14 ll. 20-23.

[2] *Main arguments*

In this section Scotus puts forward the main arguments of the *quaestio*. First, he states three arguments *quod neutrum*, namely arguments meant to prove that neither being *qua* being nor God and Intelligences can be the subject of metaphysics. Second, he states two arguments *sed contra*, the first in favour of the view that being is the subject of metaphysics (Avicenna's position), the second in favour of the view that God and Intelligences are (Averroes' position). Since Scotus in his solution will indeed endorse a "*quod neutrum*" position, it is already interesting to observe that the arguments *quod neutrum* are arguments *ex ratione*, while the arguments *sed contra* are *ex auctoritate*. This means that, in order to defend Avicenna's and Averroes' position, one should show why the arguments *ex ratione* fail to prove what they are meant to prove; by contrast, in order to defend his own solution Scotus will have either to reject the authorities he quotes here or to explain why they are consistent with his own view.

The structure of [2] is the following:

2) Main arguments	1-12
a) Arguments " <i>quod neutrum</i> "	1-10
i) First argument: " <i>oportet notum esse 'si est' et 'quid est'</i> "	1-5
ii) Second argument: " <i>habet passiones de ipso demonstrabiles</i> "	6-8
iii) Third argument: " <i>habet propria principia et partes</i> "	9-10
b) Argument " <i>pro ente</i> "	11
c) Argument " <i>pro Deo</i> "	12

[§§1-5] These paragraphs contain the first argument *quod neutrum*. The argument is stated in §1 in the following syllogistic form:

(M) Of the subject of a science it must be known 'if it is' (*si est*) and 'what it is' (*quid est*)

(m) 1. In metaphysics it is not known *si est* of God; 2. In metaphysics it is not known *quid est* of God; 3. In metaphysics it is not known *quid est* of being

(C) God is not the subject of metaphysics; being is not the subject of metaphysics

The first part of the conclusion is drawn from the major premise (M) together with either (m.1) or (m.2) in the minor premise; the second part of the conclusion is drawn from (M) together with (m.3). The fact that the minor premise does not contain a fourth part suggests that Scotus assumes the *si est* of being to be known.

The major premise (M) is justified *ex auctoritate* in §1 itself, where Scotus refers to Aristotle's *Posterior Analytics*. The necessity of knowing the *si est* and the *quid est* of the subject of a science

must be understood as a prerequisite for all the enquiry carried out in that science, namely as something to be known before that science begins its investigation.

The minor premise (m) is justified in §§2-5. More precisely, (m.1) is argued for with two arguments in §2 and §3, respectively; (m.2) is argued for in §4; (m.3) is argued for in §5. For each of the three parts of (m), Scotus claims that he is going to prove it *dupliciter*. The meaning of this, however, is quite different in the case of (m.1), on one hand, and in the case of (m.2) and (m.3), on the other⁵¹². In the case of (m.1), Scotus does indeed provide two independent, self-sufficient arguments. By contrast, the “two arguments” for (m.2), as well as the “two arguments” for (m.3), start from contradictory premises; they are meant to show that (m.2)/(m.3) is entailed by either of these contradictory premises. More than two arguments for (m.2) and two arguments for (m.3), we have here one single argument for (m.2) and one single argument for (m.3), each of them being of the form: $(\alpha \rightarrow \beta) \wedge (\neg\alpha \rightarrow \beta) \vdash \beta$.

The two arguments for (m.1) are basically meant to state that the *si est* of God is enquired into in metaphysics; the reader is left to draw the conclusion that the *si est* of God is not known before metaphysical enquiry and that, therefore, God does not fulfil one of the requirements to be the subject of metaphysics. This is exactly the way in which Avicenna denies that God is the subject of metaphysics, and Scotus explicitly quotes the relevant passage of Avicenna’s *Philosophia prima* I 1 while stating his first argument in §2.

The argument in §2 is based on three premises Scotus derives from Avicenna’s *Philosophia prima* I 1: (p1) “the fact that God is” is not known *per se*; (p2) its knowledge is not hopeless; (p3) it is not enquired into in another science. From these three premises Scotus derives the conclusion that the *esse* of God is enquired into in metaphysics. In support of (p1), Scotus observes that “the fact that God is” is a conclusion drawn starting from God’s effects and mentions two places of Aristotle’s works where this conclusion is drawn, namely *Phys.* Θ and *Metaph.* Λ. Scotus also briefly comments upon (p2) to observe that, even if (p2) were false (in which case the conclusion of the argument could not be drawn), his *si est* would still not be known in advance (presumably because it would never be known); accordingly, we can infer, God could still not be the subject of metaphysics⁵¹³.

⁵¹² The ways in which Scotus introduces the “two arguments” differ from the linguistic point of view as well: in the case of (m.1) the phrases used are “primo [...] secundo probatur eadem pars minoris [...]”; in the case of (m.2) and (m.3) they are “tum [...] tum [...]”.

⁵¹³ The punctuation of the critical edition is misleading in this respect. I would punctuate thus: “Primo, sicut probat eam Avicenna, I *Metaphysicae* cap. 1 b, ‘quia Deum esse non est per se notum’, cum concludatur ex effectibus, – VIII *Physicorum*, et XII *Metaphysicae* – ‘nec est desperatum cognosci, quia signa habemus de eo (et etiamsi sit desperatum, tunc non praecognoscitur), nec inquiritur eius esse in alia scientia, nec morali nec doctrinali, et sic de aliis”. The remark “et etiamsi sit desperatum, tunc non praecognoscitur” corresponds to Avicenna’s *Philosophia prima* I 1, p. 5 ll. 79-80: “Amplius: omne id cuius manifestatio desperatur, quomodo potest concedi esse eius?”.

The second argument for (m.1) is found in §3: Scotus observes that in *Metaph. α* Aristotle demonstrates that the series of efficient causes does not go on *ad infinitum* and that this ultimately amounts to demonstrating that God is. The underlying assumption is that such a demonstration was carried out by Aristotle in his *Metaphysica* because it properly belongs to metaphysics⁵¹⁴.

In §4 Scotus states an argument to prove (m.2), namely that a knowledge of God's *quid est* is not presupposed by metaphysics. As already mentioned, the argument takes into account two contradictory cases: either God has no quiddity (Scotus mentions Avicenna's *Philosophia prima* VIII 5 in support of this view), or he has a quiddity, but the knowledge of this quiddity cannot be presupposed in metaphysics (because of its obscurity with respect to human intellects: Scotus mentions here Aristotle's similitude of the bat – *nycticorax* in Scotus' quotation – in *Metaph. α*). In both cases, God's *quid est* cannot be presupposed by metaphysics.

In §5 Scotus states an argument to prove (m.3), namely that a knowledge of the *quid est* of being is not presupposed in metaphysics. Again, he takes into account two contradictory cases: either being is equivocal, or it is univocal. In support of the view that being is equivocal, he mentions Porphyry's *Isagoge*. He also refers to a subsequent *quaestio* on the fourth book of Aristotle's *Metaphysics* – this will be *QM*, L. 4 q. 1. It has been shown that this *quaestio* is composed of two “redactions” and that, in the earlier redaction, Scotus definitely defends the view of the equivocity of being. We can already assume that Scotus endorsed this view also while he was writing the first redaction of *QM*, L. 1 q. 1; in any case, this will become clear in the course of the *quaestio*. Scotus does not spell out explicitly the consequence of the equivocity of being for the problem at stake, but his point must definitely be that, if being is equivocal, it has no common *quid* in virtue of which it is predicated of all of which it is predicated. By contrast, he states explicitly why being would not have a *quid* even if it was univocal: it would be something most common and, accordingly, it would not have genus or differentia, so that it would not have a definition either.

Scotus' statement of the first argument ends here. If (M) is true, as argued in §1, and (m) is true, as argued in §§2-5, the truth of the conclusion (C) follows: neither God nor being is the subject of metaphysics. Before moving to Scotus' discussion of the second argument, however, a remark is worth making whose significance will become clear only later. While discussing Scotus' argument to the effect that God's *si est* is enquired into in metaphysics, I employed the same terms as the ones used by Scotus himself: *si est* of/about God, the fact that God is (*Deum esse*), God's *esse*. Which kind of knowledge does Scotus have in mind? The source of the argument, as I said, is Avicenna, and in Avicenna's account there is little doubt that the knowledge of the *existence* of the subject is at stake: God cannot be the subject of metaphysics because metaphysics proves the existence of God. Due to

⁵¹⁴ Notice that this assumption is weakened by the mention of *Phys. Θ* in §2 as evidence for the fact that God's *si est* is to be proved.

the lack of Scotus' statements to the contrary here, it is natural to interpret the arguments in §§2-3 as referring to God's existence as well.

[§§6-8] These paragraphs contain the second argument *quod neutrum*. The argument is stated in §6 in the following syllogistic form:

(M) The subject of a science has attributes (*passiones*) which can be proved of it

(m) 1. God does not have attributes which can be proved of it; 2. Being does not have attributes which can be proved of it

(C) God is not the subject of a science; being is not the subject of a science

Again, the first part of the conclusion is drawn from (M) and (m.1); its second part from (M) and (m.2). (M) is justified in §6 by mentioning Aristotle's *Posterior Analytics*; (m.1) is justified in §7, while (m.3) is justified in §8.

Two arguments for (m.1) are put forward in §7. First, attributes must be external to the essence of their subjects; since nothing which is in God is external to his essence, God does not have attributes. Second, Scotus mentions again Avicenna's *Philosophia prima* VIII 5, where it is stated that God does not have either quality or quantity, and that there is no demonstration of him (here Scotus apparently interprets this last point as denying that an attribute can be demonstrated of God).

Two arguments are also put forward for (m.2) in §8. The first argument is said to have the same premise as the first argument for (m.1), but here this premise is stated in the form "attributes differ from their subject essentially", rather than "attributes are external to the essence of their subject". And indeed, the other premise of the argument seems to imply that the problem at stake is exactly the opposite, namely that being as a subject would not be external to its attributes, since being belongs to the essence of everything. On this ground Scotus draws here the conclusion that being cannot have attributes. As we shall see, however, the discussion of (m.2) throughout the *quaestio* is ambiguous in this respect: a comparison with §76 and §87 shows that Scotus speaks both of *ens* being external to the essence of its attributes and of *ens* having attributes external to its essence.

The main idea of the second argument for (m.2) seems to be the same as the one behind the first argument. The first premise of the argument is that attributes are predicated of their subject *denominative*, while a subject is predicated of its attributes only *per accidens*. Being, however, is predicated *in quid* of everything – and of nothing *per accidens* (this premise seems to be equivalent to the second premise of the first argument for (m.2)⁵¹⁵). Therefore, it cannot have attributes.

Since neither God nor being have attributes which can be proved of them, they cannot be the subject of metaphysics.

⁵¹⁵ See also §76: "[...] praedicatur de quolibet in quid, et est de essentia cuiuslibet".

[§§9-10] These paragraphs contain the third argument *quod neutrum*. The argument is stated in §9 in the following syllogistic form:

(M) The subject of a science has proper principles and parts

(m) 1. God does not have proper principles and parts; 2. Being does not have proper principles and parts

(C) God is not the subject of a science; being is not the subject of a science

(M) finds support again in Aristotle's *Posterior Analytics*, mentioned in §9. In §10, (m.1) is said to be evident: God is first – it has no principles – and most simple – it has no parts. In the same paragraph (m.2) is argued for as follows: if being *qua* being had principles, then every being would have principles. Scotus quotes Aristotle's *Prior Analytics* to explain the validity of this argument, in particular the move from "*ens inquantum ens*" to "*quodlibet ens*". One should notice that the argument for (m.2) is restricted to denying that being has principles: surely the categories are to be considered parts of being, so that being would at least meet this requirement to be the subject of a science.

Since God does not have either principles or parts, and since being does not have principles, neither God nor being can be the subject of metaphysics.

[§11] The first argument *sed contra* is an argument *pro ente*, namely in support of the view that being is the subject of metaphysics. Two *auctoritates* are quoted: Aristotle's *Metaphysics* Γ 1 and Avicenna's *Philosophia prima* I 2. As we have seen, in the introduction to the *quaestio* Scotus explicitly connects this view with Avicenna.

[§12] The second argument *sed contra* is an argument *pro Deo*, in support of the view that God is the subject of metaphysics. The *auctoritas* quoted here is a passage from Averroes' commentary on the first book of *Physics*, a passage where Averroes explicitly criticises Avicenna's position. In the introduction to the *quaestio* Averroes' view had been described, more precisely, as maintaining that "God and Intelligences" are the subject of metaphysics. This point becomes clear from Averroes' text quoted in §12, where Averroes states that separate beings are the subject of metaphysics – he does not single out only God as the subject of metaphysics. Another point emerging from Averroes' text which is convenient to bear in mind is that, in Averroes' view, the existence of separate beings is demonstrated in physics, and it cannot be demonstrated in metaphysics exactly because they are the subject of metaphysics. Scotus, as we shall see, finds these two aspects of Averroes' position unacceptable, regardless whether God is or is not the subject of metaphysics.

[3] Averroes' opinion and [4] Avicenna's opinion

In these two sections Scotus examines Avicenna's and Averroes' competing views on the subject of metaphysics before stating his own view in [5]. It is useful to look at the structures of sections [3] and [4] together:

<p>3) Averroes' opinion</p> <ul style="list-style-type: none"> a) Introduction b) Arguments in favour of Averroes <ul style="list-style-type: none"> i) <i>Ex auctoritatibus</i> (2 arguments) ii) <i>Ex ratione</i> (2 arguments) c) Answers to the arguments <i>quod neutrum</i> according to Averroes' position d) Rejection of Averroes' position e) Answers to the arguments in favour of Averroes 	<p>4) Avicenna's opinion</p> <ul style="list-style-type: none"> a) Introduction b) Arguments in favour of Avicenna <ul style="list-style-type: none"> i) <i>Ex auctoritatibus</i> (4 arguments) ii) <i>Ex ratione</i> (2 arguments) c) Answers to the arguments <i>quod neutrum</i> according to Avicenna's position d) Rejection of the answers to the arguments <i>quod neutrum</i>
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Both [3] and [4] can basically be divided into two parts. Their first part, [3.a-c] and [4.a-c], is what might be called the *pars construens* of the sections, in which Scotus states Averroes' and Avicenna's views. The second part of [3] and [4], namely [3.d-e] and [4.d], is the *pars destruens* of the sections, in which Scotus rejects Averroes' and Avicenna's views.

Both [3] and [4] have their *pars construens* structured in the same way. First, Scotus repeats again what the view discussed in the section amounts to ([3.a] and [4.a]). Second, he lists some arguments in support of this view ([3.b] and [4.b]). Third, he provides answers, from the perspective of the position he is dealing with, to the main arguments *quod neutrum* in section [2] ([3.c] and [4.c]).

By contrast, the *pars destruens* of [3] is quite different from the *pars destruens* of [4]. The former is carried out in two steps, [3.d] and [3.e]. In [3.d], Scotus tackles Averroes's position in itself, providing three arguments against it. In [3.e], Scotus answers to the arguments listed in [3.b] in support of Averroes' view. As for the *pars destruens* of [4], namely [4.d], it corresponds neither to [3.d] nor to [3.e]. Rather, here Scotus restricts himself to rejecting the answers to the main arguments provided in [4.c]. This, of course, is tantamount to rejecting Avicenna's position; only, this rejection is given no other grounds than the ones already stated in [2].

The following is a more detailed structure of [3]:

3) Averroes' opinion	
a) Introduction	13
b) Arguments in favour of Averroes	14-18
i) <i>Ex auctoritatibus</i> (2 arguments)	14-16
ii) <i>Ex ratione</i> (2 arguments)	17-18
c) Answers to the arguments <i>quod neutrum</i> according to Averroes' position	19-29
i) To the first argument: " <i>oportet notum esse 'si est' et 'quid est'</i> "	19-24
ii) To the second argument: " <i>habet passiones de ipso demonstrabiles</i> "	25-26
iii) To the third argument: " <i>habet propria principia et partes</i> "	27-29
d) Rejection of Averroes' position	30-35
i) First argument against Averroes	30-31
ii) Second argument against Averroes	34
iii) Third argument against Averroes	35
e) Answers to the arguments in favour of Averroes	36-67
i) Preliminary remarks	36-42
ii) Answers to the arguments <i>ex auctoritate</i>	43-61
iii) Answers to the arguments <i>ex ratione</i>	62-67

[§13] Scotus states here that there are different opinions concerning the *quaestio* about the subject of metaphysics, and that one of these opinions is Averroes'. Averroes' position is here described as stating that "separate substances, namely God and Intelligences", are the subject of metaphysics.

[§§14-16] Two arguments *ex auctoritate* are put forward in favour of Averroes' position, both of which resort to Aristotle. The first argument is stated in §14. Scotus mentions Aristotle's views that wisdom concerns first causes (*Metaphysics* A) and that metaphysics concerns separable and immobile beings (*Metaphysics* E). Since Aristotle also maintains in *De Anima* Γ that sciences are divided according to *res* – so the argument goes on – and since this means they are divided according to the subjects they enquire into, it follows that first causes and separate substances are the subject of metaphysics.

The second argument is stated in §15-16. Basically, Scotus mentions the fact that Aristotle calls metaphysics "theology", providing two reasons for this. First, Aristotle states that if something divine exists, it should be immobile and separable, namely the sort of thing that metaphysics enquires

into. Second, he states that the most honourable science should be about the most honourable genus – and this eventually entails that metaphysics should enquire into separate substances (rather than a second reason for the name “theology”, this looks much more to be a proof of the fact that metaphysics enquires into separate substances, an assumption employed while justifying the name “theology”).

In order to be successful, both the arguments need to assume some form of the following principle: “if a science enquires into x , and in virtue of x it is distinguished from other sciences, then x is the subject of that science”. In fact, the first argument even argues for something like this principle explicitly, quoting Aristotle’s *De Anima*. The way in which Scotus will answer these arguments, as we shall see, consists exactly in finding a way in which separate substances can be enquired into in metaphysics without their being the subject of metaphysics.

[§17] In §§17-18 Scotus states two arguments *ex ratione* in support of Averroes’ view. The first argument is stated in §17: since the knowledge of separate substances must be conveyed in some science – for they are not completely unknown, and since it is not conveyed by physics or mathematics, it must be conveyed by metaphysics – for the tripartition of theoretical philosophy is exhaustive.

This argument might be interpreted in two different ways. The “correct” interpretation, as revealed by Scotus’ answer to it in §62, is that the same assumption as the one in §§14-16 is at work here: since separate substances must be enquired into in metaphysics (this is the conclusion of the argument), they must be the subject of metaphysics.

There is also a “wrong” interpretation, which is still worth mentioning, for it shows a problem harder to solve – and for which Scotus will eventually find a solution. According to the “wrong” interpretation, the argument in §17 speaks about subjects from its very beginning: since separate substances are not completely unknown, they must be the subject of some science, and since they are not the subject of mathematics or physics, they must be the subject of metaphysics. A complete answer to this argument would require an explanation of why separate substances cannot be the subject of metaphysics; even more, however, it would require an explanation of why separate substances cannot be the subject of a philosophical science more generally.

[§18] The second argument is stated in §18. The first premise of the argument states that, when a science deals with many things which are attributed (*attributa*) to some first single thing, then that science especially deals with such first thing as its proper subject. The second premise states that all beings are attributed to the first cause. From these two premises, Scotus draws the conclusion that

metaphysics especially concerns the first being as its subject. Of course, the implicit premise which is needed for the argument to be successful is that metaphysics is the science dealing with all beings. This must not be considered an assumption restricted to this argument, though, but a view underlying all the *quaestio*. In other words, the question itself which is asked in the *quaestio* may be reformulated as follows: “Which is the subject of the science dealing with all beings?”. This will become more and more evident, as all possible solutions stated in the text do indeed answer this sort of question.

The first premise of the argument is of great interest for the developments of the *quaestio*. As we shall see, it will be accepted by Scotus throughout the *quaestio*, either in an absolute or in a relativised form – I shall come back to this later. It is interesting to notice that this premise is supported here by quoting Aristotle’s *Metaphysics* Γ 2, where Aristotle argues that the science of being *qua* being will be primarily a science of substance. In other words, Scotus argues in favour of Averroes by resorting to Aristotle’s *pros hen*, which was meant to trace back all beings to substance (henceforth “horizontal *pros hen*”), and applying it to the relation between all beings, on one hand, and God, on the other (henceforth “vertical *pros hen*”).

[§§19-24] In these paragraphs Scotus provides an answer, from the point of view of Averroes’ position, to the first of the main arguments *quod neutrum*, namely the one stated in §1. The major premise of this argument – the requirement that the knowledge of *si est* and *quid est* of the subject be presupposed by the science – is not questioned. Rather, these paragraphs aim at rejecting the minor premise:

(m) 1. In metaphysics it is not known *si est* of God; 2. In metaphysics it is not known *quid est* of God; 3. In metaphysics it is not known *quid est* of being

Of course, §§19-24 are restricted to rejecting (m.1) and (m.2), since (m.3) is not relevant from the point of view of Averroes’ position. As for (m.1), three possible answers are proposed in §§19-22: the first one in §19, the second one in §20, the third one in §21; §22 makes a final remark on the three answers just given. As for (m.2), it is rejected in §§23-24.

[§19] This paragraph contains the first rejection of (m.1). After declaring (m.1) and (m.2) false, Scotus focuses on (m.1) and states that it is false because God’s *si est* is known *naturaliter* and *secundum se*. As revealed by the lines which follow, Scotus is here adopting a distinction between what is known *secundum se* and what is known *quoad nos*. In this framework, Scotus basically intends to state that God’s existence is evident *secundum se*, even though *quoad nos* it is not evident and can only be known through a demonstration having God’s effects as its starting-point. This is the case

because God's effects, while being less known than God *secundum se*, are more known than God *quoad nos*.

Having said that God's existence is known *secundum se*, §19 goes on to show what is wrong with the two proofs for (m.1) provided in §2 and §3, respectively. As for the first, "Avicennian" proof in §2, Scotus grants that knowing the existence of God is not hopeless and that it is not enquired into in another science. However, he also maintains that it is not enquired into in metaphysics *secundum se*; rather, the proof of God's existence mentioned in §2 is a proof "from effects", which makes God known *quoad nos* – and which does not prevent God from being the subject of metaphysics.

As for the second proof for (m.1), namely the one in §3, Scotus employs the same argument: the demonstration in Aristotle's *Metaphysics α* is a demonstration from effects, which does not prevent God from being the subject of metaphysics. In this case, he also adds another argument of different nature, showing that the proof in §3 would not be conclusive anyway: the demonstration in Aristotle's *Metaphysics α* is a demonstration of the existence of a first efficient cause, rather than of God – and even though the two amount to the same thing *from the extensional point of view*, still it is possible for one of them to be assumed while the other is demonstrated. This sort of argument is directed at the proof for (m.1) stated in §3 specifically and is not sufficient to reject the one in §2; I would therefore overlook its details and focus on the main point of §19, which answers both §2 and §3, namely the view that God's existence is known *secundum se*.

It must be said that the distinction *secundum se/quoad nos* concerning the knowledge of God's existence is not Scotus' own innovation; it is clearly spelled out, for example, by Aquinas⁵¹⁶. The original idea in §19 is rather the application of this distinction to the principle that a science must presuppose the knowledge of the existence of its subject. Such application consists in the view that the existence of the subject of a science must be known *secundum se*, rather than *quoad nos* – and since God's existence is evident *secundum se*, it can be presupposed by metaphysical enquiry. As it stands, this view poses more problems than it solves. For if we maintain that a science must presuppose the existence of its subject, how can this principle be fulfilled by the fact that the subject is evident *secundum se*, given that a science is a form of knowledge acquired by human intellects? From Scotus' point of view, however, the answer given in §19 would be perfectly intelligible, for he would precisely deny that a science is, in itself, a form of knowledge proper to human intellects. This is implied in his distinctions between a science in itself and the same science as human intellects can have it. A distinction of this kind between theology in itself and our theology is famously found in Scotus' *Lectura* and *Ordinatio*, but is already hinted at in his *QM* 1.1 as far as metaphysics is concerned. I shall come back to this when commenting upon the relevant paragraphs. For the time

⁵¹⁶ See for example *ST I*, q. 2 a. 1.

being, I would like to recall that here Scotus is not stating his own views, but answering the main arguments from the point of view of Averroes' position. It will become clear soon, however, that Scotus endorses the main ideas he is expressing here.

[§20] This paragraph contains the second rejection of (m.1), which is explicitly identified as the rejection Averroes formulates in his commentary on the *Physics*. According to Averroes, the existence of God is demonstrated only in physics – and if it happens to be demonstrated in metaphysics, such demonstration would nonetheless be based on premises proved in physics. Again, §20 goes on to show what is wrong with the two proofs for (m.1) provided in §2 and §3, respectively. As for the first, it mistakenly assumed that God's existence is not demonstrated in a science other than metaphysics; as for the second, the demonstration in *Metaphysics α* is grounded on a physical middle term, namely the notions of mover and moved.

[§21] This paragraph explicitly presents itself as the third answer to the two proofs for (m.1) provided in §§2-3. This is contradicted by §22, though, where Scotus observes that the answer in §21 is effective only against the proof in §3. Finally, one can notice that §21 does not expressly address any of the two proofs in §§2-3.

What §21 expressly states is that a science may very well demonstrate the existence of its subject, but *a posteriori*, namely through a demonstration moving from effects (a *quia*-demonstration). By contrast, no science can demonstrate the existence of its own subject *a priori*, through a demonstration moving from causes (*propter quid*-demonstration). So far for what the paragraph expressly says. The application of this to the proofs in §§2-3 is not spelled out by Scotus, but I think it can be safely reconstructed from the larger context in which this passage is found (the essential point being the connection §22 draws between §21 and §19). Basically, §§2-3 argue that, since God's existence is demonstrated in metaphysics, then metaphysics cannot presuppose it. Now, §21 relativises the validity of this entailment to *propter quid*-demonstrations. It may very well be the case, Scotus is implying here, that a science presupposes the existence of its subject, while providing a demonstration thereof – as far as this demonstration is a *quia*-demonstration. This is so, we are going to see, because such demonstration would be provided only *quoad nos*, while the existence of the subject would be assumed as known *secundum se*.

As said, in §22 Scotus states that this answer is effective only against the proof in §3. That it is indeed effective against it is clear, for the proof in *Metaphysics α* infers the existence of a first efficient cause starting from its effects. That it is not effective against the proof in §2 is also probably true – against the opening line of §21. For the knowledge of God's existence *secundum se* must be

presupposed in metaphysics – but if no other science demonstrates it, it might still be the case that such knowledge is provided (through a *propter quid*-demonstration), rather than being presupposed, by metaphysics. To sum up, §21 is not successful in rejecting (m.1), and Scotus is well aware of this; it is only able to make the proof for (m.1) in §3 harmless.

[§22] This paragraph makes some final remarks on the “three rejections” of (m.1) provided in §§19-21. First, it states that the third rejection is in agreement with the first one, because the former explains the “second part” of the latter. I suppose Scotus sees the first rejection as composed of the following two views: 1) God’s existence is evident *secundum se*; 2) God’s existence is made known starting from its effects *quoad nos*. When he refers to the “second part” of the first rejection, he must mean (2): in other words, the third rejection amounts to a clarification of (2).

Scotus’ second remark in §22 is that the third rejection is only effective against the proof for (m.1) given in §3: we have already dealt with this remark while considering §21. From this Scotus draws the conclusion that only the first rejection is sufficient to answer both the proofs in §§2-3, for it is necessary for metaphysics to presuppose the existence of its subject, and only the first rejection grants that metaphysics can presuppose the existence of God. More in detail, it is view (1) in the first rejection that grants this presupposition; being only a clarification of (2), the third rejection cannot work. However, Scotus must believe the second rejection, namely Averroes’ one, does not work either, if he states that only the first rejection is adequate. In the rest of §22 he explains precisely why he does not believe the second rejection to be adequate.

Scotus’ reasoning is as follows: when Averroes says that the existence of God can be presupposed in metaphysics because it has already been proved in physics, he means either (i) that this is the order of knowing only for us (*nobis tantum*) or (ii) that this is the order of knowing in absolute (*simpliciter*). The pair *nobis tantum* / *simpliciter* is clearly equivalent to the pair *quoad nos* / *secundum se*. Now, Scotus argues that, if Averroes means (i), he *tantum fugit*. I take this to mean that (i) would only avoid the question, for it would not explain how metaphysics as a science in itself might presuppose God’s existence⁵¹⁷. In order for this presupposition to take place, God’s existence should be known *secundum se* before the beginning of metaphysical enquiry – which would be granted, for example, by interpretation (ii). On the other hand, Scotus states that (ii) would imply that physics is absolutely (*simpliciter*) prior to metaphysics, the reason for this being that in physics there would be something more known than what is most known in metaphysics. By this Scotus probably means that the causes in virtue of which God’s existence would be established in physics through a

⁵¹⁷ Another possible interpretation of the expression would perhaps be that Averroes’ rejection would be sound only according to interpretation (i). The overall argument speaks against this interpretation, though.

propter quid-demonstration should be more known than God himself, the alleged subject of metaphysics. In any case, Scotus does not make explicit which problem would be posed by the absolute priority of physics over metaphysics: I believe he takes for granted that metaphysics is the first science, and that establishing the subject of metaphysics means to establish the subject of the first science. We shall see that the view of metaphysics as the first science will emerge throughout the whole *quaestio*, posing problems for the determination of its subject.

Since the second rejection of (m.1), whether interpreted as (i) or (ii), is not adequate, and since the third rejection is not adequate either, the first rejection is for Scotus the only viable answer to the first main argument from the point of view of Averroes' position: God's existence can be assumed in metaphysics because, *secundum se*, it is something known. Related to this, it might be interesting to rephrase some ideas encountered so far as follows. In §19 one finds the – apart from skepticism trivial – view that what is not known might *become* known: God's existence is not known *quoad nos*, but becomes known from his effects *quoad nos*. The same can plausibly be said about what is not known *secundum se*: what is not known *secundum se* might become known *secundum se* through a *propter quid*-demonstration. As a consequence, there are two ways in which a science may presuppose the existence of its subject: either it is known *secundum se* in the first place, or it becomes known *secundum se* through a *propter quid*-demonstration provided by another science. As we have seen, as far as metaphysics is concerned only the first way is viable, for otherwise metaphysics would not be the first science. In other words, of the subject of metaphysics it is required that its existence be self-evident in itself.

I would like to make here one last remark concerning the main idea of the third rejection of (m.1), which is also part of the complex view expressed in the first rejection, namely the idea that the existence of the subject of a science can be demonstrated within that science itself. Let us call this idea (A). Now, (A) is stated from the point of view of Averroes' position and is grounded on the distinction between *propter quid*-demonstration and *quia*-demonstration: a science can provide a *quia*-demonstration of the existence of its own subject, because such demonstration would make that subject known only *quoad nos*. It will become clear, I believe, that Scotus himself endorses (A), and that he endorses it throughout most of *QM* 1.1 on the very same grounds which are indicated here, namely the restriction of (A) to *quia*-demonstrations. I also believe that Scotus keeps endorsing (A) throughout his career – doing so, however, on very different grounds later on, and forsaking the reference to the possibility of *quia*-demonstrations of the *si est* of the subject of a science.

[§§23-24] In these paragraphs Scotus turns to the rejection of (m.2). As said, Scotus declares he is providing two proofs for (m.2) in §4. Accordingly, he says that he is answering these two proofs

in §23 and §24, respectively. However, we have seen that §4 would be best analysed as providing a single proof for (m.2) of the form: $(\alpha \rightarrow \beta) \wedge (\neg\alpha \rightarrow \beta) \vdash \beta$. Following this analysis, Scotus' reply to §4 in §§23-24 should be read thus: in §23 Scotus maintains that α is false (and therefore that $\neg\alpha$ is true), while in §24 he shows that $\neg\alpha$ does not entail β .

Going into details, §23 argues that it is false to state that God does not have a *quid*. Of course, God's *quid* cannot be expressed by a definition, for in that case it would be limited; however, since God has an unlimited essence, he does have an unlimited *quid*.

On the other hand, §24 argues that God's *quid* can be presupposed in metaphysics. The argument is exactly the same – as Scotus himself observes – as the first rejection of (m.1) provided in §19, except that the *quid est*, rather than the *si est*, is here at stake: God's *quid est* is known before metaphysical enquiry *secundum se*, even though *quoad nos* it is not. Scotus also recalls the third rejection of (m.1), namely the one provided in §21, to notice that God's *quid est* can be clarified in metaphysics *quoad nos*.

To sum up, both (m.1) and (m.2) are rejected in the same way: both God's *si est* and his *quid est* can be presupposed in metaphysics, for they are known *secundum se*; they are clarified within metaphysics only *quoad nos*, but this is not relevant to the sort of presupposition which is required of the subject of a science. In rejecting both (m.1) and (m.2), §§19-24 reject the first main argument *quod neutrum* as far as God is concerned. The principle according to which the *si est* and *quid est* of the subject of a science must be presupposed in that science does not prevent God from being the subject of metaphysics.

[§§25-26] In these paragraphs Scotus provides an answer, from the point of view of Averroes' position, to the second of the main arguments *quod neutrum*, namely the one stated in §6. The major premise of this argument – the requirement that the subject of a science have attributes which can be proved of it – is not questioned. Rather, these paragraphs aim at rejecting the minor premise:

(m) 1. God does not have attributes which can be proved of it; 2. Being does not have attributes which can be proved of it

Of course, §§25-26 are restricted to rejecting (m.1), since (m.2) is not relevant from the point of view of Averroes' position. In §25 Scotus makes his main point against (m.1), maintaining that God does indeed have attributes and providing examples of such attributes. Scotus observes that the attributes he mentions are conceived *secundum se* subsequent to God's essence⁵¹⁸, and this is surely meant to clarify that they are somehow distinct from God's essence and demonstrable of it.

⁵¹⁸ Because they express a feature God has with respect to something external to him.

In §26 Scotus answers the two arguments in favour of (m.1) which had been put forward in §7. The first argument moved from the view that attributes are external to the essence of their subjects in order to claim that God cannot have attributes. Scotus answers denying that attributes are *always* distinct from their subjects *essentialiter* – a kind of distinction which should be probably identified with what Scotus calls *differentia realis* a few lines later. Rather, a difference by notion (*ratione*) is enough to ground a distinction between attribute and subject. Now, in creatures, due to their imperfection, attribute and subject are always also distinguished by a *differentia realis*. By contrast, there is real identity between God’s attributes and his essence; still, God’s attributes differ *ratione* from his essence, and this is the ground for the distinction between subject and demonstrable attributes in God. As for the second argument in §7, it consisted in quoting Avicenna’s claim that there is no demonstration of God. In §26, Scotus answers this argument by providing two ways of interpreting Avicenna’s claim without this implying that no attribute can be demonstrated of God: either Avicenna was referring to demonstrations through a prior cause, or to demonstrations through the definition of the subject (God lacks a definition: see §23).

In rejecting (m.1), §§25-26 reject the second main argument *quod neutrum* as far as God is concerned. Again, the principle according to which the subject of a science must have attributes which can be proved of it does not prevent God from being the subject of metaphysics.

[§§27-29] In these paragraphs Scotus provides an answer, from the point of view of Averroes’ position, to the third of the main arguments *quod neutrum*, namely the one stated in §9. Unlike the answers to the first and the second argument, here Scotus does not address the minor premise, but the major one. This is evidence that he deems the part of the minor premise concerning God as correct (God does not have either principles or parts), and indeed he had not even provided any proof for it, declaring it evident in §10. Accordingly, it is (M) the major premise of this argument – the requirement that the subject of a science have principles and parts – which is called into question in order to reject the third argument *quod neutrum*.

Basically, three independent discussions of the major premise are to be found in §27, §28, and §29. Only the discussion in §28 addresses the major premise in its full scope – both principles and parts; §27 and §29, by contrast, are restricted to considering the requirement that the subject have principles.

In §27 Scotus simply denies that the subject of a science must have principles prior to itself. What the subject of a science must have, by contrast, are “the principles of the properties”, in virtue of which the properties of the subject inhere in the subject itself – this is so, of course, because the task of a science is to demonstrate that given attributes inhere in its subject. Even this requirement,

however, is restricted to subjects of which a *propter quid*-demonstration can be had; since there is only a *quia*-demonstration of God, effects are employed instead of principles, as middle terms more known to us, in order to prove given attributes of God.

Unlike §27, where Scotus clearly denies that the subject itself must have principles, §28 tries to account exactly for Aristotle's statement that the subject itself has principles and parts. Scotus suggests here that this statement by Aristotle should not be considered as necessarily true of the subject of a science, but as true in most cases. As a consequence, God may very well be the subject of metaphysics without any necessary epistemological rule being broken.

Another, alternative way of interpreting Aristotle's statement that the subject of a science must have principles is suggested in §29: "principles" refers to propositional principles, namely the premises from which demonstrations start⁵¹⁹. Also in this case, it would be possible to pose God as the subject of metaphysics, for the terms of the propositional principles in question may also be the effects of the subject of a science – in this case, God's effects – as long as the principle itself is immediately known once its terms are known. Such principles, having God's effects as their terms, could be used as premises to demonstrate something about God, and in this sense God would be said to have propositional principles.

The discussions of (M) in §§27-29 reject the third main argument *quod neutrum* as far as God is concerned. God can be the subject of metaphysics even if he has not principles or parts, for having principles and parts is not necessary to be the subject of a science. On the other hand, God has the principles which are really required of the subject of a science: propositional principles and effects serving as middle terms in demonstrating God's attributes. Incidentally, I would also notice that these last points (namely, those made in §27 and §29, rather than §28) do not fit really well with the spirit of the rejection of the first argument *quod neutrum*, and especially of §22. In keeping with that, one should take care of explaining how the subject of a science *secundum se* respects given epistemological requirements, its status *quoad nos* being irrelevant. By contrast, God's principles mentioned in §27 and §29 are supposed to be principles *quoad nos*.

This is the end of the section composed of §§19-29, devoted to the rejection, from Averroes' point of view, of the arguments *quod neutrum* as far as God is concerned. As a result of this rejection,

⁵¹⁹ The explanation Scotus provides for this idea is not as clear as the idea itself. Problems are compounded by a plausible variant reading found in three of the collated manuscripts: *praedicari* instead of *probari* at p. 26, ll. 15-17. If we conform to the reading *probari*, it becomes hard to make sense of *in aliqua propositione*, for this should refer to the premise in virtue of which the inherence of something in the subject is proved, rather than to the conclusion expressing such inherence. In other words, we should probably assume quite a strange use of the preposition *in* in order to understand the text. The reading *praedicari*, by contrast, would make much a better sense: every subject of science is also the subject of some proposition which must be assumed as a first principle in demonstrations concerning that very subject. However, this sort of explanation would be pointless with respect to the intended application to the case of God as expressed in the final part of §29: in that case, God would not be the subject of the propositional principles in virtue of which something is demonstrated of him.

maintaining Averroes' view turns out to be not currently hindered by anything. In the very next section, however, Scotus moves to a refutation, based on new arguments, of Averroes' position.

[§§30-35] These paragraphs contain Scotus' refutation of Averroes' position. Going into details, Scotus states three arguments against Averroes. The first argument is stated in §§30-31; the second argument is stated in §34; the third argument is stated in §35. §§32-33 are *extra* making remarks on the first argument.

Before having a closer look at the arguments, it is useful to clarify the position against which they are put forward. In [1], the introduction to the *quaestio*, and then again in §13, Scotus had described Averroes' position as maintaining that God and Intelligences are together the subject of metaphysics. However, the arguments *quod neutrum* and their rejection in §§19-29 deal with the view that God, rather than God *and* Intelligences, are the subject of metaphysics. Scotus' view on the relations between these two positions (namely God vs. God and Intelligences) would be difficult to outline. What will become clear, however, is that he reckons them as two distinct positions, for at least the former may be maintained while the latter is rejected. It is also clear that Scotus sees the inclusion of Intelligences as distinctive of Averroes' view, which he will deem false throughout the whole *quaestio*.

Now, given the ambiguity concerning the target of Scotus' discussion: are the rejections in §§30-35 directed at "God" or at "God and Intelligences"? Ideally, the same position should be discussed in the three arguments. This turns out not to be the case, though: only the second argument (namely the one in §34) is directed at "God and Intelligences", while the first and third arguments (in §§30-31 and in §35, respectively) are expressly directed at "God"⁵²⁰.

The presence of arguments against both the positions implies that, at this stage, Scotus believes that God cannot be the subject of metaphysics, either alone or together with Intelligences. One can also notice that the arguments directed at "God" are likely to be effective also against the position "God and Intelligences". By contrast, the argument in §34 is inherently directed at "God and Intelligences" and cannot be applied to "God". The relevance of this for the developments of the *quaestio* will become evident in due course, since in section [7] – which, it will be recalled, definitely does not belong to the first redaction of the *quaestio* – Scotus is to maintain that God is the subject of metaphysics. This notwithstanding, he will keep deeming Averroes' position erroneous for pulling God and Intelligences together as the subject of metaphysics, and he will do so again on the basis of

⁵²⁰ It might be no coincidence that the second argument alone opens with stating that it is "against the Commentator".

the argument in §34. On the other hand, since the arguments in §§30-31 and in §35 are expressly directed at “God”, Scotus must have somehow overcome them by the time he writes section [7].

[§§30-31] These two paragraphs contain the first refutation of Averroes’ position. As said, this refutation is directed at the position “God” and I believe it provides the main reason why Scotus rejects this position in the first redaction of the *quaestio*. The refutation itself is stated in §30, while §31 is meant to prove one of its claims. The text presents several problems, though, which, I believe, point to the presence of an *extra* within §30 itself. In order to highlight these problems, I shall first of all analyse §30 as found in the critical edition – in other words, as it were entirely part of the first redaction of the text.

I would repeat here that the position Scotus has to reject is the view that God is the subject of metaphysics: the whole *quaestio* is concerned with the subject of metaphysics, and Averroes’ position, which is being discussed in these paragraphs, is exactly a position concerning the subject of metaphysics. Having a closer look at §30, however, one finds an argument which is stronger than a refutation of Averroes’ position. Apparently, not only does the argument deny that God can be the subject of metaphysics, but it also proves that God cannot be enquired into in metaphysics in any way.

Ideally, the argument in §30 should be seen as made of two premises, from which conclusion (C) can be drawn:

- (P1) metaphysics is a science *propter quid*;
- (P2) there is no science *propter quid* enquiring into God in any way;
- (C) metaphysics does not enquire into God in any way.

Scotus would argue for (P1) in the first half of the paragraph on the basis of some statements by Aristotle: since metaphysics is the most certain science (*Metaphysics A*), and since a science *propter quid* is more certain than a science *quia* (*Posterior Analytics A*), metaphysics must be a science *propter quid*.

In the second half of the paragraph Scotus would argue for (P2). In particular, (P2) seems to be a consequence of four more basic claims, which are meant to rule out all possible ways (at least, Scotus deems his list as exhaustive) in which God might be enquired into by a science:

- (P2.1) no science *propter quid* deals with God as its first subject;
- (P2.2) no science deals with God as a cause;
- (P2.3) no science deals with God as an effect;
- (P2.4) no science deals with God as a propositional principle.

(P2.1) might be seen as the main claim here, for it alone would be sufficient, together with (P1), to reject Averroes' position. Scotus states (P2.1) without any further comment in §30, but I would maintain that §31 amounts precisely to a proof of (P2.1) – I shall come back to this later.

By contrast, Scotus does say something to justify his assertion of (P2.2), (P2.3), and (P2.4). As for (P2.3) and (P2.4), he declares them to be certain – and of course, since God supposedly has no cause and is not a propositional principle, we can follow Scotus in taking the truth of (P2.3) and of (P2.4) for granted.

As for (P2.2), Scotus states that no science enquires into God as a cause because he does not cause anything with necessity – namely, he is a free cause, whatever Aristotle's opinion on this matter may be. The fact that Scotus maintains (P2.2) here is problematic, for in answering the arguments in favour of Averroes' position (namely in [3.e]) he will claim that metaphysics enquires into God inasmuch as he is a principle of the subject of metaphysics.

Another problem comes from the fact that, in asserting (P2.2), (P2.3), and (P2.4), Scotus does not refer to sciences *propter quid* specifically. Are we to understand that (P2.2), (P2.3), and (P2.4) hold true of sciences more generally, or that a restriction to sciences *propter quid* is implied? Of course, (P2.3) and (P2.4) may very well be referred to sciences more generally: God is not an effect or a propositional principle, so that he cannot enter any science, whether *propter quid* or *quia*, as though he were one. The situation about (P2.2), on the other hand, is not as clear. Considering X as a cause in a science *propter quid* must mean that X allows for a *propter quid* demonstration concerning the subject of that science. This is not possible for God, for he does not bring about effects by necessity. What can it mean, on the other hand, that X is considered as a cause in a science *quia*? A science *quia* moves from effects to causes – but, for what we have seen before, the cause should be posited as the *subject* of that science, whose attributes are demonstrated in virtue of its effects.

The problem is compounded by the fact that, after stating (P2.1) and (P2.2), Scotus concludes that God is not considered in any science either as subject or as cause. There is no restriction in the conclusion to sciences *propter quid*, as there should be, given the restriction in (P2.1).

From (P2.1-4) Scotus concludes that God is not enquired into by any science in any way. Again, it is not clear whether a restriction to sciences *propter quid* is implied, as it should, or not. Be it as it may, it is certainly hard to make sense of the phrase which follows, namely “*ut concedit responsio ad tertiam rationem*”. There can be little doubt that the *responsio ad tertiam rationem* referred to here is the one stated in §§27-29. However, none of these paragraphs states that God is not enquired into by a science in any way, or at least that he is not enquired into by a science *propter quid* in any way. All that is stated in §27 is that there can be only a demonstration *quia* concerning

God – which simply amounts, I believe, to denying that there may be a science *propter quid* having God as its subject.

One final problem is posed by the beginning of §31, namely the phrase “*et hoc probatur*”. As already mentioned, I am going to maintain that §31 contains an argument only for (P2.1). However, the “*hoc*” at the beginning of §31 should refer to the conclusion of (P2.1-4), rather than to (P2.1) alone.

To sum up, §30 presents the following difficulties: i) the argument proves more than is needed to refute Averroes’ position; ii) it contradicts the view that God is enquired into in metaphysics as a cause of its subject, which is then maintained as soon as §§36-37; iii) the overall argument is not strictly valid due to the ambiguity between the restriction to sciences *propter quid* and a reference to sciences more generally; iv) the reference to the *responsio ad tertiam rationem* seems to be wrong; v) “*et hoc probatur*” at the beginning of §31 should refer only to (P2.1).

I believe there is no way to solve these difficulties interpreting the text as it stands. However, the critical apparatus points to an interesting omission found in the text of four manuscripts (one of them presents the omitted passage copied in the margins by a second hand): from “*ut de primo subiecto*” (l. 13) to “*igitur nullo modo*” (l. 17). If we follow these manuscripts in omitting the passage, the last sentence of §30 would be:

De Deo autem non est scientia propter quid, ut concedit responsio ad tertiam rationem.

Accordingly, the argument in §30 would be made of two premises, expressly stated in the text, from which the conclusion (C*) can be drawn:

- (P1) metaphysics is a science *propter quid*;
- (P2*) there is no science *propter quid* of God;
- (C*) God is not the subject of metaphysics.

I believe there is no doubt that, when Scotus denies that there is a science *propter quid* of God, he means that there is no science *propter quid* having God as its subject. In other words, (P2*) = (P2.1).

Of course, the omission might be seen as a scribal error due to homoeoteleuton (*ut...ut*). However, it is striking to notice how all problems listed above do not affect §30 omitting the relevant passage:

- i) the argument would not prove more than is needed – it would amount exactly to a rejection of the view that God is the subject of metaphysics;
- ii) the argument does not deny that God may be enquired into in metaphysics as the cause of its subject;
- iii) both premises refer to a science *propter quid*;

- iv) within the *responsio ad tertiam rationem* – to be more precise, in §27 – one finds the statement “*de Deo solummodo est demonstratio quia*”, which is the same as stating that “*de Deo non est scientia propter quid*”;
- v) paragraph §31 is a proof of (P2*), which is stated in the last sentence of §30.

I believe this to be sufficient evidence to deny that the passage omitted by the four manuscripts was originally in the first redaction of the *quaestio*. It is plausible to deem it as an *extra* added by Scotus himself. The fact that here Scotus denies that God can be enquired into in metaphysics as a cause of its subject suggests that this passage is posterior not only to the first redaction, but also to other *extra*'s we shall examine later.

As already said, §31 is meant to provide a proof for (P2*). This amounts, according to Scotus, to proving that there is no demonstration *propter quid* concerning God, namely no demonstration moving from causes to effects and in virtue of which something can be demonstrated of God. Scotus seems to take into account two sorts of causes in virtue of which something may be demonstrated of something else in order to show that a demonstration *propter quid* concerning God is not possible in either case. In particular, a demonstration *propter quid* of God would be possible (a) either in virtue of a cause prior to God himself, (b) or in virtue of a cause which is the middle term in a demonstration of an attribute of God. I believe Scotus' point here to be that, in case (b), the cause in question is not prior to God, but to the attribute which is demonstrated of God.

The impossibility of (a) is certain according to Scotus, surely because there is no cause prior to God. As for (b)⁵²¹, Scotus argues that God's attributes are, by essence, identical to him – accordingly, nothing can be prior by nature to God's attributes, just as nothing can be prior by nature to God. This, together with the assumption that a cause should be distinct from what is caused and prior by nature to it, entails that God's attributes cannot have any causes.

Scotus draws the conclusion that no attribute can be proved of God in virtue of a cause, whether it be a cause “*in essendo*” or “[*in*] *inhaerendo*” – I think it likely that these two kinds of causes correspond to (a) and (b), respectively. On the other hand, a demonstration concerning God in virtue of his effects would not be a demonstration *propter quid*. This concludes the argument for (P2*), and the overall argument against Averroes in §30 is thus justified.

[§33] As I mentioned above, §33 is marked as an *extra* in the critical edition, together with §32. I do not consider §33 an *extra*, and I shall justify this choice below, while commenting on §32. I should say in advance, however, that if §32 is an *extra* while §33 is not, then §33 cannot be opened

⁵²¹ The distinction between absolute and relational properties introduced by Scotus does not seem to play any role in the argument.

by the phrase “*alia responsio*”; I believe it plausible that the word “*alia*” was not present in the original text.

In §33 an objection is raised against the argument in §31; however, Scotus provides an answer to the objection immediately, so that the validity of §31 remains unaffected. The objection simply consists in the remark that one attribute of God can be prior to another attribute of God. The implicit consequence of this must be that a demonstration *propter quid* about God is possible inasmuch as the attribute which is prior can be used to demonstrate *propter quid* the attribute which is posterior. This being the case, the argument in §31 would be wrong in denying the possibility of a demonstration *propter quid* about God on the basis of the essential identity between God and his attributes (which entails that nothing can be prior to God’s attributes, just as nothing is prior to God). Rather, the conceptual distinction between the attributes of God would be sufficient to grant the possibility of a demonstration *propter quid*.

Without going into details, Scotus answers the objection denying the last point, namely that the conceptual distinction between the attributes of God is sufficient to have a demonstration *propter quid*. If this is the case, then the impossibility of a demonstration *propter quid* concerning God is confirmed, together with the validity of the first refutation of Averroes’ position in §§30-31.

[§34] This paragraph contains the second refutation of Averroes’ position, which is directed at “God and Intelligences” specifically. The argument may be reconstructed as follows:

- (P1) The subject of a science must be univocal
- (P2) Nothing is univocal to God and Intelligences
- (C) No single science concerns God and Intelligences

As said, Scotus will recall this argument later in the *quaestio*, in §125, in order to reject the position “God and Intelligences” while maintaining that God is the subject of metaphysics. However, I also believe that, despite appearances, the meanings of the arguments in §34 and §125 are slightly different. Here I shall try to provide a deeper insight into §34.

(P1) is not explicitly stated in this form; rather, Scotus quotes Aristotle’s statement in *Posterior Analytics* A 28 according to which one science deals with one genus. This statement definitely entails (P1) and, as we are going to see, it might even be meant as equivalent to (P1) in §34. In any case, the idea underlying (P1) is that the subject of a science is unique, so that a plurality of things can fall within the consideration of a single science only if those things fall under a single concept.

As for (P2), it allows for a stronger and a weaker interpretation:

- (s) nothing at all is univocal to God and Intelligences

(w) nothing is univocal *only* to God and Intelligences

Of course, (s) entails (w), but not vice versa. According to (s), no concept whatsoever would include in its extension both God and Intelligences. On the other hand, (w) only states that the extension of no concept consists *exactly* in God and Intelligences, leaving the possibility open that something might be univocal to God, Intelligences, and something else. In particular, (s) entails that “being” is equivocal, while (w) does not.

Now, it is beyond doubt that, at this stage of development of the *quaestio*, Scotus maintains the equivocality of being (this will be made explicit in §85). Accordingly, it is possible that (P2) should be interpreted as (s), and Scotus’ argument for (P2) strongly suggests that he does indeed mean (P2) as (s) here.

Scotus’ proof for (P2) runs as follows: if there was something univocal to God and Intelligences, then this would be divided by differentiae – God could therefore be defined in virtue of genus and differentia, which is impossible. Most noteworthy in the argument is the entailment from “univocal” to “divided by differentiae” – in other words, from “univocal” to “genus”. Scotus is well-known for drawing a distinction between “univocal” and “genus” as an element of his standard view on the univocity of being: being is univocal, but still not a genus; it is a single concept, but it is not immediately divided by differentiae. On the contrary, Scotus seems to identify the notions of “genus” and of “univocal” in an earlier stage of his thought, while endorsing the equivocality of being – at least, this seems to be the case as far as §34 is concerned.

This being the case, one should notice that Scotus’ proof for (P2) does not only prove (w), but also (s): were something univocal to God and Intelligences, this would be divided by differentiae into “lower” univocal concepts – as a consequence, God would be defined in virtue of the first univocal concept and of one or many differentiae.

To conclude: Scotus’ argument in §34, which denies that God and Intelligences can be the subject of metaphysics, is based on the view that no univocal concept is common to God and Intelligences, regardless whether such a concept extended to something beyond God and Intelligences or not. For, given the identification between “univocal” and “genus”, if God fell under an univocal concept together with anything else, he could eventually be defined by genus and differentia, which is impossible.

[§35] This paragraph contains the third refutation of Averroes’ position, which is directed, like the first refutation, at the position “God”. I think Scotus does not attach much importance to this argument against the position “God” in itself, for he must deem one of its two premises as false or, at

least, as not adequately justified. On the other hand, Scotus probably deems this argument as effective against Averroes specifically, inasmuch as it points to an inconsistency in his views.

The refutation can be outlined as follows:

(P1) A science cannot have more than one subject

(P2) Something other than God is the subject of metaphysics

(C) God is not the subject of metaphysics

One premise of Scotus' refutation, namely (P1), is unproblematic: basically, Scotus states here expressly the principle of uniqueness of the subject, which we had already seen implied in §34.

(P2) is more of a problem. In order to justify this premise, Scotus says that it will be shown "*etiam per Commentatorem*" while dealing with Avicenna's position. As we know, Avicenna's position consists in maintaining that being is the subject of metaphysics, and we shall see that, within the discussion of Avicenna's position, Averroes himself is quoted –in §71, but also in §68 and §70 – as an *auctoritas* in support of that position. I would conclude that (P2) in §35 basically amounts to (P2*):

(P2*) Being is the subject of metaphysics

Thus interpreted, however, the argument is problematic, for Scotus would not endorse (P2*) at this stage of development of the *quaestio*: he will eventually reject Avicenna's position and maintain a different view in his own *solutio*. This being the case, the argument in §35 is not successful in refuting the view that God is the subject of metaphysics.

One may try to maintain that, even though Scotus justifies *here* (P2) reading it as (P2*), this is not the only way to argue for the truth of (P2), and that it is still possible for him to maintain (P2) while rejecting (P2*). Indeed, this is what he will do at the end of the first redaction of the *quaestio*, namely in [5], where he states his view that substance is the subject of metaphysics:

(P2**) Substance is the subject of metaphysics

In that case, the argument in §35 could still be effectively employed by Scotus to refute Averroes' position, for (P2) is actually grounded on (P2**), which is endorsed by Scotus, rather than on (P2*), which is not.

This defence of the argument in §35 is not successful, though. As we shall see, Scotus' endorsement of (P2**) depends itself on the refutation of the view that God is the subject of metaphysics (in particular, on the refutation in §§30-31). In other words, Scotus has no independent, direct proof of (P2**): basically, he will argue that, since God cannot be the subject of metaphysics,

then substance must be. Accordingly, he cannot effectively employ (P2**) in order to reject the position “God” in the first place⁵²².

To sum up, the argument in §35 is ultimately useless to refute Averroes’ position *from Scotus’ point of view*. Why does Scotus state it then? I do not think he is just being inaccurate. Rather, I believe Scotus states the argument in §35 as a refutation of Averroes’ position *from the point of view of Averroes himself*. According to this interpretation, the main point of Scotus’ stating (P2) in §35 is the phrase “*etiam per Commentatorem*”: (P2) is grounded on (P2*) not from Scotus’ point of view, but from Averroes’ point of view. In other words, Scotus stresses the fact that Averroes seems to maintain that being is the subject of metaphysics: if this is the case, he cannot also maintain that God is the subject of metaphysics. The argument in §35 appears to be an argument *ad personam* against Averroes, who is guilty of violating the principle of uniqueness of the subject of science.

[§36-67] These paragraphs close the discussion of Averroes’ position by answering the arguments which had put forward in §§14-18 to support Averroes. Before going into the details of the answers, I would make some remarks on the overall structure of this section and highlight some problems which it poses.

In the outline above, I divided this section into three parts in the following way:

- | | |
|----------------------------------------------------|-------|
| i) Preliminary remarks | 36-42 |
| ii) Answers to the arguments <i>ex auctoritate</i> | 43-61 |
| iii) Answers to the arguments <i>ex ratione</i> | 62-67 |

Scotus expressly declares that (i) is preparatory to (ii) and (iii): “*ad illa igitur quae videntur facere pro Commentatore solvenda, notandum [...]*”. More precisely, this sentence introduces a remark which is stated in §§36-37: accordingly, from it alone we can only infer that §§36-37 are preparatory to (ii) and (iii). However, §42 is introduced by the phrase “*aliud est notandum*”, and we should definitely understand that §42 – just like §§36-37 – states something which is noteworthy to answer the arguments in favour of Averroes. There are no “preliminary remarks” other than the two just mentioned, namely the one in §§36-37 and the one in §42 respectively.

As for the other paragraphs of part (i), §41 is an objection to a statement made in §40; there is evidence for considering §41 an *extra*, as the editors do. On the other hand, §§38-40 are more of a problem. They contain two objections to the first remark (the one in §§36-37), one of which is accepted as correct. They are not marked as *extra* by the editors. There is only one clue in the tradition to their being an *extra*: according to the second hand of ms. H, all of §§38-57 should be considered

⁵²² See the commentary on section [5] below.

as an *extra*. This indication, I believe, cannot be correct, for it would include in the *extra* also §42, which is essential, together with §§36-37, for the development of the first redaction of (ii). By contrast, there is better evidence that §§44-57 should be deemed an *extra*, and the editors are probably right in following this indication.

If §42 definitely belongs to the first redaction of the *quaestio*, however, §§38-40 and §43 are quite problematic. To begin with, from the point of view of style §§38-40 really look like an *extra*. Moreover, some of the paragraphs following §§38-40 and definitely belonging to the first redaction of the *quaestio* seem to presuppose the absence of §§38-40. More in particular, §42 and §58 apparently ignore the objection made in §38 and deemed as correct in §40; they rather conform to the view stated in §37.

On the other hand, §43 clearly presupposes §§38-40; accordingly, if §§38-40 are an *extra*, then §43 must be an *extra* as well. In this respect, one should notice another problem posed by §43. In the outline provided above, §43 opens part (ii) and is followed by the *extra*, already mentioned, of §§44-57. Part (ii) is closed by §§58-61, in which the arguments *ex auctoritate* are answered. More in detail, §§58-60 provide three explanations of the quotation from *Metaphysics* E in §14 (notice the opening line of §58: “*ad auctoritatem primam VI huius...*”), while §61 is meant to answer the other quotations from *Metaphysics* E (“*ad alias auctoritates VI...*”; actually, there is only one other argument *ex auctoritate* in §§15-16, but Scotus might be referring to the plurality of quotations from *Metaphysics* E on which the argument is based). As already said, §58 seems to presuppose the absence of §§38-40, and I would add that §§59-61 do not presuppose the presence of §§38-40.

Turning back now to §43, we should notice that it seems to play the very same role as §§58-61: its opening line – “*secundum hoc patet ad auctoritates Philosophi*” – suggests that it is meant to explain *all* the *auctoritates* quoted in §§14-16. As for the words “*secundum hoc*”, they must refer to part (i) in its entirety, with the only exception of §41: §43 definitely presupposes both the “preliminary remarks” in §§36-37 and §42, as well as the correction of the first remark in §§38-40.

To sum up, §43 seems to be alternative to §§58-61; the former presupposes the presence of §§38-40, while the latter – §58 in particular – presuppose its absence. The absence of §§38-40 is presupposed by §42 as well, and their style resembles the style of an *extra*. It would be tempting, given these data, to consider both §§38-40 and §43 to be *extra*.

This solution is not viable, though, because §62 presupposes the presence of §§38-40. §62 opens part (iii) and answers the argument *ex ratione* stated in §17; the remaining paragraphs of (iii), namely §§63-67, deal with the other argument *ex ratione*, namely the one in §18. Accordingly, it is hardly imaginable that §62 was not originally included in the first redaction of the *quaestio*: without §62 the argument in §17 would receive no answer, and the discussion of Averroes’ position would

therefore be lacking. If the text of §62 transmitted by the manuscript tradition is correct, the conclusion must be drawn that §§38-40 are not to be considered an *extra*.

This leaves us with the problems of §§38-40 and §43 unsolved. As far as I can see, the data in the critical apparatus do not provide any clue for an explanation. I can think of only one hypothesis which would allow us to explain all the data mentioned above. Scotus might have originally written parts (i) and (ii) in the following form:

(i) §§36-37 (first preliminary remark); §42 (second preliminary remark)

(ii) §§58-61 (answers to the *auctoritates*)

Before going on to write part (iii), however, Scotus must have gone back to his first preliminary remark, writing §§38-40 in order to correct it; on the same occasion, he must have also added §43 in order to answer Aristotle's *auctoritates* taking into account the correction provided by §§38-40. On this scenario, §§38-40 and §43 would not be *extra* properly speaking, for they would still belong to the first redaction of the *quaestio*. Rather, while certainly being afterthoughts, they would have been written during the first redaction itself.

[§§36-37] These paragraphs contain the first preliminary remark. The main epistemological point is made in §36, where it is also exemplified with the cases of physics, psychology, and logic; §37 presents the application of this point to the case of metaphysics.

Scotus' main point in §36 is that a science is said to be "about something" (*circa aliquid*) – let us say "about *x*" – not only if *x* is its subject, but also if *x* is a cause of its subject. To give just one of Scotus' examples: physics deals with nature even though nature is not its subject, but a cause of its subject. It is worth noticing that, in stating this point, Scotus is denying the inference from "a given science being about *x*" to "*x* being the subject of that science". On this inference, it will be recalled, most of the arguments supporting Averroes' view were grounded (the two *ex auctoritate* in §§14-16, as well as the first *ex ratione* in §17).

As for metaphysics, §37 makes clear that, when metaphysics is said to be about the highest causes, it is because the highest causes are the causes of the subject of metaphysics, rather than its subject. In order to show that Aristotle's view is this, Scotus closes the paragraph mentioning two passages in which Aristotle connects the enquiry into first causes to the enquiry into being, for the first causes are the causes of being *qua* being⁵²³.

⁵²³ This does not imply that Scotus endorses the view that being is the subject of metaphysics, or that he ascribes this view to Aristotle. Basically, from Scotus' point of view the enquiry into being *qua* being is the kind of enquiry proper to the science whose subject is substance.

Before leaving §§36-37, I would make a final remark on Scotus' view that a science deals with the causes of its subject. How are we supposed to understand this epistemological point? We can safely assume that a given science enquires into its subject and into the causes of its subject in different ways – otherwise there would be no reason for the causes not to be themselves the subject of that science. We can also assume that the relevant causal relation must play a role in the scientific enquiry of the causes of the subject of a science.

The author who, before Scotus, had clearly made the point that a science enquires into the causes of its subject is Thomas Aquinas. Just like Scotus, Aquinas does not expressly say why a science should deal with the causes of its subject. In *Super De Trinitate* q. 5 a. 4, he states that a science cannot be complete without a knowledge of the principles⁵²⁴. In the same article, he also states that, due to the limits of human intellects, separate substances cannot be the subject of a philosophical science – rather, philosophy (more precisely, metaphysics) can gain knowledge of them only starting from their effects. In this sense, they are enquired into by metaphysics inasmuch as they are principles of its subject. Aquinas' discussion of the metaphysical enquiry of separate substances suggests that he would endorse the following claim: if x is enquired into by a given science as the cause of its subject, then the knowledge of x is among the goals of that science. Metaphysics, for example, aims at knowing separate substances just for the sake of knowing them. In this respect, a science cannot be complete without a knowledge of the principles just because, in that case, it would miss one of its goals. This picture seems to be confirmed also by the prologue to the *Commentary on the Metaphysics*, where Aquinas identifies the subject of a science as the item whose attributes and causes are sought. Knowing the causes of the subject seems to be equated to proving an attribute of the subject: both should be deemed as a goal pursued by the scientific enquiry. Given this evidence, I believe the following view could be ascribed, at least to some extent, to Aquinas:

- A) Knowledge of the causes of the subject of a science is pursued in itself, and the attainment of such knowledge is possible inasmuch as the science moves from the knowledge of its subject to the knowledge of its causes.

According to (A), a science takes advantage of the causal relation between the subject and its causes in the direction “from effect to cause”. One may maintain, on the contrary, that a science should take advantage of the causal relation in the opposite direction, moving from the cause to the effect, and that the science deals with the causes of its subject only in order to move from them to the subject. Let us call this alternative view (B):

⁵²⁴ Aquinas, *Super De Trinitate*, q. 5 a. 4, p. 153 ll. 82-87: “Sciendum siquidem est quod quecumque scientia considerat aliquod genus subiectum, oportet quod consideret principia illius generis, cum scientia non perficiatur nisi per cognitionem principiorum, ut patet per Philosophum in principio Phisicorum”.

B) Knowledge of the causes of the subject of a science is only pursued inasmuch as it contributes to the knowledge of the subject, for causes are employed in demonstrations concerning their effects.

Scotus does not say which view he would endorse, whether (A), or (B), or some other, possibly halfway, view. However, I believe one can find one decisive clue in some paragraphs of the *quaestio*; here I shall restrict myself to §39. In §39 Scotus puts forward an objection to the view that God is enquired into in metaphysics as the cause of its subject: only a cause which causes by necessity can bring about some knowledge of its effect – but since God does not act by necessity, nothing can be known of God’s effects in virtue of God. This argument works as it is meant to work, but only if (B) is accepted. I should add that Scotus, as will become clear while commenting on §39, does not reject the rationale behind the argument. I would also add to what Scotus expressly says that an effect could presuppose by necessity a given cause even if this cause acts by freedom: accordingly, scientific knowledge would not be threatened in the direction “from effects to causes”. In other words, this argument is not only directed from the point of view of (B), but could not possibly even be formulated from the point of view of (A). I would conclude that Scotus takes it for granted that (B) is the proper way in which causes of the subject of a science enter the examination of that science. In Scotus’ view, a science takes into account the causes of its subject in order to gain knowledge *propter quid* of its subject, not in order to gain knowledge *quia* of the causes.

[§§38-40] These three paragraphs contain two objections against the first preliminary remark, made in §§36-37. More precisely, the objections are not directed at the general epistemological point – a science is said to be about the causes of its subject – made by Scotus in §36. Rather, they are directed at its application to the case of metaphysics in §37, namely to the view that the highest causes are enquired into in metaphysics as the causes of its subject. When Scotus mentions “the highest causes” in §37, he clearly has in mind God and the Intelligences, as the inclusion of this paragraph in the discussion of Averroes’ position reveals. The first objection against §37 focuses on the Intelligences, while the second one focuses on God; they are stated in §38 and §39, respectively. In §40 Scotus evaluates the two objections. He definitely accepts the one concerning Intelligences (§38). The one concerning God (§39) is more problematic: I believe he is basically rejecting it, but without committing himself in person to this rejection.

The objection against the Intelligences in §38 runs as follows: since Intelligences can only play their causal role in virtue of motion, they cannot be considered as causes but in physics. In other words, Intelligences are causes of mobile being, which is enquired into by physics, rather than causes of the subject of metaphysics – accordingly, from the epistemological point in §36 one cannot draw

the conclusion that metaphysics deals with Intelligences. Scotus is quite clear in §40 that this objection should be accepted as correct.

The objection against God in §39 has already been mentioned while discussing §§36-37: only a cause which causes by necessity can bring about some knowledge of its effect – and since God is a free cause, no knowledge of God’s effects can ever be gained in virtue of God. The implicit conclusion of the argument is, of course, that God cannot be dealt with as a cause in metaphysics – and, for that, in no science at all.

In §40, after having accepted the objection of §38, Scotus comments on the one in §39. He says that this objection assumes something which, according to Aristotle, is false, for Aristotle determined God to be an agent by necessity. Scotus is referring, of course, to the premise of the argument in §39 stating that God is a free cause. One should notice that this premise is not said to be false absolutely, but false according to Aristotle (*secundum intentionem Philosophi*). However, the fact that the premise is false according to Aristotle seems to be a sufficient reason to reject the argument in §39 – this is confirmed by subsequent paragraphs, in which God is still maintained to be dealt with in metaphysics as a cause of its subject.

The rejection of the objection in §39 as stated in §40 is interesting from the point of view of the strategy Scotus follows in the discussion of the positions of his opponents. Apparently, he would not object anything to Averroes (or to Avicenna) which is not ultimately grounded in Aristotle’s view – and this makes his refutations stronger, for they are grounded on views his opponents are supposed to endorse. Aristotle’s philosophy seems to play the role of a common ground, against which the tenability of given statements is to be tested.

[§42] Here Scotus states his second preliminary remark. This remark concerns “separate and immobile substances”, which may be safely identified with the Intelligences, as Scotus had called them so far. God must not be included in separate substances, as will become clear as soon as §43 (Scotus’ reason for this must be that God is not a substance).

Scotus begins by observing that separate substances do not fall within the consideration of any particular science, either physics (for they are not mobile) or mathematics (for they have no quantity). Accordingly, they must be examined by another, higher science, whose kind of consideration abstracts from both motion and quantity. From this Scotus draws the conclusion that separate substances are enquired into in metaphysics not only as causes of its subject, but also as the main parts of the subject (*non solum tanquam subiecti causae, sed tanquam principales partes subiecti*).

The phrase “*non solum tanquam subiecti causae*” refers to what had been established in §37, and indicates that §42 ignores §§38-40. The new point made in §42 is the idea that separate substances are the main parts of the subject of metaphysics. First of all, they must fall under the subject of metaphysics, so Scotus argues, because they cannot fall under the subject of mathematics or physics. Second, they are the *main* parts of the subject of metaphysics. The reason for this is given immediately afterwards: separate substances are abstracted *secundum esse* according to the sort of abstraction which is proper to metaphysics.

This last point is clarified better by Scotus’ subsequent remark. All that falls within the consideration of metaphysics, he notices, is examined in metaphysics according to an abstraction from motion and quantity *secundum rationem*. No matter whether something is mobile or has quantity: when it is examined in metaphysics, it is examined abstracting from quantity and motion. Of course, mobile things can also be examined inasmuch as they are mobile (they are so examined in physics), and things endowed with quantity can also be examined inasmuch as they have quantity (they are so examined in mathematics). By contrast, separate substances are examined solely (*praecise*) in metaphysics, because they are abstracted *secundum esse* – not only *secundum rationem* – from motion and quantity, namely according to the metaphysical kind of abstraction. This is why they are the *main* parts of the subject of metaphysics – corporeal substances are parts of the subject of metaphysics as well, but not its main parts.

As already said, God must not be included in separate substances, so that §42 does not apply to God. One may still wonder why the remark in §42 is restricted to separate substances. After all, one could reason in a similar vein that, since God does not fall within the consideration of any particular science, he must be examined by another, higher science, whose kind of consideration abstracts from both motion and quantity; accordingly, God should be part of the subject of metaphysics. There is no intrinsic problem with this argument – nonetheless, Scotus would not accept it. In §34 we came across the reason why he would not, and Scotus will make it explicit in §43: there is nothing univocal to God and anything else. This being the case, God cannot fall under the subject of any science – not even under the subject of metaphysics, which enquires into both corporeal and separate substances.

[§43] This paragraph is meant to answer Aristotle’s *auctoritates* quoted by Scotus in §§14-16. The quotations from Aristotle in question are of various nature: they state that metaphysics deals with first causes, that it deals with divine things, that it deals with immobile and separable things; again, that metaphysics is called theology, or that it is concerned with the most honourable genus (then identified with the genus of separate substances).

In in §58 Scotus does not distinguish between God and separate substances. However, the second answer (§59) definitely concerns separate substances. We can conclude that, in general, Scotus understands the mention of “immobile and separable” things in *Metaphysics* E as referring to separate substances. Accordingly, §58 must be read as referring to separate substances (at least, also to separate substances). This means that §58 states that separate substances are principles of (the subject of) metaphysics; this entails, in turn, that §58 ignores §§38-40: it is rather grounded on the original version of the first preliminary remark, as found in §§36-37.

By contrast, the second explanation of the first *auctoritas* (§59) is grounded on the second preliminary remark, namely on §42. Basically, Scotus maintains that Aristotle may be singling out metaphysics in *Metaphysics* E by mentioning the only things which are enquired solely by metaphysics. All other objects are enquired into, even if in different ways, by both metaphysics and particular sciences; separate substances, by contrast, are enquired into only in metaphysics, and this is why they are the principal parts of its subject.

While the answer in §59 identifies “immobile and separable” things with the main parts of the subject of metaphysics, which are abstracted *in essendo* from motion and quantity, the third answer (§60) takes into account the subject in its entirety. “Immobile and separable” are here identified with the notions under which everything falling under the subject of metaphysics is examined in metaphysics. In this case, metaphysical objects are said to be “immobile and separable” according to an abstraction *secundum rationem*, rather than *secundum esse*.

To sum up, Scotus’ third answer to the first *auctoritas* simply denies that “immobile and separable” should be understood as referring to specific objects falling under the consideration of metaphysics. By contrast, the first and the second answer do not deny that “immobile and separable” things are to be identified with separate substances. However, they deny one assumption of the arguments in §§14-16 we saw to be crucial for those arguments to be successful: “if a science enquires into x , and in virtue of x it is distinguished from other sciences, then x is the subject of that science”. According to §§58-59, x may very well be a cause of the subject or among its main parts.

Having provided three possible explanations for Aristotle’s reference to “immobile and separable” things, in §61 Scotus addresses “the other *auctoritates*” of *Metaphysics* E. However, the paragraph only explains why Aristotle calls metaphysics “theology” (which is the main point, mentioned in §15, of the second argument *ex auctoritate*): “theology” is a name referring to the cause of the subject of metaphysics, rather than to its subject.

[§§62] This paragraph answers the first argument *ex ratione* in support of Averroes, namely the one stated in §17. Here again, Scotus denies the assumption that, if something is enquired into in

a science, then it must be the subject of that science. From the fact that separate substances are not enquired into in mathematics or physics, the argument in §17 had drawn the conclusion that they must be the subject of metaphysics. In his answer in §62 Scotus admits that separate substances must be examined in metaphysics, but specifies a different way in which they are there examined. In particular, he states that they are examined “not as causes, but as main parts of the subject”.

The specification “*non ut causae*” entails that §62 presupposes §§38-40. Accordingly, since §62 must belong to the first redaction of the *quaestio*, §§38-40 must belong to the first redaction as well, at least if the text of §62 we read is the original version of that paragraph. There is no strong reason to suspect it is not. However, for the sake of completeness, there are two points worth mentioning. First, the inclusion of the specification “*non ut causae*” is somehow strange, superfluous at best – the argument is supposed to deny that separate substances are the subject of metaphysics, not that they are its causes. Second, one should compare two statements found in §42 and §62, respectively:

§42: *non solum tanquam subiecti causae, sed tanquam principales partes subiecti*

§62: *non ut causae, sed tanquam principales partes subiecti*

As they stand, §42 presupposes the absence of §§38-40, while §62 presupposes its presence. Nonetheless, the similarity of the two sentences is striking and makes us alert of the fact that, had a single word (*solum*) been originally present in §62 (and then deleted by Scotus himself, or omitted in the tradition), we would have a scenario quite different from the one just described.

[§§63-67] These paragraphs deal with the second argument *ex ratione* in support of Averroes, namely the one stated in §18, which established God as the subject of metaphysics on the basis of a vertical *pros hen* of all beings with respect to him. More precisely, it is §63 that gives an answer to the argument as found in §18. Having been answered in §63, however, the argument of §18 is restated and corroborated twice, in §64 and §66 respectively; the new versions of the argument are then immediately answered in §65 and §67.

The answer in §63 addresses the first premise of the argument in §18: if a science enquires into many things which are attributed to some first single thing, then that science especially deals with such first thing as its proper subject. As I mentioned above, Scotus accepts this premise throughout the *quaestio* – accordingly, he does not reject it here. However, he does not always accept it in an absolute form, and the strategy followed in §63 consists exactly in relativising its applicability. The first item to which many things are attributed, Scotus tells us, is indeed the subject of the science enquiring into those things, but only if that first item fulfils all conditions which are required of the subject of that science. In the case at stake, Scotus’ point is that God does not fulfil at least one

condition required of the subject of metaphysics: metaphysics is supposed to be a science *propter quid*, while there cannot be any demonstration *propter quid* concerning God.

To sum up, the answer to §18 provided in §63 is based, on one hand, on the relativisation of the first premise of §18; on the other hand, on Scotus' first refutation of Averroes' position (§§30-31), which declares the reason why the relativised premise does not apply to God: metaphysics must be a science *propter quid*. These are the main points behind all the discussion in §§63-67 and are presupposed by the rejections, in §65 and §66, of the new arguments of §64 and §66. These new arguments, however, do not simply restate the argument in §18, but also corroborate it in interesting ways and are therefore worth a closer scrutiny.

Basically, it is the argument in §64 that introduces the new elements on which also the argument in §66 is based. Most importantly, Scotus takes here into account the case in which more than one *pros hen* – each with its own “subject of attribution” – is viable for a given set of things. Apparently, in this case such set of things could be the object of different enquiries, resulting from the several *pros hen*'s. More precisely, Scotus makes here the case, for a given set of things, of different *pros hen*'s being hierarchically ordered, where the hierarchy in question consists in the relations of priority/posteriority obtaining between their different “subjects of attribution”. The main idea behind the argument is that such a hierarchy of *pros hen*'s determines an isomorphic hierarchy of the enquiries resulting from them.

Scotus' argument in §64 runs as follows:

(P1) When many things are attributed to other things *ut ad prius et posterius*, then the absolutely first enquiry (*simpliciter prima consideratio*) into those many things is the one according to their attribution to what is absolutely first among the subjects of attribution (*ad simpliciter primum*);

(P2) All accidents are attributed to substance immediately and to God *ut ad prius*;

(C) The absolutely first enquiry into all beings is according to their attribution to God.

The implicit premise of the argument is that metaphysics is not only supposed to be an enquiry into all beings, but also the absolutely first enquiry into them. This can be traced back to the view of metaphysics as the highest and first science, which Scotus presupposes here. This being the case, the argument aims at identifying the absolutely first enquiry into all beings.

In (P1) Scotus states that, in case of hierarchically ordered *pros hen*'s for a given set of things, the absolutely first enquiry into those things is the one according to the absolutely first subject of attribution. In (P2) Scotus takes into account two *pros hen*'s for the set of all accidents. All accidents, he says, are attributed both to substance and to God; however, they are attributed to God *ut ad prius*. The last statement is justified by observing that substance itself is attributed to God – accordingly, substance must be posterior to God. From (P1) and (P2) the conclusion (C) is drawn: the first enquiry

into all beings is about all beings (accidents and substances) inasmuch as they are attributed to God, rather than to substance.

The argument in §64 is immediately, and briefly, answered in §65. Basically, Scotus grants that the absolutely first enquiry into all beings is according to their attribution to God. Still, he repeats that God cannot be the subject of metaphysics because there cannot be a science *propter quid* of God. Accordingly, in metaphysics all beings can only be attributed to God inasmuch as he is their cause. This sort of attribution is apparently sufficient to make metaphysics the absolutely first enquiry into all beings (probably because there is no other possible enquiry which could be prior to that one).

In §66 the argument in §18 is restated again. The main idea behind §66 is similar to the one in §64, even though Scotus makes different assumptions explicit in §64 and in §66. In particular, in §66 Scotus states expressly as a premise the view that metaphysics is the first science. By contrast, he implicitly assumes that the first science should have as its subject the *simpliciter primum* to which all beings are attributed. The argument runs as follows: the *simpliciter primum* to which all things are attributed is God; therefore, God is the subject of the first science. In other words, §66 argues that metaphysics, as the science of all beings, would not be the first science unless its subject were the *simpliciter primum* to which all beings are attributed.

Scotus' answer to §66 is given in §67: he states that the argument in §66 would indeed establish God as the subject of metaphysics, but only if God also met all the other requirements set out for the subject of metaphysics. Since he does not (for he cannot be the subject of a science *propter quid*), he also cannot be the subject of metaphysics.

The final part of §67 is interesting, inasmuch as Scotus announces that, later in the *quaestio*, he will show what is the *primum* to which all beings are attributed and which, in addition to this, also fulfils all other conditions to be the subject of metaphysics. Scotus' reference is to §§92-96, where he will state his *solutio* (the *solutio* of the first redaction of the *quaestio*). Still, the identity of the subject of metaphysics in Scotus' view is hinted at already in §67: Scotus mentions again Aristotle's *Metaphysics* Γ 2, which had been employed in §18 in order to introduce the *pros hen*, and observes that Aristotle's *primum* in the *pros hen* is substance, rather than God.

This paragraph closes section [3], namely Scotus' discussion of Averroes' position. Before moving to section [4], it is worth highlighting the main reasons behind Scotus' rejection of Averroes' position. We have seen that Scotus states three arguments against Averroes' position in §§30-31, §34, and §35. Leaving aside the argument in §35, which simply points to an inconsistency in Averroes' views, we have also seen that the arguments in §§30-31 and §34 are actually directed against two different positions, which we labelled "God" and "God and Intelligences", respectively. As a matter of fact, the two arguments *ex ratione* in support of Averroes, stated in §17 and in §18, had already

focused on “separate substances” and on God separately; moreover, the argument in §18 seems to demonstrate the position “God” regardless of the role of Intelligences. This being the case, Scotus’ answers to §17 and §18, which are given in §62 and §§63-67 respectively, also focus on separate substances and God separately.

Now, the position “God and Intelligences”, as already said, will be deemed wrong throughout the *quaestio* because of the lack of univocal concepts common to God and Intelligences. On the other hand, the position “God”, which is rejected here, will be maintained by Scotus himself in [7], which definitely belongs to a subsequent stage of development of the *quaestio*. Accordingly, in order to analyse the transition from the first redaction to [7], it is important to bear in mind the exact reason why the position “God” is rejected in the first redaction. This reason emerges clearly from both the refutation in §§30-31 and the answer to §18 provided in §§63-67: God cannot be the subject of metaphysics because metaphysics is supposed to be a science *propter quid*, while there cannot be a demonstration *propter quid* about God. No matter whether God is the first subject of attribution of all beings in a *pros hen*: as far as he cannot be the subject of a demonstration *propter quid*, he also cannot be the subject of metaphysics. Metaphysics will still be the first science, because it takes into account God – the absolutely first subject of attribution of all beings – as the cause of all beings. A different subject of attribution of all beings is required, though, for the role of subject of metaphysics; as §67 suggests, Scotus will eventually identify this with substance in [5].

In light of this, we are entitled to expect two things of Scotus in his *solutio*¹ in [5] and in his *solutio*³ in [7], respectively. *Solutio*¹ is Scotus’ *solutio* in the first redaction of the *quaestio*; accordingly, Scotus’ subject of metaphysics as identified in [5] – namely substance – will have to observe the requirement of a science *propter quid*. In other words, if God cannot be the subject of metaphysics just because he cannot be the subject of a science *propter quid*, then substance must be something of which demonstrations *propter quid* are possible.

As for *solutio*³ in [7], where Scotus maintains that the subject of metaphysics is indeed God, it belongs to a subsequent redaction of the *quaestio*. The transition to [7] must then be explained in terms of a doctrinal shift in Scotus’ views. Basically, there would be two possible doctrinal shifts which could allow Scotus to endorse the position which he had previously rejected: by the time he writes [7], he must have either realised that God can in fact be the subject of a science *propter quid*, or simply dropped the requirement that metaphysics be a science *propter quid*.

The structure of [4] has been compared with the structure of [3] above. The following is a more detailed structure of [4]:

4) Avicenna’s opinion

a) Introduction	68 (<i>incipit</i>)
b) Arguments in favour of Avicenna	68-73
i) <i>Ex auctoritatibus</i> (4 arguments)	68-71
ii) <i>Ex ratione</i> (2 arguments)	72-73
c) Answers to the arguments <i>quod neutrum</i> according to Avicenna's position	19-29
i) To the first argument: " <i>oportet notum esse 'si est' et 'quid est'</i> "	74-75
ii) To the second argument: " <i>habet passiones de ipso demonstrabiles</i> "	76-77
iii) To the third argument: " <i>habet propria principia et partes</i> "	78-84
d) Rejection of the answers in (c)	85-91
i) Rejection of (c.1)	85
ii) Rejection of (c.2)	86-90
iii) Conclusion	91

[§68inc] This passage is supposed to be read with §13 in mind. In §13 Scotus had stated that there are several opinions concerning the subject of metaphysics, and that one of these is Averroes' opinion. In §68 he continues by saying that another opinion is Avicenna's: according to Avicenna, Scotus reports, the "first subject" of metaphysics is being *qua* being. As noted in the critical edition, in reporting Avicenna's position Scotus is basically quoting Avicenna's *Philosophia prima* I 2. This also explains why the expression "first subject" is employed here: it is present in the corresponding Avicennian passage. By contrast, Scotus had so far only spoken of the "subject" (or of the "object") of a science⁵²⁶. In §72, in presenting one of the arguments in favour of Avicenna's position, Scotus will use again the expression "first subject". As we shall see, it is plausible to maintain that Scotus attaches a definite meaning to the adjective "first" in the expression "first subject", and that such meaning is revealed by §72.

[§§68-71] Scotus provides four arguments *ex auctoritate* in support of Avicenna's position in §68, §69, §70, and §71. The first three arguments (§§68-70) are based on quotations from Aristotle's *Metaphysics*, while the fourth (§71) is based on Averroes.

To begin with the latter, Scotus quotes a passage from Averroes' *Long Commentary* on *Metaphysics* B in which Averroes explicitly states that the subject of metaphysics is *ens simpliciter*. The fact that Scotus quotes Averroes in order to support Avicenna's position does not come as something unexpected, for he had already referred forward to this in rejecting Averroes' position in

⁵²⁶ The expression "first subject" had already appeared in §11, where Scotus had expressly quoted Avicenna's statement in *Philosophia prima* I 2. It is also found in §30, but within the part which I argued should be deemed an *extra*.

§35. Still it is worth highlighting the abnormal character – and the strength – of this argument in favour of Avicenna: Scotus shows how Avicenna’s position is ultimately supported even by its opponent, namely Averroes. Thus Averroes’ stating that being is the subject of metaphysics is employed by Scotus for two complementary purposes: in order to point to an inconsistency in Averroes’ views in §35, and in order to support Avicenna’s position in §71.

The first two arguments based on Aristotle make use of passages in which Aristotle explicitly claims that metaphysics enquires into being *qua* being. As for the argument in §68, it refers to the opening line of Γ 1, together with Averroes’ explanation of Aristotle’s aim in the chapter. In Γ 1 Aristotle claims that there is a science enquiring into being *qua* being; according to Averroes, Γ 1 would provide an argument meant to establish the subject of metaphysics. Accordingly, in Γ 1 Aristotle would be claiming that being *qua* being is the subject of metaphysics.

The second argument is interesting inasmuch as the passage quoted by Scotus belongs to *Metaphysics* E 1, a chapter which had already been quoted in support of Averroes’ position in §§14-16 (indeed, *Metaphysics* E 1 is among the main sources for the “theological view” of metaphysics). In §69 Scotus reports the end of E 1, where Aristotle wonders whether metaphysics – which he has just described as the science of what is separate and immobile – is universal. As Scotus notes, Aristotle reaches the conclusion that metaphysics is universal, and that it should enquire into being *qua* being.

The third of the arguments grounded on Aristotle’s authority, namely the one in §70, is less “direct” than the ones in §68 and §69. In the latter, Aristotle is reported to maintain that metaphysics enquires into being *qua* being. In §70, on the other hand, Scotus quotes the following Aristotelian statement: “*si non est substantia altera praeter natura consistentes, tunc physica erit prima scientia*”. This statement is found in *Metaphysics* E 1, and within Aristotle’s argument, mentioned in §69, to the effect that metaphysics is the universal science. However, in §70 Scotus is not interested in the conclusion eventually reached by Aristotle, but simply in the validity of the statement reported above, namely of the implication:

- (T) “if there is no substance other than natural substances, then physics is the first science”.

In Scotus’ view, in order for (T) to be valid it is required that being *qua* being be the subject of metaphysics; since (T) is a premise employed by Aristotle, it must indeed be valid, and therefore being *qua* being must be the subject of metaphysics.

It remains to be understood why, in Scotus’ view, the validity of (T) requires that being be the subject of metaphysics. Scotus himself provides an argument for this point in §70, which can be outlined as follows:

(P1) T is valid;

- (P2) The subject of physics is something common to all natural things;
- (C) The subject of the first science is something which is most common.

Since being is supposed to be the most common reality, the argument would conclude that being is the subject of metaphysics. The passage from (P1) and (P2) to (C) might need further clarification and is probably best grasped considering the argument in the opposite direction: the negation of (C) together with (P2) entails the negation of (P1). Let us suppose that the subject of the first science is not something which is most common ($\neg C$) – for example, let us suppose that the subject of the first science is one single being to which all other beings are attributed. Also, let us suppose that there is no being other than natural beings. Then the subject of physics would encompass all beings for (P2). Still physics would not be the first science, because the subject of physics would not be identical to the subject of the first science, which is assumed not to be something common to all beings. Accordingly, (T) is not valid, namely (P1) is false.

[§72] The material of paragraphs §§72-73 is presented in such a way as to suggest that two arguments *ex ratione* are being provided, in §72 and §73 respectively, in favour of Avicenna’s position. In fact, while §73 does indeed contain a single argument, §72 alone seems to provide two different arguments.

In the first part of §72 Scotus argues as follows: since particular things cannot be known without a prior knowledge of most common realities (*communissima*), there is necessarily a science enquiring into *communissima*. It is implicit that being *qua* being would be the subject of a science enquiring into *communissima*. It is also implicit that the science enquiring into *communissima* should be exactly metaphysics, namely the science enquiring into all beings, which is the topic of the *quaestio*.

The second part of §72, on the other hand, is based on the assumption that metaphysics should enquire into given attributes: “one and many, potency and act, and similar things”. The argument runs as follows:

- (P1) The attributes enquired into in metaphysics do not belong to any determinate thing primarily – rather, they belong to every x inasmuch as x is a being;
- (P2) The *first* and proper subject [of a science] is the item to which the attributes enquired into in that science belong primarily;
- (C) Being is the subject of metaphysics.

Premise (P1) makes use of a notion, namely that of “belonging primarily”, which finds its origins in Aristotle’s *Posterior Analytics* A 4. It would be enough to repeat the example given there by Aristotle in order to grasp the basic idea: the attribute 2R (= “having the angles adding up to 180°”) belongs to the triangle primarily. By contrast, it does not belong to the isosceles triangle primarily,

for it belongs to non-isosceles triangles as well; moreover, it belongs also to isosceles triangles just inasmuch as they are triangles, and not inasmuch as they are isosceles.

The very same notion is employed in (P1), where “being” plays the role of the triangle, while any determinate thing can play the role of the isosceles triangle. According to (P1), the attributes enquired into in metaphysics belong to being primarily; as a consequence, they also belong to any determinate thing, but just inasmuch as it is a being and not inasmuch as it is that determinate thing (therefore, not primarily).

As for (P2), it states a general principle which must be observed in order for something to be the subject of a given science: if a science enquires into given attributes, its subject must be the item to which those attributes belong primarily. Actually, (P2) speaks of the “first and proper subject”, but it is clear that Scotus is not drawing a distinction between a “first and proper subject” and a subject in general. In fact, (P2) happens to explain why the subject of a science is called “first (*primum*) subject” in §72 and in §68: the attributes enquired into in that science must belong to the subject primarily (*primo*).

From (P1) and (P2) the conclusion (C) can be drawn, even if Scotus does not state (C) explicitly. Thus it seems that §72 yields the same conclusion (“being is the subject of metaphysics”) twice, by means of two arguments which are independent of each other. Why then does Scotus seem to list them as a single argument? Plausibly, this is because the *communissima* mentioned in the first part of §72 should be identified with the primary attributes of being mentioned in the second part.

If this is the case, the two arguments in §72 seem to play complementary roles. The first argument would prove that the first science enquires into *communissima*, while assuming that the science enquiring into *communissima* should have being as its subject. On the other hand, the second argument would assume that the first science enquires into *communissima*, while proving that the science enquiring into *communissima* should have being as its subject. Accordingly, it would be tempting to read the whole §72 as a single argument, but it must be said that this is not very well supported by the syntax of the passage.

Before moving to §73, one last remark is in order concerning Scotus’ usage of the phrase “first subject” in §68 and in §72. As said, in §68 Scotus is basically quoting Avicenna’s *Philosophia prima* I 2, where the expression “first subject” is already found. On the other hand, §72 suggests that Scotus connects the expression “first subject” with primary attributes. Now, it can be shown that Avicenna himself employs the expression “first subject” to indicate that all things enquired into in a science should belong to the subject of that science primarily. Avicenna does not state this principle explicitly, while Scotus does so in (P2). This is all the more interesting from the point of view of the reception

of Avicenna's thought: Scotus picks up an Avicennian phrase which is left unexplained in Avicenna's works, grasping nonetheless its exact meaning (at least in part).

[§73] This paragraph puts forward the second argument *ex ratione* in favour of Avicenna's position. The argument runs as follows:

(P1) If the subject of metaphysics were a determinate genus, then there would be another science higher and prior to metaphysics;

(P2) No science is higher and prior to metaphysics;

(C) The subject of metaphysics is not a determinate genus.

Of course, (C) amounts to the statement that being *qua* being is the subject of metaphysics. (P2) is supported by referring to Aristotle's *Metaphysics* E, while a proof of (P1) is provided in the second half of §73. Basically, Scotus aims at showing that, in case metaphysics enquired into a determinate genus, then some principle of metaphysics would be a conclusion of another science. Metaphysics would thus depend on another science, which, accordingly, would be higher than metaphysics. The proof runs as follows:

Suppose the subject of metaphysics is the determinate genus G. Then there must be a notion more common than G which is predicated of G essentially (in other words, something above G in a "Porphyrian tree" which includes also the non-generic notion of "being"). Let us call A one such notion. A will have its own primary attributes, which attach to A just inasmuch as it is A – for example, let P be a primary attribute of A. Then the science enquiring into A will have to prove that A is P – in other words, this science will have the statement "A is P" among its conclusions. The statement "A is P" is in turn one of the two premises of the syllogism which demonstrates "G is P": "A is P" and "G is A", therefore "G is P". Accordingly, metaphysics (the science of G) has among its principles a conclusion of the science of A (namely "G is P" or, at least, "A is P"⁵²⁷).

To sum up, metaphysics can be the first science only if its subject is being *qua* being, the most common notion: this ensures that no statement concerning the subject of metaphysics can be demonstrated in another science.

As the *divisio textus* provided above makes clear, the arguments in §§72-73 are not answered by Scotus, his refutation of Avicenna being based solely on the validity of the main arguments of the *quaestio* (section [2]). Yet it is obvious that Scotus must believe that the arguments in §§72-73 are somehow faulty, for otherwise they would demonstrate Avicenna's position, which he deems wrong. Thus it would be interesting to compensate for Scotus' silence on this point by guessing the reason why the arguments in §§72-73 are wrong in his view.

With some hindsight, it is plausible to assume that Scotus would deem the arguments in §§72-73 faulty because both somehow presuppose implicitly a false premise⁵²⁸, namely that being is univocal. By contrast, if being is not a single concept, both the arguments are probably harmless. As

⁵²⁷ Depending on whether the demonstration of "G is P" should take place in the science of A or in the science of G.

⁵²⁸ False in Scotus' view at this stage of the development of the *quaestio*.

for the argument(s) in §72, being would not be something *communissimum* and there would be no sense in which an attribute would attach to being – rather than to substance, quantity, etc. – primarily⁵²⁹. As for the argument in §73, metaphysics could deal with a determinate genus – say substance – without there being anything “above” such genus.

To conclude, the rejection of the univocity of being, which, as we shall see, is the main ground for Scotus’ rejection of Avicenna’s position, is also the reason why the arguments *ex ratione* in support of Avicenna are faulty in Scotus’ view.

[§§74-75] In these paragraphs Scotus provides an answer, from the point of view of Avicenna’s position, to the first of the main arguments *quod neutrum*, namely the one stated in §1. The major premise of this argument – the requirement that the knowledge of *si est* and *quid est* of the subject be presupposed by the science – is not questioned. Rather, these paragraphs aim at rejecting the minor premise:

(m) 1. In metaphysics it is not known *si est* of God; 2. In metaphysics it is not known *quid est* of God; 3. In metaphysics it is not known *quid est* of being

Of course, §§74-75 are restricted to rejecting (m.3). As said, Scotus declares he is providing two proofs for (m.3) in §5. Accordingly, he says that he is answering these two proofs in §74 and §75, respectively. However, we have seen that §5 would be best analysed as providing a single proof for (m.3) of the form: $(\alpha \rightarrow \beta) \wedge (\neg\alpha \rightarrow \beta) \vdash \beta$. Following this analysis, Scotus’ reply to §5 in §§74-75 should be read thus: in §74 Scotus maintains that α is false (and therefore that $\neg\alpha$ is true), while in §75 he shows that $\neg\alpha$ does not entail β .

Going into details, §74 argues that, in Avicenna’s view, it is false to state that being is equivocal. On the other hand, §75 argues that being can have a *quid* even though it is most common – in particular, being can be a single concept with its own *quid*. None of the most common things, it is acknowledged, has a quiddity properly speaking, namely a quiddity which may be expressed by a definition (because they cannot have a genus, which would be more common than them). Yet §75 states that all the most common concepts have a *quid*, on two grounds: first, each of them has an essence; second, they are predicated *in quid* of something.

In rejecting (m.3), §§74-75 reject the first main argument *quod neutrum* as far as being is concerned. The principle according to which the *si est* and *quid est* of the subject of a science must be presupposed in that science does not prevent “being” from being the subject of metaphysics according to §§74-75.

⁵²⁹ Cf. §96, in which Scotus explicitly argues for something stronger, namely that the common attributes enquired into in metaphysics belong primarily to substance and non-primarily to the accidental categories.

[§§76-77] In these paragraphs Scotus provides an answer, from the point of view of Avicenna's position, to the second of the main arguments *quod neutrum*, namely the one stated in §6. The major premise of this argument – the requirement that the subject of a science have attributes which can be proved of it – is not questioned. Rather, these paragraphs aim at rejecting the minor premise:

(m) 1. God does not have attributes which can be proved of it; 2. Being does not have attributes which can be proved of it

Of course, §§76-77 are restricted to rejecting (m.2); in particular, §76 and §77 are meant to answer the two arguments in support of (m.2) provided in §8.

As for the first argument, it moved from the assumption that being belongs to the essence of everything to show that being cannot have attributes. §76, on the other hand, is opened by the following claim: being *qua* being can have an attribute which is external to its essence. This sort of answer taken literally seems to miss the point. In order to make sense of it, we should probably identify the following claims: “A belongs to the essence of B” and “B is not external to the essence of A”. If this is the case, Scotus would be claiming that being *qua* being has attributes and that it does not belong to the essence of its attributes.

The justification of this claim conceals a further ambiguity: as §76 continues, some attributes (the alleged attributes of being *qua* being) are external to the essence of *anything* (*cuiuslibet*) inasmuch as it is a being. The attributes at stake are not said to be external to being in its entirety, but – in a distributive fashion – to any being inasmuch as it is an “*ens sive quid in se*”. This change of perspective on the attributes of being is revealed by the last sentence of §76 itself, introduced by “*tamen*”, which acknowledges the main points made in §8, namely that being, according to its general notion⁵³⁰, belongs to the essence of everything and is predicated *in quid* of everything.

One finds a similar ambiguity behind the answer, in §77, to the second argument in support of (m.2) provided in §7. According to §7, being cannot have attributes because it is predicated *in quid* of everything, while a subject should be predicated of its attributes only *per accidens*. On the other hand, §77 points to the fact that being is predicated *in quid* of everything only in a certain respect: “[...] *accepto ut quid est, non tamen accepto secundum quamcumque rationem, secundum quam est passio entis*”. To give an example of what Scotus means: “being” is predicated *in quid* of “man” inasmuch as “man”, not inasmuch as “one”. The distributive perspective is again at work here, leaving unanswered the following question: how is “being” predicated of “one”?

⁵³⁰ I cannot find another way of interpreting Scotus' words; yet I deem this interpretation not fully satisfying. Scotus writes: “*Tamen ens, acceptum secundum quamcumque rationem generaliter [...]*”.

§§76-77 are meant to reject (m.2) from Avicenna’s point of view; in so doing, they would reject the second main argument *quod neutrum* as far as being is concerned. The principle according to which the subject of a science must have attributes does not prevent “being” from being the subject of metaphysics according to §§76-77.

As for the the ambiguity behind the answers provided in §§76-77, Scotus is plausibly well aware of it. As we shall see, his rejection of §§76-77 will be based in part on a clarification of the exact meaning of the problems posed by the possibility of attributes of being.

[§78-§84] These two paragraphs are meant to provide an answer, from the point of view of Avicenna’s position, to the third of the main arguments *quod neutrum*, namely the one stated in §9. As we have seen, the answer to this argument from the point of view of Averroes’ position was based on the rejection of the major premise, namely of the requirement that the subject of a science have principles and parts (§§27-29). Since the major premise of the arguments *quod neutrum* is common to the case “God” and to the case “being”, one might expect §78-§84 to follow the same strategy as §§27-29, repeating the very same points⁵³¹.

Quite the opposite, the major premise is not questioned here. Rather, these paragraphs aim at rejecting the minor premise:

(m) 1. God does not have proper principles and parts; 2. Being does not have proper principles and parts

Of course, §§78-84 are restricted to rejecting (m.2). In particular, it had been argued in §10 that being *qua* being cannot have principles (while it plausibly has parts); accordingly, §78 and §84 try to maintain that being *qua* being can have principles (§§79-83 are *extra*). The problem highlighted in §10 was based on the move from “*ens inquantum ens*” to “*quodlibet ens*”: if being *qua* being had principles, then every being would have principles – and this is impossible. In other words, the argument in §10 was based on the following premises:

(P1) “*Ens inquantum ens* is Q” entails “*quodlibet ens* is Q”

(P2) The statement “every being has principles” is false

§78 and §84 follow two different paths to provide a solution: §78 proposes a way to understand the phrase “*inquantum*” which would make (P1) false, while §84 proposes a way to understand “*ens*” which would make (P2) false.

The second solution, namely the one in §84, is quite straightforward: when one says that being *qua* being has principles, he is actually restricting himself to created being. Then, if (P1) is true, one can infer that “every (created) being has principles”, which is also true; accordingly, (P2) is false if

⁵³¹ At least as far as the arguments in §§28-29 are concerned.

interpreted with the restriction to created being which is presupposed in the statement “being *qua* being has principles”.

As for the first solution, its main idea will be actually explained in §79 (which I shall take into account in a while), arguing that the move from “*ens inquantum ens*” to “*quodlibet ens*” is valid only when the phrase “*inquantum*” is understood “*reduplicative*”. By contrast, when the phrase “*inquantum*” is understood “*specificative*”, it does not imply a universal quantification. This being the case, §78 argues that, when one says that “*ens inquantum ens*” has principles, the phrase “*inquantum*” must be interpreted “*specificative*”: in that case “*ens inquantum ens*” can have principles even if some *ens* has no principles.

Scotus gives us a clue to what he means by opposing “*inquantum* understood *reduplicative*” to “*inquantum* understood *specificative*”. In particular, he explicitly states that “*inquantum* understood *reduplicative*” signifies “the cause”. On the other hand, he gives an example of “*inquantum* understood *specificative*”: speaking of “principles *entis inquantum ens*” is the same as speaking of “principles *entis secundum suam entitatem*”. Plausibly, one might say that “*inquantum* understood *specificative*” signifies “the point of view”.

The distinction between signifying the cause and signifying the point of view, however, is not spelled out clearly in §78. Some examples can help us to understand what is, plausibly, Scotus’ point here. Let us begin with the following:

R) Socrates, *inquantum* man, is capable of laughing

S) Socrates, *inquantum* man, is tall

In (R), the phrase “*inquantum*” signifies the cause, namely the reason why Socrates is capable of laughing: he is capable of laughing just because he is a man. This presupposes that all men are capable of laughing, for only in that case Socrates’ being a man would be a sufficient cause for his being capable of laughing. In other words, (R) implies a universal quantification.

In (S), the phrase “*inquantum*” signifies the point of view from which Socrates is said to be tall: he is tall from the point of view of his being a man. He might not be tall from some other point of view, but inasmuch as he exceeds the average height of men, he can be said to be tall *inquantum* man. This does not prevent other men from not being tall: no universal quantification is implied.

Returning to the problem of the principles of “*ens inquantum ens*”, we can draw a distinction between two statements which may be expressed with the following wording:

(R) / (S) X is a principle of a being *inquantum* being

(R) states that X is a principle of a being, say *y*, just because *y* is a being, and clearly presupposes that X is a principle of all beings. By contrast, (S) states that X is a principle of a being,

say *y*, from the point of view of *y*'s being a being; this does not entail that *X* is a principle of all beings, because beings other than *y* can have principles of their being other than *X*.

At this point, one may wonder whether principles of being *inquantum* being (*specificative*) actually exist or not. §78 says nothing about this; §79 argues that they exist and some examples are given in the *extra* which follows; more precisely, in §§82-83. Just to give an example in advance, matter (*X*) is a principle of a material being (*y*) from the point of view of its being a being, because matter is a cause of the very being of material realities, and not only, for, example, of their motion. On the other hand, matter is not a principle of all beings: immaterial beings may have principles of their being which are different from the principles of the being of material realities.

[§79] As I said when I listed the paragraphs which should be considered *extra*, there are opposite indications concerning §79 in the tradition of the text. The evidence provided by several extant manuscripts, in particular, points to the fact that §§79-83 are *extra*. On the other hand, Mauritius informs us that some manuscripts would have the *extra* begin with §80 and end immediately before §85. Leaving aside the significance of such information for §84, I would focus on the fact that §79 seems not to be marked as *extra* in Mauritius' manuscripts.

From the point of view of content, nothing suggests that §79 should be deemed an *extra*. Rather, it seems to be a natural continuation of §78, completing the argument which had been introduced there. More precisely, §79 can be summarised as follows:

1. Further example of *inquantum* understood *specificative*;
2. *Inquantum* understood *specificative* does not entail *universale*;
3. Beings *inquantum* being (*specificative*) has principles.

It must be noticed that (1) continues the last sentence of §78 in a natural way and simply tries to explain further the meaning of *inquantum* understood *specificative*; moreover, (2) and (3) are essential points for the argument in §78 to work. In other words, §79 does not make revisions of §78 or introduce completely new points; it is rather an explication and a completion of §78. Accordingly, it is possible that §§78-79 were in fact written together as a single argument.

On the other hand, it is still possible that §79 was added later just in order to explain the argument in §78, which was far too implicit. I would notice, however, that §§80-83 are of a quite different nature: they really introduce new observations, some of which are even inconsistent with the background of §78 – in particular, with the assumption that being *inquantum* being (*reduplicative*) has no principles.

[§§85-90] These paragraphs are meant to rebut the answers to the arguments *quod neutrum* from the point of view of Avicenna's position. In so doing, they reaffirm the validity of the arguments *quod neutrum* against "being", which is tantamount to a rejection of Avicenna's position.

More precisely, Scotus restricts himself to the first and the second argument *quod neutrum* ("oportet notum esse 'si est' et 'quid est'", "habet passiones de ipso demonstrabiles"). He does not deal with the third one ("habet propria principia et partes"): plausibly, he deems at least one of the points made in §78 and §84 correct. The first argument *quod neutrum* is dealt with in §85, while the second argument *quod neutrum* in §§86-90.

[§85] The answer to the first argument from the point of view of Avicenna's position was based on the negation of the equivocality of being (§74); §85 opposes this answer just on the basis of the equivocality of being.

On the assumption of the equivocality of being Scotus builds an argument to the effect that being cannot be the subject of metaphysics. The argument actually does not directly restate the impossibility of knowing the 'quid est' of being given that being is not a single concept. Rather, in §85 Scotus points to a more fundamental problem posed by equivocal terms: they do not stand for a single reality, which prevents them from fulfilling the principle of uniqueness of the subject. The subject of a science must be one, while an equivocal term is not one thing.

The argument is stated as follows:

(P1) "Being" has not a concept common to the ten categories

(P2) One science has one (univocal) subject

(C) The subject [of metaphysics] must be a single being to which all other beings are attributed

As for (P1), Scotus requires that the equivocality of being be assumed here, referring forward to the arguments, both based on Aristotle's authority and *ex ratione*, which he will expound in *QM* L. IV q. 1.

(P2) is expressly derived from Aristotle's *Posterior Analytics*, but also argued for in §85 along the following line of thought: one *habitus* entails one *actus*, which in turn entails one *obiectum*. In the case of a science: to one science there correspond a single act of understanding, which must be directed at a single *obiectum*. The unicity of the *obiectum* for a single act of understanding is necessary even in presence of an attribution of all beings to one being, for otherwise the intellection of each being would be the same as the intellection of any other being.

From (P1) and (P2) Scotus does not simply infer, negatively, that being cannot be the subject of metaphysics, but provides a positive account of what the subject of metaphysics should be in (C). The main point is that, since being cannot be the subject of metaphysics either in virtue of an inner unity (for it is not univocal) or in virtue of an attribution of all beings to one single being (for this would not entail the unity of the *actus intelligendi* of all beings), then the subject of metaphysics must be that very being to which all other beings are attributed. The unity of the science of all beings can ultimately be grounded only on the unity of a single, first being.

[§§86-90] The answer to the second argument from the point of view of Avicenna's position was based on the claim that something – let it be *a* – may be an attribute of “being” inasmuch as *a* is external to the essence of anything, while “being” is predicated “*in quid*” of anything. According to §76, this claim was tantamount to maintaining that being can have an attribute external to its essence.

§§86-90 oppose the claim that being *qua* being may have an attribute in two moments:

- §§86-87: opposition to (1) the first interpretation of the claim;
- §§88-90: opposition to (2) the second interpretation of the claim.

The first interpretation of the claim is also the more natural one: being *qua* being in its entirety – namely, taken as something common encompassing the ten categories – has an attribute *a*. As revealed by the text, Scotus would deem the claim so interpreted as the correct way of allowing being *qua* being to be the subject of a science.

However, Scotus also takes into account another way of maintaining that being *qua* being has an attribute: according to the second interpretation, the claim would amount to saying that any single being has an attribute external to its essence. This might be interpreted in two ways, depending on the order of quantifiers: (2.W) every being is such as to have an attribute; (2.S) there is an attribute such that every being has it. Interpretation (2.S) is stronger, inasmuch as it entails the weaker (2.W).

One should notice that the claim interpreted as (2.S) is basically the one employed in §§76-77 in defence of Avicenna's position (the ambiguity we have noticed in §§76-77 is exactly due to the lack of distinction between (1) and (2.S)). One should also notice that the beginning of §88 seems to suggest that Scotus would focus on (2.S), since he grounds (2) on the following remark: “*aliud est enim in quolibet entitas eius, aliud unitas vel actualitas*”. Yet in §88 he does not restrict himself to rejecting (2.S) and clearly provides an argument which would refute (2.W) as well; in any case, since (2.S) entails (2.W), a rejection of (2.W) is also a rejection of (2.S).

[§§86-87] These paragraphs reject the first interpretation of the claim that being *qua* being may have attributes. Had being *qua* being an attribute, say *a*, two problems would arise. Scotus expounds these two problems in §87.

As for the first problem, Scotus basically reaffirms the argument in §8: since a subject must always be external to the essence of its attributes, being should be external to *a*, so that there would be something (namely *a*) of which being would not be predicated *in quid* (which is problematic).

The second problem is a new entry of §87 and is introduced as a genuinely distinct issue (“*aliud inconveniens*”). Yet its true result is to show that being could not be predicated *in quid* of its attributes, if it had attributes at all. Accordingly, it would be best to read it in conjunction with the first problem, forming a single argument against the possibility that being may have attributes. This single, enlarged argument would run as follows: being cannot have attributes, because if it had an attribute *a*, it would not be predicated *in quid* of *a*, because if it were predicated *in quid* of its attribute *a*, such-and-such nonsense would follow.

It remains to see the content of the “second problem”, namely the reason why being could not be predicated *in quid* of its attributes. Were this the case, Scotus argues, *a* would turn out to be an attribute of itself. The ground for this is Scotus’ claim that “an attribute of the superior is also an attribute of the inferior, albeit not primarily”. The opposition between “superior” and “inferior” should be read in terms of genera/species arrangement; the adverb “*primo*” should be read again against the background of Aristotle’s *Posterior Analytics* A 4. Just to illustrate Scotus’ claim by means of Aristotle’s example of triangles in *Posterior Analytics* A 4: whichever attribute of the triangle is also an attribute of the isosceles triangle, albeit not primarily.

Now, Scotus’ point is that, if *a* is an attribute of being and being is predicated *in quid* of *a*, one could build up the following syllogism:

- | | | |
|--------------------------------|-----|----------------------------------------|
| (M) Every being is <i>a</i> | Cf. | Every triangle is 2R |
| (m) Every <i>a</i> is a being | | Every isosceles triangle is a triangle |
| (C) Every <i>a</i> is <i>a</i> | | Every isosceles triangle is 2R |

This syllogism would be a *propter quid* demonstration of the identity “*a* is *a*”, which contradicts, as Scotus observes, Aristotle’s remarks in *Metaph.* Z 17.

Scotus draws the conclusion that being, according to its whole extension which encompasses the ten categories, cannot be the subject of any science. The following paragraph will propose a different way of understanding the attributes of being, namely (2), which is meant to avoid the problems listed in §87. This being the case, the objections raised in §87 must be conclusive in Scotus’ view as far as interpretation (1) is concerned.

[§§88-90] In these paragraphs Scotus takes into account the second interpretation of the claim that being *qua* being has attributes: any given being has an attribute external to its essence. The problems listed in §87 do not affect the possibility that being has an attribute according to this interpretation. Yet §88 claims that interpretation (2) is not satisfactory for two reasons.

First of all, interpretation (2) is simply not enough to grant that being fulfils the epistemological “attributes-criterion” required of the subject of a science. Being *qua* being cannot be the subject of a science if it cannot have an attribute according to its whole extension, even if any given being according to its own quiddity has an attribute.

Second, Scotus shows that the claim “being *qua* being has an attribute” interpreted as (2) is not only inadequate, but even false. In particular, he argues that the claim in question would entail one of the following: (a) either some x is such that x is an attribute of x , (b) or there is a circle in the relation “subject-attribute” (meaning that there would be an x which is an attribute of y , which is in turn an attribute of z , ..., which is in turn an attribute of x)⁵³². Both cases are declared impossible by Scotus; accordingly, it must also be impossible that every being has an attribute.

In order to prove the entailment from (2) to (a or b), Scotus puts forward a “combinatorial argument” grounded on the assumption that the number of beings is finite⁵³³. Actually, Scotus’ argument falls short of providing a general proof which would be valid regardless of the actual number of beings. Rather, Scotus restricts himself to dealing with the case of 3 beings as an example, the underlying (and correct) idea being that the same line of reasoning could be applied in the case of any other number of beings. Just to repeat Scotus’ example: suppose there are 3 beings, namely a b c , and suppose that any of these has an attribute. For example, let b be an attribute of a and let c be an attribute of b . Since every being has an attribute, c must have an attribute. Such attribute must be chosen among a b c . If it is c , then c is an attribute of itself; if it is either a or b , then there is a circle.

The rejection of the claim that (2) every being has an attribute is closed by §§89-90. §90 is a refutation of §89. As for §89, it is introduced by the words “*responsio ad haec*”, where “*ad haec*”, as it becomes evident in the paragraph, actually refers solely to the last part of §88, namely to the “combinatorial argument”. In particular, §89 is meant to give a counterexample to the thesis of the combinatorial argument by exhibiting a finite number of beings such that: i) every being has an attribute; ii) “*neutrum sequitur inconveniens*” – nothing is an attribute of itself and there is no circle.

Going into details, Scotus’ counterexample is a set of just two beings, a and b , where a is “unity” and b is “actuality”; Scotus observes that “unity” is something in act and “actuality” is something one. This being the case, both a and b have an attribute; moreover, a is not the attribute of

⁵³² The first disjunct can actually be seen as a special case of the second one, when the circle is made of a single element in relation with itself.

⁵³³ This premise must be evident in Scotus’ view given the impossibility of an actual infinity.

a and *b* is not the attribute of *b*. Scotus further argues that, in spite of appearance, there is no circle either: *a* is not said to be in act in virtue of *b*, but in virtue of a certain (singular) actuality; similarly, *b* is not said to be one in virtue of *a*, but in virtue of a certain (singular) unity.

The answer in §89 to the combinatorial argument is probably faulty in several respects. For example, it assumes there are just two beings, namely *a* and *b*, but then introduces two further items which are supposed to be different from both *a* and *b*. Scotus' refutation of §89 in §90 follows a different strategy and is based on a principle we have already encountered in §87, namely the fact that "an attribute of the superior is also an attribute of the inferior, albeit not primarily". Applying the principle in the case of singulars falling under a given universal: if *x* is an attribute of *y*, then *x* must also be an attribute of singular *y*'s. Scotus' answer to §89 runs as follows. We know that *a* is in act, which means that a certain singular actuality (let it be *c*) is an attribute of *a*; this entails that *c* is also an attribute of any singular unity. We also know that *b* is one, which means that a certain singular unity (let it be *d*) is an attribute of *b*; this entails that *d* is also an attribute of any singular actuality, including *c*. As a consequence, there is the following circle: *c* is an attribute of *d*, which is an attribute of *c*.

In rejecting §89, §90 reaffirms the validity of the combinatorial argument against interpretation (2) of the claim that being can have attributes. Together with the first problem of interpretation (2) and with the problems of interpretation (1), this brings to an end the discussion on the possibility of attributes of being *qua* being. The essential part of this discussion, it should be noticed, is the one concerning interpretation (1). Interpretation (2) is simply inadequate to grant that being may be the subject of a science. Since, however, the claim that being has attributes interpreted as (1) is false, the second argument *quod neutrum* (§6) is successful in showing that being cannot be the subject of any science.

[§91] This paragraph summarises the results of §§85-90, drawing the conclusion that being *qua* being cannot be the subject of metaphysics, and therefore rejecting Avicenna's position at last. Scotus highlights the two reasons why being *qua* being cannot be the subject of metaphysics. First, there is no common concept of being encompassing the ten categories (§85). Second, being *qua* being cannot have attributes. Scotus' references to the proofs of the fact that being *qua* being cannot have attributes are not extremely clear. It seems to me that the best reading is the following:

- "*quia secundum totam communitatem suam [...] propter diversitatem essentialem passionis a subiecto*" should refer to §§86-87;
- "*quia idem foret passio sui vel circulus foret in passionibus et subiectis*" should refer to the second argument in §88;

- “*ut probatum est dupliciter*” should refer to the two proofs in §87⁵³⁴.

§91 closes section [4], namely Scotus’ discussion of Averroes’ position. Before moving to section [5], it would be useful to pay attention to two points implied by [4]. First of all, we must expect that Scotus’ candidate for the role of subject of metaphysics in his *solutio* is not affected by the problems of being *qua* being; in particular, Scotus’ candidate must be univocal and must have attributes. Second, we must expect that Scotus has overcome the problems in question by the time he begins to maintain that being *qua* being is the subject of metaphysics, both in *QM* and in his other works. In other words, before maintaining that being *qua* being is the subject of metaphysics Scotus must have endorsed the univocity of being and must have solved the problem of the predication *in quid* of being with respect to its attributes.

Finally, a question arises from what has been said so far. Basically, we have seen that being univocal and having attributes are two necessary conditions for being *qua* being to be the subject of metaphysics. Are they also sufficient conditions? The development of the *quaestio*, as we shall see, suggests that they are not.

[5] *Solutio*¹: *substance*

Having rejected both Averroes’ and Avicenna’s position, in this section Scotus states his own position, namely that substance is the subject of metaphysics. In the first part of the section, in particular, Scotus argues that substance is the only thing to fulfil all the conditions required of the subject of metaphysics. The remaining parts of the section then corroborate the *solutio* and add remarks on some of its aspects.

The structure of [5] is the following:

5) <i>Solutio</i> ¹ : substance	92-96
a) <i>Solutio</i>	92
b) <i>Confirmatur per auctoritates</i>	93-95
c) Answer to the <i>auctoritates</i> “ <i>pro ente</i> ” and concluding remarks	96

[§92] In this paragraph Scotus states his own position, arguing that substance is the subject of metaphysics. He reaches this conclusion by listing three conditions which the subject of metaphysics

⁵³⁴ Rather than §88, as suggested in the critical edition.

must meet and claiming that substance is the only one to meet them. The three conditions prescribe that the subject of metaphysics be:

- (i) *Aliquod unum;*
- (ii) *Quod potest habere proprias passiones de ipso demonstrabiles propter quid;*
- (iii) *Primum ens ad quod omnia alia attribuuntur.*

The first two conditions, (i) and (ii), are mentioned in the very first sentence of §92. The fact that conditions (i) and (ii) must be prescribed is said to derive from what has already been said at this point of the *quaestio* (“*ex his sequitur* [...]”); Scotus recalls here that metaphysics must be *one* science and a *propter quid* science. The most natural way to read the phrase “*ex his sequitur*” is to refer the pronoun “*his*” to §91, namely to the final rejection of Avicenna’s position due to the lack of univocity and of attributes of being *qua* being. Indeed, Avicenna’s position is rejected just because being *qua* being does not fulfil either condition (i) – because it is not univocal – or condition (ii) – because it cannot have attributes. Yet one should notice that §91 does not justify condition (ii) completely. Rather, the requirement that the attributes be proved *propter quid* of the subject is the fundamental reason why Averroes’ position, rather than Avicenna’s⁵³⁵, had been rejected; accordingly, condition (ii) in its entirety must presuppose the discussion of Averroes’ position as well. If Scotus’ reference in “*ex his sequitur*” is meant to be accurate, the pronoun “*his*” must therefore refer to all the discussion of Averroes’ and Avicenna’s position (§§13-91).

As for condition (iii), it is actually prescribed under the implicit assumption that the subject of metaphysics cannot be anything common to all beings (we know that this is the case due to the equivocity of being). Assuming this, Scotus argues:

- (P1) Should the subject of metaphysics not meet condition (iii), metaphysics would fall short of enquiring into all beings;
- (P2) Metaphysics enquires into all beings;
- (C) The subject of metaphysics must meet condition (iii).

(P2) is justified referring back to Aristotle’s authority. The argument for (P1) is as follows: the subject of a science enquiring into many things *per se* must be either something common to all those things, or some first item to which all those things are attributed. Together with the implicit assumption that the subject of metaphysics cannot be anything common to all beings, (P1) and (P2) yield the conclusion (C).

⁵³⁵ Clearly, if being *qua* being cannot have attributes, it also cannot have attributes proved *propter quid*. However, imposing the possibility of a demonstration *propter quid* is not necessary to rule out that being be the subject of metaphysics.

At the end of §92 Scotus claims that only substance meets all conditions (i)-(ii)-(iii), drawing the conclusion that substance must be the subject of metaphysics. Making Scotus' claim more explicit:

- God does not meet condition (ii);
- Being does not meet either condition (i) or (ii);
- Accidental categories do not meet condition (iii);

On the other hand, (i) substance is univocal, so that it is apt to be the subject of a science enquiring into all substances; (ii) it is not predicated *in quid* of everything, so that it can have attributes; (iii) all accidents are attributed to substance, so that it is apt to be the subject of a science enquiring into all accidents in addition to substances. As for (ii), Scotus must also believe at this stage that it is possible to demonstrate *propter quid* something about substance. Even though we cannot know whether he has any ground to believe this, we should notice that his arguments in §31 against a demonstration *propter quid* concerning God would not apply to the case of substance. At the very least, Scotus must not have any reason to suspect that a demonstration *propter quid* is impossible in the case of substance.

[§§93-95] In these paragraphs Scotus aims to show that his *solutio* is in agreement with Aristotle's view. In particular, he quotes passages from *Metaphysics* Γ and Z. Without going into the details of the single quotations, Scotus' comments are basically meant to show that Aristotle endorsed two complementary views: first, metaphysics enquires into all beings; second, the subject of metaphysics is substance, because metaphysics enquires mainly into substance, inasmuch as substance is the first being.

[§96] Here Scotus provides an explanation of the *auctoritates* in support of the view that being is the subject of metaphysics. The phrase "*auctoritates, quae adductae sunt prius*" must refer back to §§68-71 (and might include §11 as well). Scotus' explanation is based, of course, on the fact that the science enquiring into substance must also enquire into all things which are attributed to substance, namely into all beings.

The paragraph continues with two interesting remarks concerning the epistemological structure of metaphysics. First, we have seen that §72 – within an argument in favour of Avicenna's position – states the following epistemological principle: if a science enquires into given attributes, then the subject of that science is the item to which those attributes belong primarily. In §96 Scotus claims that substance fulfils this principle: the attributes enquired into in metaphysics (we can repeat the examples given in §72: unity, actuality, etc.) belong to substance primarily; they belong to all

other beings in virtue of substance. It is noteworthy the way in which Scotus adjusts the notion of primary inherence of *Posterior Analytics* A 4 in order to apply it to the case of substance. In Aristotle's account, if we say that A belongs to B non-primarily, we mean that it belongs to B in virtue of some C different from B; however, at least as far as one can guess from Aristotle's text, the C at stake must be in a relation of extensional/intensional inclusion with B. Substance, of course, is in no such relation with accidental categories. Due to this fact, it is also not straightforward to understand how the accidental categories would inherit the common attributes from substance; Scotus provides no explanation thereof.

As for the second remark, Scotus highlights that accidents fall within metaphysical enquiry in two respects. For one thing, they are demonstrated to belong to substance – accordingly, they are enquired into by metaphysics inasmuch as they are attributes of its subject. In addition to this, they are considered in themselves, inasmuch as they are beings (and, we should add, are in a relation of *pros hen* with substance) which have attributes in turn; accordingly, metaphysics also provides demonstrations of the attributes belonging to accidents.

Scotus closes the paragraph stating that all the arguments put forward “*ad utramque partem*” yield a single truth. In particular, the “first arguments” would prove that metaphysics concerns all beings, while the “other arguments” that it concerns a first thing to which all other things are attributed. Scotus' reference to the arguments “*ad utramque partem*” is difficult to understand. On one hand, the most natural interpretation would connect it to Averroes' and Avicenna's positions, respectively; in that case, the reference would be to the arguments *against* Averroes and Avicenna. On the other hand, this connection is not easily tenable: it would be difficult to explain why the arguments against Averroes would prove that metaphysics concerns all beings. A less natural, but perhaps better interpretation would refer to the arguments in favour and against Avicenna's position, respectively. In any case, it seems that Scotus sees his own *solutio* as the natural consequence of all the arguments which have been put forward so far in the *quaestio*: metaphysics is the science enquiring into all beings, and its subject cannot but be substance.

Scotus' *solutio* in [5] brings to an end the long discussion, opened by section [1], concerning the subject of metaphysics. As said at the beginning, sections [1]-[5] constitute a text which has the features of a *quaestio* complete in itself. Scotus poses the problem in [1] asking whether God or being should be the subject of metaphysics. In [2] he puts forward arguments against the two views, as well as *auctoritates* in support of them. The two competing positions are then discussed at length in [3] and [4], respectively, with the following result: neither God nor being can be the subject of

metaphysics. Scotus' *solutio* in [5] must therefore point to a third, different subject for metaphysics; we have just seen that his choice falls upon substance.

In this respect, it must be stressed that Scotus' *solutio* depends essentially on the refutation of Averroes' and Avicenna's positions. Scotus' argument for his own view consists in maintaining that nothing else would fulfil conditions (i)-(iii). This claim presupposes that God and being do not fulfil conditions (i)-(iii), which actually means that God and being do not fulfil either condition (i) or condition (ii) – since condition (iii) is met by God, while it is not required of being. Basically, these presuppositions are just the results of sections [3] and [4].

As for section [4], being is not univocal and cannot have attributes. We may expect that, *ceteris paribus*, Scotus would deem being *qua* being, rather than substance, to be the subject of metaphysics if the problems of univocity and of attributes were solved.

As for section [3], God cannot be the subject of a demonstration *propter quid*. We may expect that, *ceteris paribus*, Scotus would deem God, rather than substance, to be the subject of metaphysics if the problem of a demonstration *propter quid* was solved. In that case, the preference of God over substance would be due to the priority of God over substance as “first being” to which all other beings are attributed⁵³⁶. Accordingly, the preference of substance over God in [1]-[5] must be due to nothing other than the following reason: at this stage, Scotus believes that a demonstration *propter quid* concerning substance is possible, while a demonstration *propter quid* concerning God is not. The importance of this observation will become clear while examining section [6].

To sum Scotus' reasoning up: neither God nor being *qua* being can be the subject of metaphysics, therefore substance must be. Yet it must be stressed that Scotus' *solutio* does not restrict, in his view, the field of metaphysics to an enquiry into substance alone. More precisely, Scotus would be able to explain (A) why God falls within metaphysical enquiry even though the subject of metaphysics is not God; also, he would be able to explain (B) why all beings fall within metaphysical enquiry even though the subject of metaphysics is not being *qua* being. (B) is stated in section [5]: all beings are enquired into in metaphysics because of the *pros hen* of all beings to substance. As for (A), we should go back to section [3]: God is enquired into in metaphysics as the cause of its subject.

Given the complete picture provided by [1]-[5], it would be possible for us to believe that the first redaction of the *quaestio* goes as far as §96, without any essential section lacking. The first part of section [6] raises some doubts about the *solutio* in [5] and solves them immediately. Accordingly, section [6] could in principle be coherent with the picture of [1]-[5]. As we shall see, however, it is not; as a consequence, it is highly unlikely that section [6] should belong to the first redaction. We can safely conclude that the first redaction of *QML*. 1 Q. 1 is composed precisely of sections [1]-[5].

⁵³⁶ Cf. §64.

In this redaction, Scotus definitely endorses the view that substance is the subject of metaphysics, and that nothing other than substance enjoys all the features required of the subject of metaphysics.

2. *Extra* within §§1-96

[§30: *ut de primo subiecto...igitur nullo modo*] It has already been argued above that this part of §30 must be deemed as a later addition. As already said, originally §30 was just meant to prove that God cannot be the subject of metaphysics because he cannot be the subject of a science *propter quid*. The addition proves much more, arguing that God cannot fall under the consideration of a science *propter quid*, and therefore of metaphysics, in any respect. The passage has already been examined above: Scotus takes into account four ways in which something may fall within the consideration of a science, maintaining that God cannot be considered in any of these ways.

First of all, he cannot be the “first subject” of a science *propter quid*. This was the main point of §30 in its original form; the addition of the words “*ut de primo subiecto*” is now required to single out this mode of consideration from the others taken into account in the *extra*.

Second, he cannot be considered as a cause. This statement is in sharp contradiction with Scotus’ views as they emerge from section [3] of the first redaction of the *quaestio*: in rejecting Averroes’ position, Scotus had explained that God enters metaphysical enquiry precisely as a cause. The reason why God cannot be considered as a cause, Scotus says, lies in the fact that he is not a necessary cause.

The problem of God not being a necessary cause had already been raised in the first redaction, §39, and solved immediately afterwards, in §40, noting that God is a necessary cause for Aristotle. This solution is no longer deemed satisfying in the *extra* part of §30. Scotus decisively asserts that God is not a necessary cause, adding that Aristotle’s views are not relevant to establish this point: “*quidquid sit de Aristotele*”. More precisely, these words express at least the irrelevance of Aristotle’s views, which may very well be wrong; in addition, they could also express a real doubt about what Aristotle’s views actually were. If this additional nuance is implied, then after the first redaction of the *quaestio* Scotus must have found some evidence to the effect that Aristotle conceived of God as a free cause. As a matter of fact, such evidence is put forward in another *extra*, namely §41; no conclusion can be drawn from this, but it is certainly possible that the *extra* part of §30 and §41 were written in the same spirit, and even at about the same time.

Third, God cannot be considered as an effect, and fourth, he cannot enter metaphysical enquiry as a propositional principles; these two points – for quite obvious reasons – are just said to be certain. From the survey of these four modes of consideration, Scotus draws the conclusion that God cannot be considered by metaphysics in any respect. This conclusion is interesting, because it tells us that at

some point Scotus must have deemed the traditional theological side of metaphysics as entirely incompatible with the strict epistemological criteria he had imposed on metaphysics. Whether this ever resulted in the actual belief that metaphysics does not deal with God at all, it is difficult to say. However, it is sure that such incompatibility is eventually overcome in [6], where the epistemological criteria for the subject of metaphysics are made looser. The main reason behind this change in [6] does not concern God directly; yet it is possible that the problem of making room for a metaphysical consideration of God contributed to Scotus' dissatisfaction with the epistemological structure of metaphysics as outlined in the first redaction of the *quaestio*.

[§32] This paragraph is meant to reject Scotus' argument in §31 to the effect that no *propter quid* demonstration about God is possible. In so doing, it allows for the possibility of God being the subject of a science *propter quid*, and therefore of metaphysics.

Basically, §32 seems to deny that, if A is a *medium sciendi* of B, then A and B must be distinct. For even when A and B are two distinct things and A is naturally prior to B, the fact that A can be a *medium sciendi* for B is entirely due to A being naturally prior to and being known in itself prior to B, rather than to their distinction. The paragraph is closed by the observation that divine attributes are arranged according to relations of priority-posteriority; we are left to conclude, I suppose, that, even though there is no real distinction between God's attributes, a demonstration *propter quid* is still possible because of the order obtaining among them.

In the critical edition of the text, §32 and §33 are both considered an *extra*. I believe there are two complementary reasons to deny that §33 is an *extra*, or at least that it was written together or after §32: first, it is more difficult to make sense of the text if §§32-33 are taken together to be an *extra*; second, the textual evidence overall suggests that §32 alone be an *extra*.

Let us begin with the first problem: the purport of the remarks in §§32-33 is not entirely clear if they are taken together. The first remark, namely the one in §32, admits that one attribute of God can be prior to another attribute of God, and argues that such priority, even in the absence of a real distinction, is sufficient for something to be the middle term in a demonstration of what is posterior to it. The second remark, namely the one in §33, is introduced as an "other answer", and consists in noticing that one attribute of God can be "conceptually" (*ratione*) prior to another attribute of God. Now, if §33 is *another answer*, it is difficult to see what the first answer (§32) amounts to: which kind of priority-posteriority would §32 be ascribing to the attributes of God, given the lack of a real distinction? I would rather believe that §32 can argue that an attribute is naturally prior to another just in virtue of a conceptual distinction between them. Moreover, the remark in §33 is immediately dismissed in the very same paragraph, while the remark in §32 is not. Such lack of symmetry is not

impossible, but still strange. On the other hand, if one believes that the remarks in §32 and §33 must mean the same, as I argued, then §33 (*Contra: haec differentia...*) could be seen as rejecting the two remarks at once. However, in §131 in section [7] Scotus quotes §32 to maintain the possibility of a demonstration *propter quid* about God: he seems to believe in the correctness of §32, so that it is implausible for §32 to be rejected in §33.

Turning to the textual evidence, nothing in the manuscripts suggests that §33 is an *extra*. By contrast, two manuscripts omit §32, and several manuscripts have marginal annotations indicating that §32 is an *extra*. A marginal annotation referring to §33 can also be found in another manuscript yet. In this case, however, the annotation says “*ab illo cancellata*”; should we attach any value to these words, they would rather point to the original presence of §33 in Scotus’ work, and possibly suggest that §32 was meant to replace §33.

In addition to the indications provided by the extant manuscripts, some interesting data can be found in Mauritius’ annotations. In particular, he notes that in some manuscripts (A) all of §§30-33 are said to be *extra*, while other manuscripts would indicate (B) only §32 as an *extra*; apparently, none of his manuscripts would mark only §§32-33 as *extra*. Now, information (A) can hardly be true: as I have tried to show above, the first refutation of Averroes’ position (§§30-31) is an essential part of the first redaction of the *quaestio*⁵³⁷. On the other hand, information (B) is in agreement with the data provided by some of the extant manuscripts, suggesting that §32 alone should be considered an *extra*.

Given the lack of textual evidence suggesting that §33 be deemed an *extra*, one may wonder why the editors marked it as an *extra* in the first place. The answer, I believe, is quite obvious: as it stands in the critical edition, §33 is opened by the words “*alia responsio*”, and the word “*alia*” cannot be explained but presupposing the presence of §32. Accordingly, if §32 is an *extra* then §33 must be an *extra* as well, so that, given the evidence for §32 being an *extra*, it is reasonable to assume that both §32 and §33 are *extra*.

To sum up, if the word “*alia*” was originally present in the text, there seems to be no better option than to take both §32 and §33 to be *extra*. This, however, would require a solution of the problems listed above about the overall purport of §§32-33 taken as a single unit. Given these problems, it seems more plausible to me to deny that §33 is an *extra*, and, consequently, that the word “*alia*” was originally in the text. In this respect, it is interesting to notice again some information provided by the extant manuscripts, on one hand, and by Mauritius, on the other.

⁵³⁷ Yet the presence of manuscripts providing information (A) is interesting: if it is correct to maintain that part of §30 is an *extra*, then an original indication of this might have turned into information (A) throughout the manuscript tradition.

As for the former, the word “*alia*” is interestingly omitted by one of the two manuscripts omitting §32 (ms. G)⁵³⁸. Moreover, another manuscripts omits “*alia*”, replacing it with “*igitur*”. As for the evidence provided by Mauritius, when noting that some manuscripts mark only §32 as an *extra*, he indicates the extension of the *extra* by quoting the first words of §32 and the first words which follow §32. In his account, the first words following §32 would be “*Responsio quod una proprietas*”, without “*alia*”.

All the data mentioned so far would be best explained, I believe, by the following scenario. The first redaction of the *quaestio* did not include §32; by contrast, it included §33, without the word “*alia*”. Scotus added §32 later as an *extra*. The addition of §32 potentially raised the problem for future readers of the relationship between §32 and §33. Plausibly, mss. G and A witness to two different ways in which this problem was actually tackled throughout the transmission of the text (by people other than Scotus). The insertion of the word “*alia*” could thus be the consequence of an interpretation of §§32-33 as two different arguments against §31. On the other hand, the insertion of the word “*igitur*” might be the consequence of an interpretation of §§32-33 as a single argument against §31 (an interpretation based on the view – correct in my opinion – that the main idea behind §32 and §33 is substantially the same).

[§41] In §40 Scotus had defended the view that God is dealt with in metaphysics as a cause of its subject on the ground that, in Aristotle’s eyes, God is a necessary cause. §41 simply calls into question that Aristotle’s view on God is the one ascribed to him in §40. Going into details, Scotus quotes a passage from *Metaphysics* A and argues that the statement he is reporting presupposes a conception of God as a free voluntary cause.

[§§44-57] These paragraphs comment upon the position, maintained in the first redaction of the *quaestio* and summarised in §43, that God is enquired into in metaphysics as a cause of the subject and that Intelligences are enquired into in metaphysics as the main parts of the subject. More precisely, §§44-45 focus on God, while §§46-57 are about Intelligences.

⁵³⁸ This piece of evidence alone might certainly confirm the connection between the presence/absence of “*alia*” and the presence/absence of §32, but could be interpreted in two opposite ways: either G is a witness to the omission of “*alia*” as a consequence of the omission of §32, or most of the manuscripts witness to the addition of the word “*alia*”, originally absent from Scotus’ text, in order to make sense of the addition of §32, and therefore of the simultaneous presence of both §32 and §33. I believe the latter to be the correct interpretation.

One manuscript would have the *extra* end with §53. It is clear enough, however, that §54 raises an objection against the conclusion stated in §53, and that the discussion continues until §57, so that §§54-57 should be deemed *extra* as well. On the other hand, there is some reason to suspect that at least part of §§54-57 (in particular §56) was written quite later than §§44-53. First of all, nothing forces us to believe that §§46-57 were written together as a single addition; rather, §§46-53 are a complete discussion on Intelligences, reaching a definite conclusion which is then called into question in §54. Second, §56 apparently refers to §128, namely to a paragraph in section [7], where Scotus maintains the view that God is the subject of metaphysics. By contrast, in §52 one finds the phrase “*substantia, quam tu ponis subiectum*”, by which Scotus is clearly referring to his own position. It is certainly possible that in §52 Scotus is simply “speaking to his younger self” and mentioning a position he would not endorse any more while writing. If, on the other hand, the phrase in question witnesses to Scotus’ current and unchanged position, then §52 and §56 can hardly be seen as belonging to a single addition. In the latter case, one may wonder whether §§54-55 were written at the time of §52 or at the time of §56. Providing an answer is difficult again. On one hand, §56 is undoubtedly Scotus’ answer to the objection raised in §54. On the other hand, the sequence §§54-56 is suspect: §54 – first objection; §55 – second objection and answer; §56 – answer to the first objection. In addition to this, one could also notice that §55 apparently assumes that God falls within metaphysical consideration as a cause (rather than as its subject) – a view endorsed in Scotus in the first redaction of the *quaestio*, but abandoned in [7].

Other interesting data are the following: presence of §§44-45 and omission of only §§46-57 in one manuscript; presence of §§44-56 and omission of only §57 in three manuscripts (while another manuscript has §57 written in the margin). As a matter of fact, it is not clear to me whether §46 is consistent with §45; as for §57, even though there might be some way to explain its presence after §§54-56, it really seems to be an objection addressed to §52, or to §§52-53 taken together. This last point is not only suggested by the overall content of §52 and §57, but by a terminological analysis as well⁵³⁹.

All the problems listed so far make the order and the relative chronology of §§44-57 quite uncertain. On the other hand, any attempt to solve such problems would result in a more or less speculative hypothesis. In what follows, I shall ignore them; however order and chronology of §§44-57 might be, I shall divide them into three parts: §§44-45, on God; §§46-53, first part on Intelligences; §§54-57, second part on Intelligences.

⁵³⁹ The correspondence between §52 and §57 is clear. Moreover, the last words of §57 (*ut de prima specie substantiae, non ut de causa*) might be meant to answer §53 (*nec ut de causa, nec ut de subiecto*).

[§§44-45] §44 makes an objection to the view that God is enquired into in metaphysics as a cause: if, according to Aristotle, God only causes something through motion, then metaphysics does consider God as a cause (rather, physics should consider God as a cause). The very same objection had already been made in §38 against the view that Intelligences are considered as causes in metaphysics, and it was acknowledged as valid in §40. In the case of God, by contrast, the objection is rejected.

More precisely, Scotus denies the premise that God only causes through motion: he causes the Intelligences without motion; moreover, he is a cause of all other things inasmuch as they are beings, not only inasmuch as they are mobile or have quantity – even though such form of causality is not carried out, according to Aristotle, except through motion. By contrast, Scotus remarks (and in so doing he confirms §38), Intelligences are causes of things only inasmuch as they are mobile.

[§§46-53] These paragraphs provide further remarks on whether and how metaphysics should enquire into Intelligences. First of all, Scotus refers forward to the “8th question below” – which actually turns out to be a reference to *QM L. 1 Q. 9*, concerning whether it is up to the metaphysician as such to consider the quiddities of things from the point of view of their particular nature. The answer given to this question, Scotus argues, is relevant to determining what is considered as a cause in metaphysics. §46 and §48 derive the consequences of a positive and a negative answer, respectively.

§46: if metaphysics enquires into the quiddities of things in their particular nature, then not only God, but also, for example, the angel, the sun, and the fire should be considered as causes, if they cause something according to its own *entitas*. §46 argues that they must indeed cause something according to its *entitas*, otherwise they would not cause anything at all. In other words, a positive answer to *QM L. 1 Q. 9* would entail that Intelligences are indeed considered as causes in metaphysics; not only Intelligences, though, but anything which might be considered a cause of the being of something. This conclusion depends, however, on the view that angel, sun, etc., are causes of the *entitas* of their effects; this view is called into question as soon as §47, which maintains that only God is a cause of *entitas*, while other things can only cause a “*talitas entitatis*”.

§48: if metaphysics does not enquire into the quiddities of things in their particular nature, then metaphysics only enquires into being inasmuch as it is common being; accordingly, metaphysics should only consider as a cause the cause of common being, namely God. “*Hoc tenes*” refers to the fact that Scotus would endorse this answer to *QM L. 1 Q. 9*, and would therefore deny that Intelligences may be considered in metaphysics as causes.

The paragraph continues introducing another way in which metaphysics may deal with Intelligences: it may consider them *qua* Intelligences, rather than *qua* causes (the phrase “*nisi forte ponas*” is hard to explain). This mode of consideration is said to have been already mentioned in §42 and must thus be identical to the consideration of Intelligences as main parts of the subject of metaphysics.

Having introduced the consideration of Intelligences *qua* Intelligences, §49 provides an argument in support of the view that the enquiry into Intelligences *qua* Intelligences should indeed belong to metaphysics. As the argument goes: if a science of Intelligences *qua* Intelligences is possible but it is not metaphysics, then Aristotle’s tripartition of theoretical philosophy in *Metaphysics* E is inadequate.

§§50-52, by contrast, argue against a metaphysical enquiry into Intelligences *qua* Intelligences. The main idea of the three paragraphs is the same: in as far as it is the universal science, metaphysics does not only abstract from materiality, but from immateriality as well. Accordingly, metaphysics does not deal with Intelligences *qua* Intelligences, just as it does not deal with material beings *qua* material beings. As §51 shows, these considerations reveal that §42 is wrong in identifying Intelligences with the main parts of the subject of metaphysics. Moreover, §52 explicitly states an interesting principle concerning the subject of a science, which will be found again later in the *quaestio*. The principle is the following: if A is the subject of a science, and A is divided into the two opposite species B and C, then that science must enquire into B and C to the same extent. In other words, there is no privileged part of the subject of a science – if a science is supposed to enquire mainly into B, then B must be the subject rather than A.

In §53 Scotus draws his conclusion from the discussion carried on in §§46-52. Referring again to the view he would endorse in *QM* L. 1 Q. 9, he states that metaphysics does not enquire into Intelligences *qua* Intelligences any more than it enquires into fire *qua* fire, either as a cause or as a subject. Scotus’ mention of the subject here should probably be taken in a loose sense to refer to the parts of the subject as well. Basically, Scotus is telling us that, since metaphysics does not enquire into particular quiddities as such, it does not enquire into Intelligences as such or into fire as such (*nec ut de subiecto*); moreover, even if the Intelligences or the fire should cause the *entitas* of something, they would not be enquired into in metaphysics as causes because metaphysics would in any case not enquire into their effects as such (*nec ut de causa*). By contrast, Scotus adds, if metaphysics considered also particular quiddities, then both Intelligences and fire would be enquired into *ut de subiecto* (we would better understand “parts of the subject”) inasmuch as they are particular quiddities, and also *ut de causa*, provided they cause the *entitas* of some particular quiddity.

If we take §§44-45 and §§46-53 together, we find that two positions of the first redaction of the *quaestio* (basically, two positions of §43) are reaffirmed: God is considered as a cause in metaphysics, while Intelligences are not. Some new insight into these positions – or even some variant thereof – is provided in §§44-53, though.

As for the first position, §§44-45 imply a distinction between being “a cause through motion” and “a cause of things *qua* mobile things”, and suggest that only the latter feature, strictly speaking, would prevent something from being considered as a cause in metaphysics. It is true that God is said to be a cause of separate substances without motion. However, Scotus also reports the opinion that God is a cause of material substances through motion: he ascribes such opinion to Aristotle and clearly does not regard it as problematic. This suggests that, even if God did not cause anything without motion, he would still be considered as a cause in metaphysics as long as he is a cause of things *qua* beings. By contrast, he underscores, Intelligences are only causes of things *qua* mobile things.

Surprisingly enough, in §46 Scotus takes into account the possibility that Intelligences (and, for that, other efficient causes) are causes of things *secundum entitatem*. The main point of §§46-53 is exactly that, even in this case, Intelligences would not be considered as causes in metaphysics just because metaphysics is only supposed to enquire into the cause of being in its whole extension – and only God can be such a cause. Incidentally, §47 also denies that causes other than God may cause the *entitas* of other things by claiming that they only cause determinate modes of being (*talitas entitatis*), which might be quite different from claiming that they only cause things *qua* mobile things.

To sum up, the view that God is a cause in metaphysics while Intelligences are not is maintained in the first redaction of the *quaestio* (§43) and reaffirmed in the *extra* (§§44-53). At closer inspection, however, it turns out that the same view is actually maintained on three different grounds in §43, §§44-45, and §§46-53, respectively:

- §43: God is a cause without motion / Intelligences are causes through motion;
- §§44-45: God is a cause of things *qua* beings / Intelligences are causes of things *qua* mobile;
- §§46-53: God is the only cause of universal being.

So much for the two positions of the first redaction of the *quaestio* which are reaffirmed in the *extra*. By contrast, one position maintained in the first redaction is then rejected in the *extra*. In the first redaction, Intelligences are said to be considered in metaphysics as the “main parts” of its subject; according to this mode of consideration, metaphysics would enquire into Intelligences *qua* Intelligences, and not only into Intelligences *qua* beings. The reason why Intelligences should be deemed the “main parts” of the subject of metaphysics is stated in §42: they are abstracted *secundum*

esse – not only *secundum rationem* – from motion and quantity, namely according to the metaphysical kind of abstraction.

§§50-53 reject the idea that Intelligences would enjoy some privileged status among the parts of the subject of metaphysics. They are not the “main parts”, as argued in §42: in order for metaphysics to be the universal science, it must abstract *secundum rationem* from immateriality just as it abstracts from materiality. Accordingly, either metaphysics must enquire into Intelligences *qua* Intelligences, into fire *qua* fire, etc., or it must not enquire into any particular quiddity as such. Scotus’ choice, we have seen, falls on the second alternative.

[§§54-57] As we have just seen, §§50-53 reject the view that metaphysics should enquire into Intelligences *qua* Intelligences. Within the *extra*, this view had been introduced in §48 and supported in §49 by the argument based on Aristotle’s tripartition of theoretical philosophy. This very argument remains to be answered after Scotus has denied that metaphysics must consider Intelligences either as causes or as parts of the subject. Hence the question asked in §54: how do you preserve the tripartition of theoretical philosophy in *Metaphysics E*?

The question is answered in §56: Aristotle’s tripartition of theoretical philosophy only concerns the knowledge which men can attain by natural reason; it does not take into account everything that is knowable in itself. What is implied, of course, is that Intelligences *qua* Intelligences cannot be known by natural reason; accordingly, the adequacy of Aristotle’s tripartition is not hindered by the lack of a science of Intelligences as such. In giving this answer, §56 refers forward to some subsequent passage of the work (*inferius*), and I think it is highly likely for this to be a reference to §128:

§56: Ad Philosophum patet responsio inferius de divisione scientiarum speculativarum. Tenet enim de illis quae a nobis per rationem naturalem possunt tradi, non de omnibus possibilibus ex parte naturae scibilium.

§128: Et secundum hoc, divisio Philosophi de scientiis speculativis, VI huius, tenet de traditis et a nobis rationabiliter tradendis, non de omnibus ex parte naturae scibilium. Igitur Intelligentiae non sunt hic subiectum nec pars, sed hic sunt considerandae propter propinquitatem ad primum, cum hoc quod de eis modicam possumus habere notitiam naturalem.

This suggests, as already said, that Scotus added §56 quite late, after writing down at least part of section [7].

Between §54 and §56, namely between a question and its answer, another objection is made and answered in §55. Actually, the objection in §55 is specifically addressed to the view that Intelligences are not considered as causes in metaphysics: if this is the case, how can one say that metaphysics deals with the “highest causes”, in the plural, while it considers only God as a cause?

According to §57, it is God that is called “causes”, in the plural, because of its several modes of causality. Even though Scotus does not refer forward to any passage in this case, it is remarkable that the very same explanation of the plural “causes” is given in §129. I would take this to confirm that §56 must be referring to §128, and that §§54-56 may have been written at the same time as, or after §§128-129.

Finally, §57 concerns again the problem of considering Intelligences *qua* Intelligences as parts of the subject of metaphysics. §52 had denied the possibility of this kind of consideration by claiming that the science of the genus deals with its species in the same way – in the case of metaphysics, material and immaterial substances would deserve the same treatment. §57 tries to oppose this claim: the two species in question do not necessarily deserve the same treatment; rather, the “first species” is considered inasmuch as it is that particular species, while the “second species” is not. The argument assumes, of course, that the species falling under a given genus might be hierarchically ordered, and its application to metaphysics takes it for granted that Intelligences are hierarchically superior to material substances. Hence the conclusion that Intelligences is considered by metaphysics as the first species of substance.

It might be interesting to notice the remark “*non ut de causa*”, which is basically superfluous within §57 and does not serve any purpose in answering §52. Its presence might be explained, however, by reading it against §53. As we have seen, §53 maintains that either metaphysics enquires into Intelligences, the fire, etc., both as causes and as parts of its subject, or it enquires into none of them, neither as causes nor as parts of its subject. §57 tries to maintain a third alternative: metaphysics enquires only into Intelligences (rather than fire, etc.) and only as parts (rather than causes) of its subject.

[§§80-83] As discussed above, there is some doubt concerning whether §79 should be considered an *extra* or not. On the other hand, there is little doubt about the fact that §§80-83 should indeed be considered an *extra*.

The first sentence of §80 is closely connected to the end of §79, which had provided an explanation for Aristotle’s connection between the enquiry into causes and the enquiry into being *qua* being as stated in *Metaphysics* Γ 1. Aristotle’s argument there, according to §79, is valid inasmuch as metaphysics enquires into the causes of being *inquantum* being (*specificative*). The first sentence of §80 suggests another explanation for the same Aristotelian passage: Aristotle’s argument is valid because metaphysics enquires into the cause of common being, namely God. One should notice here that, if this explanation must really be a *different* explanation, then God must be a cause of being *inquantum* being understood *reduplicative*; as a consequence, the concept of common being should

be restricted to created being. If this is correct, then the first sentence of §80 would show some similarity with §84 (and this, in turn, raises the question of the nature of §84, which will be overlooked here).

The remaining part of §§80-83 is not, as far as I can see, directly linked to the first sentence of §80. However, it is a classification of the “first causes”, and Scotus’ introduction of the expression “*first causes*” might be prompted by the last sentence of *Metaphysics* Γ 1. In any case, Scotus’ discussion here is still related to the distinction between *reduplicative* and *specificative* introduced in §78: the classification of “first causes” according to four meanings of “cause” is meant to clarify which sort of causes *ens inquantum ens* can have according to the two meanings of “*inquantum*”. This, it must be noticed, contradicts the very reason why the distinction between *reduplicative* and *specificative* had been introduced in §78 in the first place, namely the impossibility of causes of being *inquantum* being (*reduplicative*).

Going into details, the four classes of causes are the following:

1. Immediate propositional principles – these are said to be the first causes of knowing (*causae sciendi*);
2. Middle terms – these are said to be causes not only of knowing but also of being (*non tantum sciendi sed essendi*), because they cause an attribute exist in the subject and such inherence be known;
3. and 4. Intrinsic and extrinsic causes – these are said to be causes of being and principles of understanding the subject (*causae essendi...principia intelligendi subiectum*), because they must be understood before the subject, either as entering its quiddity of not.

§81 explains that transcendentals are (2) the first middle terms in demonstrations, and that they are the terms of (1) the first propositional principles. Accordingly, §81 maintains that metaphysics deals with the first causes in sense (1) and (2) because they are causes of *ens inquantum ens*, “*inquantum*” being understood *reduplicative*.

By contrast, §82 confirms that there are no causes (3) or (4) of *ens inquantum ens* (*reduplicative*); yet it also reaffirms that metaphysics deals with causes (3) or (4) of *ens inquantum ens* (*specificative*). The meaning of this is explained in more concrete terms in §83: all the four causes belong to the metaphysician’s consideration, because all the four causes can be considered inasmuch as they give *esse*, prior to their being causes of motion.

3. Final *extra*, §§97-109

As said at the beginning of this commentary, there is enough evidence in the extant manuscripts and in Mauritius' remarks to the effect that *QML*. 1 Q. 1 was not written as a single unit; rather, the "second half" of the *quaestio* must be considered a later addition in its entirety. We have also seen that there are different indications as to the beginning of this later "second half": it would begin with section [6] according to some witnesses, with section [7] according to other. Three possible scenarios have therefore been distinguished, namely the ones described in Hypotheses 1-2-3; according to Hypotheses 1 and 3, section [6] would belong to the later addition, while according to Hypothesis 2 it would not. One of the main goals of this commentary on section [6] is to show something that was just mentioned earlier, namely that section [6] is unlikely to have been written together with section [5], and that, as a consequence, Hypothesis 2 is hardly tenable.

Section [6] can be divided into two parts, §§97-103 and §§104-109. As we shall see, there is no reason to suspect that the two parts were not written together; on the contrary, the second part seems to presuppose the first part and to be attached to it in quite a natural way. As it is described in the critical edition, §§104-109 are a *quaestiuncula subordinata*: Scotus deals with a problem which is not essential to the *quaestio*, but which is related to its main topic and is raised by some of its possible solutions. The first part, namely §§97-103, is of greater importance for us: it presents some objections to the *solutio* in [5] and provides answers to these objections.

The fact that the objections to the *solutio* in [5] are all answered would suggest that [6] simply reaffirms [5], and that [6] might very well belong to the first redaction of the *quaestio*. As we shall see, however, in answering the objections Scotus also modifies his *solutio* in [5] in a rather substantial way: the view eventually maintained in §§97-103 is quite different from the first *solutio* and contradicts its main idea. Accordingly, I labelled the view maintained in §§97-103 as *solutio*².

§§97-103: *solutio*²

It will be recalled that Scotus' *solutio* in [5] was based on the following assumptions: substance is a subject of attribution of all beings; substance is univocal; substance has attributes whose inherence can be demonstrated *propter quid*. The objections in [6] call into question the last of these assumptions; as we shall see, *solutio*² will ultimately drop it.

The structure of §§97-103 can be outlined as follows:

- §§97-100: first difficulty of the *solutio* in [5] – "where is a demonstration about substance?";
- §§101-102: second difficulty of the *solutio* in [5] – "how can there be one?";

- §103: *solutio*².

[§§97-100] The first difficulty about the attributes of substance is introduced by the following question: “where is a conclusion about substance demonstrated?”. In other words, where is an attribute demonstrated of substance? The question “where?”, as it becomes clear soon, is meant to ask for a definite passage in Aristotle’s *Metaphysics* where an attribute has in fact been demonstrated of substance. On the other hand, the whole discussion of §§97-100 seems to raise doubts on the very existence of an attribute of substance more generally.

The discussion runs as follows:

- i) §97, question: where is an attribute demonstrated of substance?;
- ii) §97, answer to (i): in *Metaphysics Z* the attribute “first” is demonstrated of substance;
- iii) §98, objection to (ii): in that case the attribute “first” would not belong to any category (because quantity does not belong to all substances, and all other categories presuppose quantity);
- iv) §99, answer to (iii): the attribute “first” belongs to the category of relation;
- v) §100, objection to (iv): in *Metaphysics Δ* three classes of relation are distinguished, all of which presuppose quantity.

[§§101-102] The second difficulty concerns the possibility itself of a metaphysical demonstration about substance. The problem is the following: what would serve as the middle term in such a demonstration? Two candidates for this role are taken into consideration, definition and differentia; Scotus’ aim is to rule out both of them.

§101 focuses on the first candidate, namely definition. Scotus points to the fact that substance has no definition, as it is one of the highest genera; obviously, it follows that there is no demonstration about substance having its definition as middle term. This alone, it seems, would be enough to reject that substance may be the subject of metaphysical demonstrations, if metaphysics must be the “*certissima scientia*”, for the highest kind of demonstration is demonstration through definition (employed as middle term). Yet Scotus goes on to consider also the other alternative, namely differentia, in §102. His argument in this case remains quite implicit: he simply affirms that nothing is demonstrated of substance employing a differentia as middle term, suggesting that this could not take place according to any syllogistic figure.

In order to understand Scotus' point in §102, I would make two preliminary remarks. First, I would suppose that by "differentia" Scotus refers here to divisive differentiae; in this case, to differentiae dividing the category "substance" into its species. As a matter of fact, in §101 Scotus has already denied that substance may have a definition, and this is tantamount to denying that substance may be constituted by a higher genus and a constitutive differentia. This being the case, it would be pointless to take into account constitutive differentiae of substance in §102, after having denied their existence in §101; we must therefore assume that §102 concerns divisive differentiae.

Second, the demonstration of an attribute of substance should consist in a demonstration of a universal affirmative proposition having "substance" as its subject. Scotus himself underscores this fact while stating the "second difficulty" in §101: "*per quod medium fiet demonstratio demonstrans passionem de substantia in communi?*". Of course, a demonstration of the attribute P *de substantia in communi* should have the following conclusion: "All substances are P".

Now, Scotus' argument in §102 is plausibly the following. The only possible way to demonstrate a universal affirmative conclusion is to employ the first figure (*Barbara*). In particular, in order to demonstrate "All substances are P" the following two premises would be required: "All M are P", "All substances are M", where M is the middle term. However, if M is a divisive differentia, the premise "All substances are M" is false; accordingly, there cannot be a demonstration of "All substances are P" through M⁵⁴⁰.

[§103] This paragraph is an important turning-point in the *quaestio*. It is introduced as an answer to the two difficulties in §§97-102 (*ad hoc potest dici*), and it is indeed an answer to them. This does not mean, however, that §103 solves the two difficulties and reaffirms the *solutio* in [5]. On the contrary, §103 implicitly acknowledges that the two difficulties cannot be overcome; its aim is rather to find a sense in which substance can be said to be the subject of metaphysics in spite of the difficulties.

The fundamental point made in the paragraph is a distinction between two meanings of "science". First, in its proper meaning "science" (*scientia proprie dicta*) refers to the knowledge, obtained through demonstration, of the conclusion of the demonstration itself. Second, "science" can also refer to an aggregation of many knowable things, including both terms and propositions, and both principles and conclusions. To mention Scotus' example: geometry is said to be *one* science in this second sense. I shall refer to sciences in the two meanings as science¹ and science², respectively.

⁵⁴⁰ The premise "Some substances are M" would be true, but a particular premise cannot yield a universal conclusion. Also, the following premise would be true (at least, it might be true): "All M are substances". Since "substance" must be the subject of the conclusion, the premise "All M are substances" could only be employed in a syllogism of the third or the fourth figure; neither figure, however, is suitable to infer a universal conclusion.

It is clear that several sciences¹ can be part of a science²: for example, knowledge of the property P belonging to the triangle and knowledge of the property Q belonging to the circle are two sciences¹, but belong to one science², namely geometry.

The distinction between two meanings of science immediately entails a distinction between two meanings of “subject of science”. The subject of a science¹ is the subject of the conclusion which is known by demonstration. Scotus notices that several requirements prescribed by the *Posterior Analytics* are meant to be valid for the subject of sciences¹. One of such requirements is that attributes be demonstrated of the subject of science. For example, the triangle is the subject of the science of P belonging to the triangle, and indeed P is an attribute demonstrated of the triangle.

As for the subject of science², it must be recalled that several sciences¹ can be part of one science². Now, Scotus’ main idea to establish the subject of science² is that it should unify the several subjects of the sciences¹ which are part of the science² in question. More precisely, Scotus states that the subject of science² should be one of the following: (i) either something common to the subjects of the sciences¹, (ii) or some first thing to which all of them are attributed.

Scotus provides an example of a subject of science² falling under case (i). Let us suppose we have two sciences², one of which demonstrates all the attributes of figure in common, the other demonstrating the attributes of all the species of figure (circle, triangle, etc.). The subject of both sciences², Scotus claims, would be figure in common. As for the first science, this is quite obvious, for all the sciences¹ which are part of it have the very same subject, namely figure in common. By contrast, figure in common is the subject of no science¹ belonging to the second science². Yet it must be the subject of science² nonetheless, for nothing else is common to all the species of figure, namely to all the subjects of the sciences¹ which are part of the science² in question.

For present purposes, the most interesting point in Scotus’ example is the claim that it is not necessary for a science² to demonstrate any attribute of its subject (the science of the species of figure does not demonstrate any attribute of figure as such). This claim answers the two difficulties in §§97-102 in an obvious way: since metaphysics is a science², it is not necessary for it to demonstrate the attributes of its subject. As a consequence, substance can be the subject of metaphysics, even though metaphysics does not demonstrate any attribute of substance. Unlike figure, substance would be the subject of metaphysics for alternative (ii) above: not for his commonness, but because all the subjects of metaphysical conclusions are attributed to substance.

If this is the purport of §103 (and there seems to be no doubt about this, for it is introduced as an answer to §§97-102), it is striking that Scotus does not draw himself the conclusion that substance can be the subject of metaphysics in spite of the lack of demonstrations about substance. Surprisingly enough, Scotus draws instead another conclusion: God can be the subject of metaphysics even though

it is not possible to demonstrate any attribute of him, for all beings are attributed to God as to the *simpliciter primum*.

The conclusion drawn by Scotus must be properly understood. First of all, does it mean that §103 was not meant to defend the possibility for substance to be the subject of metaphysics in the first place? I think not, and this is confirmed by the beginning of §104: “*Sed sive Deus sive substantia ponatur hic subiectum [...]*”. The alternative “*sive Deus sive substantia*” presupposes that §103 has established the possibility for both God and substance to be the subject of metaphysics; in particular, §103 must have answered §§97-102, establishing that substance can be the subject of metaphysics.

Why then does §103 call into question God? The answer is actually quite straightforward, but it requires that we look back at the first redaction of the *questio*, specifically section [3] and section [5]. In section [3] Scotus had rejected Averroes’ position mainly on the ground that there is no *propter quid* demonstration about God. Accordingly, in section [5] substance was maintained to be the subject of metaphysics as the only candidate fulfilling certain conditions, including the possibility of *propter quid* demonstrations. In other words, we have seen that according to [5] substance is the subject of metaphysics rather than God just because substance, unlike God, was believed to be the subject of *propter quid* demonstrations. Now, §§97-102 argue that not even substance can be the subject of any demonstration, and Scotus eventually accepts this fact. There is no longer any reason to prefer substance over God as the subject of metaphysics: apparently, neither can be. At this point, §103 argues that the subject of metaphysics does not really need to have demonstrable attributes, in as far as it unifies all the subjects of metaphysical conclusions (either (i) by commonness or (ii) by *pros hen*). This, however, allows for both substance and God (not only substance) to be the subject of metaphysics, inasmuch as both substance and God are supposed to unify the subjects of metaphysical conclusions by *pros hen*. There is still no reason to prefer substance over God.

Yet the conclusion of §103 mentions only God, neglecting substance. Is this the case because, at this point, there is some reason to prefer God over substance as the subject of metaphysics? Plausibly yes. Actually, the fact that Scotus refers to God as to the *simpliciter primum* is telling. It recalls the argument in §64, which must now be deemed valid⁵⁴¹. Since God is prior to substance, the consideration of all beings inasmuch as they are attributed to God is prior to the consideration of all beings inasmuch as they are attributed to substance. Since both substance and God have all the features to be the subject of a science of all beings, God should be preferred as the subject of metaphysics, which is supposed to be the *first* science. As a matter of fact, section [7] will just clarify the possibility that God should be the subject of metaphysics.

⁵⁴¹ One should notice that the answer in §65 is no longer available in the light of §103.

Before moving to section [7], I would make a final remark on §103, in particular on the distinction between science¹ and science². Admittedly, Scotus does not really define a science¹, restricting himself to the following characterisation of its subject: “*illud enim est subiectum conclusionis demonstrationis qua concluditur passio eius de ipso*”. I take this to imply that a science¹ is the knowledge of such conclusion, and I think that the reference to “the conclusion of a demonstration [...]” in the singular makes my interpretation most plausible. Yet a different interpretation has also been put forward, which is also compatible with Scotus’ statements. In particular, Demange has suggested that a science¹ should be identified with the demonstrative knowledge of all the attributes belonging to a single subject – for example, all the attributes of figure⁵⁴². A science² would therefore be an aggregation of sciences¹ in this sense: a science² including the sciences¹ of circle, of triangle, etc., would be a science² of figure⁵⁴³. Basically, Demange reads the opposition between science¹ and science² in the light of Scotus’ opposition, later in §103, between two hypothetical sciences of figure.

There are two main reasons why I would prefer not to endorse Demange’s interpretation. First, in Demange’s account both science¹ and science² turn out to be aggregations of demonstrative knowledge, while Scotus’ idea underlying the distinction seem to be an opposition between simple and aggregate knowledge in the first place. Second, in §131 Scotus mentions a distinction between two meanings of “science”; in that case, it is quite clear that, according to one meaning, a science is the *habitus* whose object is a single conclusion, rather than an aggregation of conclusions. The wider similarity in wording between the distinctions in §103 and §131 strongly suggests that Scotus is actually referring to the very same distinction in both paragraphs, and so prompts us to read §103 against the background of §131⁵⁴⁴.

On the other hand, the example of the two sciences of figure is less perspicuous according to my interpretation, for it becomes an opposition between two sciences². Still, I would maintain that this opposition makes perfect sense in Scotus’ overall argument in §103, and that it is paralleled by a distinction between two sciences² of God in §§133-134. Let us postpone the latter point to the analysis of §§133-134. As for the former, Scotus’ intention is to show that the subject of an aggregation of conclusions does not *necessarily* have to be the subject of all those conclusions; in fact, it might even be the subject of none of them. In order to claim this, Scotus *hypothetically* separates the aggregation of conclusions concerning figure as such from the aggregation of conclusions concerning specific figures: given this separation, there would be two sciences both having “figure” as subject, albeit on

⁵⁴² See [Demange 2008], p. 214.

⁵⁴³ Demange maintains that the science², including the science² of figure, enjoys a “unity of attribution”. In Scotus’ terminology, this is incorrect strictly speaking: the unity of attribution is only one of the two ways in which a science² can be unified – and the science of all specific figures is one science by commonness, rather than attribution. See [Wood 2013], p. 27.

⁵⁴⁴ The distinction in §131 has its own problems, which we shall analyse later.

different grounds. It is important, in this respect, to notice two aspects of Scotus' account which can hardly be explained from Demange's point of view:

- the status of hypothetical assumption ("*pone enim...*") of Scotus' example: it is plausible to maintain that Scotus deems his example somehow unnatural, for it splits into two parts a single aggregation of knowledge, namely geometry (if the aim of the example were to distinguish between science¹ and science², the existence of a single science of figure as such could be taken for granted);
- Scotus' insistence that the second science of figure does not demonstrate any attribute of figure in common (if the aim of the example were to distinguish between science¹ and science², there would be no difference whether the science² of figure demonstrates the attributes of figure in common or not, in addition to demonstrating the attributes of circle, triangle, etc.).

All this considered, I believe it more plausible that the hypothetical science of figure as such should be deemed a science², which means it would be an aggregation of sciences¹, namely the *habitus* whose objects are the single conclusions demonstrated of figure ("figure is *x*").

§§104-109: *quaestiuncula subordinata*

As already said, the problem dealt with in these paragraphs is not essential to the *quaestio*; it is rather a subordinate problem, raised by a particular solution to the main problem of the *quaestio*. The structure of §§104-109 is as follows:

- §104: question, *videtur (quod non)*;
- §105: solution;
- §106: objection – case "substance";
- §107: objection – case "God";
- §108: answer to §106;
- §109: answer to §107.

[§104] By the end of §103 the reader has discovered that the subject of a science must be something unifying all the subjects of its conclusions. In the case of metaphysics, such unification – given the equivocity of being – cannot take place by commonness; rather, it takes place by a *pros hen* of all the subjects of metaphysical conclusions, attributed to a single first being – whether this be substance or God. This being the case, §104 asks a question concerning the principles of science – specifically, the principles of metaphysics: are there any *principia simpliciter* which concern the

“posterior things”, namely all the subjects of metaphysical conclusions which are attributed to the first being?

Before looking at Scotus’ positive answer to this question in §105, one might wonder the reason why the question is asked in the first place. Plausibly, the problem is posed by the fact that a science is supposed to derive conclusions from principles; accordingly, if (some of) the conclusions of metaphysics concern “posterior things”, also (some of) its principles should concern “posterior things”.

On the other hand, §104 (*videtur quod non*) explicitly claims that there cannot be *principia simpliciter* of “posterior things”, for “posterior things” are caused with respect to everything belonging to them. Accordingly, all principles concerning them would not be *principia simpliciter*, but principles depending in turn on some prior cause.

[§105] Scotus gives a positive answer to the question, maintaining that there are “complex principles, namely immediate propositions” concerning “posterior things”. In particular, their definitions are immediate propositions concerning them.

Scotus claims that these propositions are *principia simpliciter*: even though their subjects are caused in themselves, their definitions are not caused by other propositions prior to them. Were this not the case, Scotus concludes, every science could have only one principle, namely the definition of its subject (in the case of metaphysics, this would be either the definition of God or the definition of substance).

[§§106-109] Without going into the details of these paragraphs, it is interesting to notice how two parallel objections are put forward against the solution in §105. In the first objection (§106), the “posterior things” are the accidents with respect to substance; in the second objection (§107) they seem to be what is created with respect to what is uncreated. These two objections correspond to two different *pros hen*, and therefore to two different positions concerning the subject of metaphysics: the first objection is put forward against the background of the position “substance”, while the second objection is put forward against the background of the position “God”.

The presence of the two parallel objections is consistent with the opening line of §104 (*sed sive Deus sive substantia ponatur hic subiectum*). In other words, the existence of a difficulty concerning the principles of metaphysics is solely due to the *pros hen* of all beings to one first being, regardless of the identity of the latter.

All this confirms one point made earlier: §103 allows for both substance and God to be the subject of metaphysics, and was rather intended to answer certain objections concerning substance. The fact that only God is mentioned in the conclusion of §103 is plausibly due to its priority over substance, which would make it preferable to choose God, rather than substance, as the subject of metaphysics. Section [7] is entirely devoted to exploring this possibility.

4. Final *extra*, §§110-163

Section [7] is obviously a consequence of section [6], for it develops the view that God can be the subject of metaphysics. What is less obvious is whether section [7] was written together with section [6] as a single *additio*, or was added later as a further development of Scotus' investigation. In other words, it is not immediately clear whether Hypothesis 1 or Hypothesis 3, as described at the beginning of this commentary, should be endorsed (Hypothesis 2 has already been ruled out). The fact that some manuscripts indicate the beginning of an *extra* with section [7], rather than with [6], might suggest that Hypothesis 3 is correct, namely that section [6] and section [7] should be deemed an earlier and a later addition respectively.

In order to settle the matter, however, the indications in the manuscript tradition are not sufficient. The only way to evaluate the several possibilities with greater precision is to assess the degree of doctrinal unity behind sections [6] and [7]. Now, on one hand, Scotus' final position in section [7] depends essentially on one point established in [6]. On the other hand, it also seems to introduce some elements totally absent in [6], even though not in sharp contrast with it. Moreover, it is also possible that section [7] is not unitary itself, which makes the scenario more complicated.

As a matter of fact, we shall see in detail that the very end of section [7] is characterised by substantial doctrinal shifts, which suggest the chronological posteriority of some paragraphs or sentences. For the time being, however, I shall restrict myself to expounding a possible scenario of the composition of sections [6] and [7] which is different from both Hypothesis 1 and Hypothesis 3 above and is also more intricated than they are. I shall not argue in favour of this scenario in full, but in my opinion it is the most likely explanation of all the available data and of the contents of sections [6] and [7].

Going into details, I believe that Scotus wrote section [6] together with §§130-136 of section [7], which state the view that God is the subject of metaphysics. Accordingly, I believe that the opening sentence of §130 (“*His sic pertractatis, videndum est de principali proposito [...]*”) was originally meant to follow the digression in §§104-109. At a later stage, §§110-129 were added to complement the defence of the view stated in §§130-136; on that occasion, §§110-129 and §§130-136 were given the structure of a unitary section, made of preliminary remarks (§§110-129) and

proper *solutio* (§§130-136). As for most of §§137-163, they were probably added at about the same time as §§110-129 – in any case, not much later.

Whether this scenario is correct or not, it is certain that in the end Scotus meant section [7] as a unitary section, and so it has come down to us. I shall therefore analyse it as a single unit, with its own inner structure. This structure can be outlined as follows:

- | | |
|----------------------------------------------------------------------|-----------|
| a) <i>Solutio</i> ³ : God as the subject of metaphysics | §§110-136 |
| i) Introduction | §110 |
| ii) Averroes' and Avicenna's errors | §§111-129 |
| iii) <i>Solutio</i> ³ : God as the subject of metaphysics | §§130-136 |
| b) Doubts about <i>solutio</i> ³ | §§137-163 |

The introductory paragraph (a.i) divides the following discussion into two parts, namely (a.ii) and (a.iii). On the contrary, (b) is not mentioned in §110; *e silentio* one might argue that the addition of (b) was at least planned after the introductory paragraph was written.

[§110] This is an introductory paragraph to §§110-136. It follows on the conclusion of §103, namely the last sentence before the *quaestiuncula subordinata*, in quite a natural way. There Scotus had opened to the possibility that God be the subject of metaphysics. Here he begins section [7] assuming that God is indeed the subject of metaphysics, and claiming that this position must in any case be maintained in a way different from Averroes'. The following discussion is meant to clarify these points. In §110 Scotus divides this discussion into a *pars destruens* and a *pars construens*: in the former (§§111-129), he would point to the mistakes in Averroes' and Avicenna's opinions; in the latter (§§130-136), he would explain how God can properly maintained to be the subject of metaphysics.

[§§111-129] The *pars destruens* of Scotus' discussion is divided as follows:

- | | |
|----------------------------------------------------|-----------|
| ii) Averroes' and Avicenna's errors | §§111-129 |
| α) List of five erroneous views | §111 |
| β) Rejection of the five errors | §§112-129 |
| • First error (common) | §112 |
| • Second (Avicenna's) and third (Averroes') errors | §§113-114 |
| • Fourth error (Avicenna's) | §§115-124 |
| • Fifth error (Averroes') | §§125-129 |

[§111] Here Scotus lists five views he deems erroneous. The first view is said to be shared by Avicenna and Averroes; the second and fourth views are ascribed to Avicenna; the third and fifth to Averroes. They can be summarised thus:

- First error (common): no science can prove that its subject is (*suum subiectum esse*);
- Second error (Avicenna's): *only* metaphysics can prove that God is (*Deum esse*);
- Third error (Averroes'): *only* physics can prove that God is;
- Fourth error (Avicenna's): God is not the subject of metaphysics;
- Fifth error (Averroes'): the genus of separate beings is the subject of metaphysics.

As in section [2] of the first redaction of the *quaestio* (see the commentary to §§1-5), it is plausible to assume that, in reporting the first three views, Scotus employs expressions such as “*Deum esse*” in order to refer to the existence of something. Accordingly, the first three views may be reformulated as follows: no science can prove the existence of its subject; only metaphysics can prove the existence of God; only physics can prove the existence of God.

[§112] This paragraph is meant to reject the view that a science cannot demonstrate the existence of its subject. On the contrary, Scotus argues, a “science *quia*” does demonstrate the existence of its subject, for it infers the existence of its subject starting from the existence of an effect of its subject. The structure of such a demonstration in general is made explicit by Scotus as follows: since a necessary condition of the effect lies with the cause, the effect cannot exist without the cause also existing – therefore, if the effect exists, so does the cause.

Taking for granted that a science *quia* can demonstrate the existence of its subject, Scotus goes on to outline the order in which such a science should proceed. First, a science *quia* would presuppose *some concept* (*conceptum aliquem*) of its subject. Second, it demonstrates the existence of the subject, namely of something falling under the concept which had been presupposed. Third, it demonstrates the inherence of properties in the subject.

The second part of §112, where Scotus outlines the order of scientific enquiry, is of utmost importance to understand Scotus' position and to outline its development over time. For the time being, it may be worth noticing that nothing is said here concerning how the concept of the subject comes to be presupposed. Yet, if §112 must be relevant to the discussion of God as the subject of metaphysics, we must assume that the concept of God can indeed be presupposed in metaphysics.

Another remarkable feature of §112 is its focus on what is called a “*scientia quia*”. This being the case, one should notice the following points. First, §112 is relevant to a discussion on the subject of metaphysics only inasmuch as Scotus has already renounced his former demand that metaphysics be a *propter quid* science. As we have seen, he renounced such demand after realising that the subject

of the universal science – whether it be God or substance – cannot be the subject of *propter quid* demonstrations.

Second, the main idea of §112 was already present in the first redaction of the *quaestio*, namely in the rejection of the first argument *quod neutrum* from Averroes’ point of view (third rejection, §21): a science can demonstrate the existence of its subject. There are two differences between the first redaction and §112, though. On one hand, according to the first redaction, it seems that *whichever* science would be able to demonstrate the existence of its subject, as long as this happens with a demonstration *quia*. On the other hand, according to the first redaction (§22), a science should in any case presuppose the existence of its subject as something already known *secundum se*. Unlike the first redaction, §112 does not allow for a demonstration *quia* while demanding a presupposition *secundum se*. Rather, it characterises some sciences as a whole as “*scientia quia*”: sciences of this sort can demonstrate the existence of their subjects without presupposing anything but a concept of their subjects.

Finally, as for the presupposition of the concept of the subject, Scotus will say something slightly different later on, in section [a.iii], §132 and §136: a science should presuppose *quid dicitur per nomen*, in order to demonstrate the *esse* and the *quid est* of its subject. Such variation will demand us to clarify exactly what kind of assumption is requested by Scotus here in §112 and whether it is different from the presupposition mentioned later in section [a.iii].

[§§113-114] Scotus argues against the second and the third error together in §§113-114. As a matter of fact, the two views at stake are considered “complementary errors”: on one hand, Avicenna wrongly believes that only metaphysics can demonstrate God’s existence; on the other, Averroes maintains that only physics can. By contrast, Scotus claims that both metaphysics and physics can rightfully demonstrate God’s existence.

The structure of a demonstration of God’s existence had been made explicit in §112: it consists in inferring the existence of a cause as a necessary condition of the existence of the effect. The analysis of such demonstration is pushed further in §113: actually, different kinds of demonstration of the cause might be possible starting from a single effect, when the latter is considered according to its different attributes. This is the main idea behind Scotus’ argument against the two “complementary errors”, which runs as follows:

(P1) The existence of a given cause can be proved in virtue of any attribute whose inherence in the effect requires that cause as a necessary condition;

(P2) Both the attribute considered in physics and the attribute considered in metaphysics have a necessary condition of their inherence, the first mover and the first being respectively;

(C) Therefore, both physics and metaphysics can demonstrate its existence.

The reference to “its” existence in (C) presupposes that physics and metaphysics demonstrate the existence of the same cause, and that, accordingly, the first mover and the first being in (P2) must coincide. The mention of the first mover and the first being also suggests the nature of the “attributes” of the effects which allow for a physical and a metaphysical demonstration of God’s existence, respectively. The physical demonstration starts from God’s effects inasmuch as they are mobile in order to prove the existence of the first mover: motion requires a first mover as a necessary condition. The metaphysical demonstration starts from God’s effects inasmuch as they are beings in order to prove the existence of the first being: being requires a first being as a necessary condition. Both demonstrations work and eventually prove the existence of the same cause; accordingly, both Avicenna and Averroes are mistaken for maintaining their one-sided positions.

Having said this, Scotus adds that Averroes’ view is somehow “more wrong”, and that §113 is accordingly directed especially against him. There are two reasons why Averroes would be “more wrong” than Avicenna, according to Scotus. First, even though both physics and metaphysics can demonstrate God’s existence, metaphysics can do so “more immediately”. By this Scotus means that the metaphysical demonstration can arrive closer to God’s nature than the physical demonstration, for the general attributes of being lead to a positive cognition of God (by way of excellence) more than its specific attributes can do.

As for the second reason, Scotus points to the fact that, according to Averroes, a physical conclusion – namely the existence of God – would be a premise in metaphysics; moreover, this would not only be true *quoad nos*: that would be a physical conclusion *simpliciter*, and a metaphysical premise *simpliciter*. In that case, however, metaphysics would be *simpliciter* prior to physics, against the assumption that metaphysics is the first science.

To sum up, §113 argues that both physics and metaphysics can demonstrate God’s existence, and therefore both Avicenna and Averroes are wrong in believing that only metaphysics or physics can. Avicenna’s view is in any case to be preferred over Averroes’, both because the metaphysical demonstration of God’s existence is superior to its physical demonstration, and because Averroes’ view entails a false consequence such as the priority of physics over metaphysics.

§114 briefly states and answers an objection to §113. Apparently the objection is raised with the aim of defending Averroes’ view: “God’s existence is not demonstrated in metaphysics *propter quid*”. Scotus dismisses the objection at once, observing that God’s existence is not demonstrated *propter quid* in physics either: accordingly, the objection would deny that God’s existence can be demonstrated in physics as well as in metaphysics. The presence of the words “*nihil ad b*”, which, as

noted in the edition⁵⁴⁵, should be referred to (P2) above, is in my opinion not clear (in particular, it is not clear why the objection should be meant to invalidate (P2) in the first place).

[§§115-124] These paragraphs argue against the fourth of the erroneous views listed in §111, namely Avicenna's view that God is not the subject of metaphysics. Given that the *pars construens* of section [7] (§§130-136) will have to explain precisely how God can in fact be the subject of metaphysics, it is no surprise that the "fourth error" is discussed at length in §§115-123. Scotus' criticism can be divided as follows:

- §115: mention of two arguments against Avicenna's view already stated in the *quaestio*;
- §§116-118: first new argument against Avicenna's view;
- §§119-121: answer to arguments *pro Avicenna* stated previously in the *quaestio*;
- §122: answer to an argument *pro Avicenna* stated in Henry of Ghent's *Summa*;
- §123: second new argument against Avicenna's view.

§124 is not part of Scotus' criticism of Avicenna's view; quite the opposite, it seems to call into question the conclusiveness of the criticism itself, and is actually quite suspect as a remark made within §§111-129.

The structure of §§115-123 is not entirely transparent. In particular, it is odd that the arguments against Avicenna's view (§115, §§116-118, and §123) should be interrupted by answers to arguments *pro Avicenna*. In other words, the structure of the section would have been clearer if §§119-122 had been postponed to §123. It might be possible to make hypotheses to explain the order of paragraphs based on thematic similarities between them, but no final evidence is available as far as I can see. I shall restrict myself to mentioning one possible contact between §122 and §123 below.

[§115] Against the view that God is not the subject of metaphysics Scotus mentions here two arguments which he had already put forward earlier in the *quaestio* in support of the opposite view, namely that God is indeed the subject of metaphysics. The first argument Scotus recalls is described as the "*ratio fundata super auctoritatem Philosophi VI Metaphysicae*"; plausibly, the reference is to §§14-16, or also to §15 alone, which focuses specifically on God.

The second argument Scotus recalls is the "*ultima ratio pro opinione Averrois cum confirmatione illius rationis posita in responsione ad eam*": the reference is to §18 (*ratio*) and to §64 and §66 (*confirmatio*). As we have seen, the argument in §18 was based on the "vertical *pros hen*" of all beings to God and on the principle that the subject of a science enquiring many things should be

⁵⁴⁵ P. 55 n. 198.

their subject of attribution in the *pros hen*. Again, §64 and §66 corroborated the argument by observing that God is the absolutely first – that is, prior to substance – subject of attribution of all beings, and that he accordingly deserves the role of subject of the absolutely first science. Both the argument in §18 and its corroboration in §64 and §66 were rejected on the very same grounds: God cannot play the role of subject of metaphysics because he cannot be the subject of a science *propter quid*. This rejection, valid under the assumption that metaphysics should be a science *propter quid*, is no longer viable in section [7], where that assumption drops. It might be useful to compare Scotus’ reasoning in section [3] and section [7]:

Section [3]	Section [7]
<ul style="list-style-type: none"> - [<i>Pros hen</i> principle] The subject of a science enquiring into many things is the first subject of attribution of those many things, <i>if it can</i> (in the specific case of metaphysics: the subject of metaphysics must be the first subject of attribution of all beings) - The subject of metaphysics should be the first subject of attribution of all beings, <i>if it can</i> - Metaphysics is a science <i>propter quid</i> - God is the first subject of attribution of all beings, but God cannot be the subject of a science <i>propter quid</i> 	<ul style="list-style-type: none"> - [<i>Pros hen</i> principle] The subject of a science enquiring into many things is the first subject of attribution of those many things (in the specific case of metaphysics: the subject of metaphysics must be the first subject of attribution of all beings) - The subject of metaphysics must be the first subject of attribution of all beings - God is the first subject of attribution of all beings
<hr/> <p>Therefore, God cannot be the subject of metaphysics</p> <hr/> <p>Further consequence: another subject of attribution of all beings is required to play the role of subject of metaphysics</p>	<hr/> <p>Therefore, God is the subject of metaphysics</p> <hr/> <p>Further consequence: metaphysics cannot be a science <i>propter quid</i>, because there is no such science about God</p>

Scotus makes use of the “*pros hen* principle” both in section [3] and in section [7]. However, in section [3] the principle has only a relative strength: it allows one to identify something as the subject of a science, provided that such item abides by all other epistemological criteria imposed on the subject of that science (“*if it can*”). In the case of metaphysics, it is subordinated to the requirement that metaphysics be a science *propter quid*. Since God cannot be the subject of a science *propter quid*, God cannot be the subject of metaphysics, even if he is the first subject of attribution of all beings. A posterior subject of attribution of all beings, such as substance, will therefore be chosen as subject of metaphysics, if it can be the subject of a science *propter quid*.

By contrast, in section [7] the “*pros hen* principle” enjoys an absolute validity. In the case of metaphysics, it definitely singles out God as subject; this being the case, metaphysics cannot be a science *propter quid*. This change of perspective is due to Scotus’ abandoning the view of metaphysics as a science *propter quid* as more important than the “*pros hen* principle”. In turn, this

can be traced back to the outcome of section [6], according to which not even substance can be the subject of a science *propter quid*.

The argument of the “vertical *pros hen*”, introduced in order to support Averroes’ view (§18) and also rejected in section [3], is therefore deemed valid in section [7] and employed in order to reject Avicenna’s opposite view. It is worth noticing that this argument is meant to prove that God alone is the subject of metaphysics – unlike, for example, the argument in §17, which argues in favour of separate substances more generally. As declared right at the beginning of section [7], Scotus is not going to endorse Averroes’ views: in particular, he is not going to admit that separate substances can be the subject of metaphysics.

[§§116-118] These paragraphs state a new argument against Avicenna’s position that God is not the subject of metaphysics. They are of the utmost importance in order to understand the epistemological significance Scotus ascribes to the subject of science and, in particular, in order to appreciate his choice to make God the subject of metaphysics. This is all the more important in as far as this choice, as §§152-153 clearly imply, is independent of Scotus’ stance on the univocity of being. Were being univocal, the subject of metaphysics would still be God, and precisely for the reasons expounded in §§116-118. By contrast, it will be recalled that the equivocality of being was one of the main reasons why substance was preferred over being in section [5] to play the role of subject of metaphysics.

The strategy of the argument is to show that Avicenna’s position is untenable. To this end it employs as its first premise ((P1) below) a view which is expressly recognised to be endorsed by Avicenna. The argument is stated in §§116-117 and runs as follows⁵⁴⁶:

- (P1) Metaphysics is both about God and about being *qua* being
- (P2) Metaphysics does not enquire into God because it enquires into being
- (C*) Metaphysics enquires into being because it enquires into God
- (P3) The subject of a science is that whose knowledge is sought after in the science mainly
- (C) God is the subject of metaphysics

(P1) and (P2) entail (C*), which in turn, together with (P3), entails (C). (P1) is said to be Avicenna’s view, and quite correctly: Avicenna definitely maintains that being *qua* being is the subject of metaphysics, while also claiming that God falls within its consideration. Even more,

⁵⁴⁶ My interpretation of the structure of the argument is, I believe, different from the one underlying the critical edition (as I understand it, the critical edition would suggest the presence of two distinct arguments in §116 and §117). In particular, I would oppose dividing the argument into two paragraphs (§§116-117), and I would suggest to punctuate in a way similar to the following: “Sed metaphysicus non intendit considerare de Deo propter considerationem entis in quantum ens (quia Deus non est principium cognoscendi ens in scientia quia; similiter, tunc ultimus finis huius scientiae non esset speculari causas altissimas et primas, nec in actu sapientiae principali esset felicitas naturalis); ergo metaphysica principaliter considerat de ente propter primum ens”.

Avicenna would claim that the knowledge of God is in fact the ultimate goal of metaphysics: God cannot be the subject of metaphysics because metaphysics cannot take his existence for granted; rather, it is the enquiry of being which yields, as its most important outcome, the knowledge of the existence of God. On one hand, being must be the subject of metaphysics; on the other, God is its ultimate goal.

The main purport of Scotus' argument in §§116-117 is to deny the epistemological adequacy of a clear-cut distinction between subject and goal of a science. This is explicitly done in (P3), which provides us with a criterion to identify the subject of a science, which somehow amounts to saying that the subject and goal of a science are one and the same. More precisely: the main goal of a science is to achieve knowledge of its subject. Scotus specifies that this knowledge consists in a cognition of the attributes and perfections of the subject, but also extends to the existence (*esse*) of the subject in a *scientia quia*. In the case of metaphysics: if the main goal of metaphysics is to achieve knowledge of God, then God is the subject of metaphysics. The fact that his existence is proved in metaphysics is not a problem: quite the opposite, it is one of the tasks of a *scientia quia* to demonstrate the existence of its subject. This being the case, (C*) and (P3) entail (C).

As for the first part of the argument, namely the entailment of (C) from (P1) and (P2), it has already been said that (P1) is put forward as a view shared by Avicenna. On the other hand, two reasons in support of (P2) are stated in §§116-117: (i) God is not a principle of knowing (*principium cognoscendi*) being in a *scientia quia*; (ii) if (P2) were false, then the enquiry into the first causes would not be the goal of metaphysics, and natural happiness would not consist in the main act of metaphysics.

The view underlying (ii) is that the acme of metaphysics, being also the end of all human scientific endeavour, should bring about the happiness which men can attain by nature. More interesting, from the point of view of epistemology, is (i): God would not fall under metaphysical consideration just because metaphysics enquires into being *qua* being, for a *scientia quia* (the only kind of human science in which God might find a place) would not employ God as a principle to demonstrate something about being *qua* being. In other words: if the subject of metaphysics were being *qua* being, there would be no point for God to fall under metaphysical enquiry.

This idea is further developed in §118, where Scotus underscores that God is not considered by metaphysics as a principle of its subject. Such statement is quite remarkable, for it explicitly opposes one of the main ingredients of other conceptions of metaphysics: the one endorsed, for example, by Aquinas, but also – and more interesting yet – the one maintained by Scotus himself through the first redaction of the *quaestio*, as the analysis of section [3] above has shown.

The fact that God is not considered as a principle of the subject of metaphysics is traced back to a general epistemological principle: Scotus claims that no science takes into consideration the principles of its subject, unless they are principles of the knowledge of the subject to be attained in that science. To give Scotus' examples: the name is a *principium sciendi* with respect to proposition, and nature with respect to natural being (accordingly, name and nature would fall under the consideration of the sciences enquiring into proposition and natural being, respectively). The same examples were mentioned in section [3], §36 and §61, to argue for God being a principle of the subject of metaphysics. By contrast, §118 maintains that the parallel between the case of God and the case of name/nature does not hold, for the former is not a *principium sciendi* with respect to being in a *scientia quia*. Scotus himself might be underscoring his change of mind at the end of §118: it seems to me most plausible that the “*glossa ad dicta Aristotelis de VI Metaphysicae adducta pro opinione Averrois*” would be a reference to §61 (and that “*adducta*” should be taken to refer to “*dicta*”, rather than to “*glossa*”).

One last remark on §118: the idea that only *principia sciendi* of the subject of a science are taken into account in that science is not entirely new in the *quaestio*. As we have seen, it was already implied by §39, arguing that God cannot be a *principium sciendi* because he is a free cause. The answer in §40 was based on the assumption that, in Aristotle's view, God would be a necessary cause – accordingly, he could serve as a *principium sciendi*. On this basis, in the conclusion of section [3] God was maintained to be a principle of the subject of metaphysics. We have also seen, however, Scotus reaffirming the position that God could not be a principle of the subject of metaphysics in an extra within §30: again, the point was that God is not a necessary cause. Scotus' perspective on this matter in section [7] is quite different. It is irrelevant whether God is a free or a necessary cause: in any case, only a *scientia quia* of God is humanly possible – and in such a science God is not a *principium sciendi*. God's effects would rather be *principia sciendi* in a *scientia quia* having God as its subject.

[§§119-120] In criticising Avicenna's view that God is not the subject of metaphysics, Scotus also provides an answer to some arguments, stated earlier in the *quaestio*, which would support Avicenna's position. Not even one of these arguments had been introduced as an argument *pro Avicenna* in the first place.

§§119-120 take into account the three main arguments *quod neutrum*, namely the three arguments of section [2] – of course, only the part of these arguments concerning God, which was meant to oppose Averroes' position. The first argument (§1) is dealt with in §119, while §120 is devoted to the second and third arguments (§6 and §9, respectively).

Beginning with §120, Scotus restricts himself to stating that the second and third arguments *quod neutrum* have been adequately answered in section [3], namely in §§25-26 and in §§27-29, respectively. Just to recall the main points of these answers:

	Second argument	Third argument
Argument	The subject of a science must have attributes; God has none.	The subject of a science must have principles and parts; God has none.
Answer	God has attributes which are conceived after his essence.	It is not necessary for the subject of a science to have principles and parts. God has no principle prior to himself, but he has principles in virtue of which demonstrations about him can be carried out (namely, his effects and the propositions having them as terms).

As for the first argument, Scotus does not refer back to the answer provided in section [3], §§19-24. This seems to suggest that he would not deem that answer as adequate any longer. Nonetheless, a comparison between the essential points of §§19-24 and §119 reveals some similarity:

Argument	Answer §§19-24	Answer §119
A science must presuppose <i>quia est</i> and <i>quid est</i> of its subject	<i>Quia est</i> and <i>quid est</i> of God can indeed be presupposed by metaphysics, because they are self-evident by nature. At the same time, metaphysics can demonstrate the existence of God <i>a posteriori</i> . More generally, a science can demonstrate the existence of its subject with a demonstration <i>quia</i> , but it cannot demonstrate it with a demonstration <i>propter quid</i> .	The argument has no value, because metaphysics is necessarily a <i>scientia quia</i> of God, who cannot be known otherwise by us.

The idea which is common to the two answers is that metaphysics can indeed demonstrate the existence of God, and that this takes place by means of a demonstration *quia*. However, §119 forsakes the reference to the necessity of a presupposition *secundum se* of God's existence. From the point of view of §119, it seems that such presupposition would not make any sense. Metaphysics, in as far as it must be a science of God and in as far as God is knowable for men only in a *scientia quia*, is a *scientia quia*. This being the case, it must accomplish all the tasks this sort of science is asked to carry out, including a demonstration of the existence of its own subject.

[§121] This paragraph deals with another argument which would support Avicenna's error, namely the criticism of Averroes' view made in §30. According to the criticism, metaphysics should be a science *propter quid*, for it is described as the most certain science by Aristotle; since God cannot be the subject of a science *propter quid*, he cannot be the subject of metaphysics.

We already know why Scotus does not consider this argument as a problem in section [7]: he has abandoned the requirement that metaphysics be a science *propter quid*, acknowledging that it must in fact be a science *quia*. §121 adds one further element to this picture, introducing the

distinction between the “*metaphysica considerata a parte scibilium*” and the “*metaphysica ut est a nobis scibilis*”. It is important to underscore that this is not meant to be a distinction between two different sciences: only one science is at stake here, namely the science whose subject is God. Rather, Scotus is drawing a distinction between two ways in which the same knowledge can be had, two different “incarnations” of the same science. The first “incarnation” of metaphysics is unattainable for men: it is the knowledge of its objects of enquiry as they would be known by nature. This sort of knowledge would be a *scientia propter quid*. By contrast, the metaphysics which men can possess is said again to be a *scientia quia* about God.

The distinction between two ways in which metaphysics can present itself is introduced in §121 for the first time in the *quaestio*⁵⁴⁷; it will be employed again in §128 and further developed in §§135-136. Yet its essential idea is definitely anticipated, in the first redaction of the *quaestio*, by §§19-24. In particular, the claim that God’s existence can be proved by metaphysics with a demonstration *quia*, as far as it is also presupposed by metaphysics *secundum se*, seems to point to the ideal presence of a science in itself, structured according to the ultimate nature of things and which must abide by strict epistemological criteria, somehow “behind” the very same science as it can be attained by men. It is difficult to say to which extent the views expressed in §§19-24 and the one which is expounded in section [7] are close to each other; this discussion will be resumed after analysing §§135-136.

[§122] This paragraph takes into consideration another argument which would support Avicenna’s position, which Scotus expressly declares to be one from Henry of Ghent’s *Summa*. According to Henry, the subject of a science ought to be the “first known” (*primum scitum*), under whose “notion” (*sub cuius ratione*) all other things come to be known in that science. This would rule out the possibility that God be the subject of metaphysics, because the knowledge of God is rather the end of metaphysics⁵⁴⁸.

In his answers Scotus acknowledges the truth of Henry’s claim that the subject of a science should be the *primum scitum*, but opposes his interpretation of the meaning of “*primum*”: Henry’s claim is true “*de primo scito primitate principalitatis et intentionis, non executionis*”. Again, we find

⁵⁴⁷ It is hinted at in §56, which is, however, likely to be posterior to §128.

⁵⁴⁸ Cf. [Pickavé 2007], pp. 109-115, and especially pp. 109-110. Pickavé also notes Henry’s insistence, in a couple of passages, on the fact that metaphysics enquires into the “first being”, and comments that this insistence does not contradict his decisive denial that God may be the subject of metaphysics. It is interesting to compare one of these passages with Scotus’ doctrine as expounded in section [7]; see Henricus de Gandavo, *Summa*, a. 38 q. 1 (p. 163 ll. 68-70): “Sic enim metaphysica dicitur universalis, quia considerat de ente primo, et eius gratia de ente simpliciter et de omnibus partibus entis, secundum quod entes sunt [...]”. In particular, in this passage Henry seem to express a view which Scotus would certainly endorse: metaphysics enquires into being because of the first being. For Scotus in section [7], this is enough to claim that God is the subject of metaphysics; in Henry’s view, by contrast, it would only amount to saying that God is the end and goal, rather than the subject, of metaphysics.

Scotus opposing the distinction between subject and goal of a science: the subject of a science is the main object of enquiry of that science itself, the item whose knowledge is its main goal. It does not have to be something which is already known at the beginning of the scientific enquiry. As an example, Scotus mentions the name and the verb in *De interpretatione*: the subject of *De interpretatione* is proposition, even though name and verb are to be dealt with before proposition inasmuch as the knowledge of proposition presupposes the knowledge of name and verb.

[§123] In this paragraph Scotus introduces a second refutation – after the one in §§116-118, and besides the “old” arguments recalled in §115 – of the claim that God is not the subject of metaphysics. The argument is based on Scotus’ technical notion of the subject of science as the item including *virtualiter* all the scientific knowledge. More precisely, Scotus states that “*notitia scientiae et habitus scibilis virtualiter includitur in notitia subiecti primi et formalis illius habitus*”; such statement is briefly and vaguely justified by claiming that the knowledge of all posterior things can be traced back to the knowledge of the first subject of the science. The lack of a full explanation of the technical notion of subject is remarkable, as this notion is introduced in §123 for the first time in the *quaestio*; it remains quite obscure if one restricts himself to the present passage, without resorting to Scotus’ more detailed discussions of the matter in other works⁵⁴⁹. It is possible that Scotus was simply not interested in clarifying the notion of subject further in §123: as a matter of fact, he might prefer to go on with the argument in §123 without talking at length about one of its premises.

The argument, which is somehow intricate, can be summarised thus:

- (P1) Scientific knowledge is included *virtualiter* in the knowledge of the first subject;
- (P2) The more perfect knowledge cannot be included in the less perfect;
- (C*) If being is the subject of metaphysics, then the knowledge of being is more perfect than the knowledge of God;
- (P3) Natural happiness lies with the cognition of God and of separate substances;
- (C**) If being is the subject of metaphysics, then natural happiness lies with the cognition of being qua being;
- (P4) Natural happiness does not lie with the cognition of being qua being;
- (C) Being qua being is not the subject of metaphysics.

If being is the subject of metaphysics, then all metaphysical knowledge, including the knowledge of God, should be contained in being *qua* being because of (P1). On the other hand, if the knowledge of God is contained in being *qua* being, then the knowledge of God cannot be more perfect than the knowledge of being because of (P2). Apparently, Scotus takes this to entail that the knowledge of being is more perfect than the knowledge of God; accordingly, he draws the conclusion (C*) from (P1) and (P2). Again, from (C*) and (P3) Scotus infers (C**): if the cognition of being is

⁵⁴⁹ On Scotus’ notion of subject of science cf. [Honnefelder 1979], pp. 3-9; [Demange 2004].

more perfect and includes the cognition of God, then natural happiness would actually consist in the cognition of being. Finally, (P4) denies that natural happiness may lie with the cognition of being, arguing that such cognition is most imperfect (plausibly because of its universality), allowing Scotus to infer (C), namely the denial of Avicenna's view.

§123 is closed by a brief summary of the whole section §§115-123. The summary states in very general terms which the achievements of the section are: i) rejecting the view that God is not the subject of metaphysics; ii) showing how to maintain that God is the subject of metaphysics; iii) answering the arguments the rejected view mentioned in (i). As we have seen, point (i) is pursued in §§115-118 and §123; point (iii) in §§119-122. Point (ii) must be probably taken to be intermingled with point (i), or altogether with both points (i) and (iii); in any case, Scotus refers forward to §§130-136 for a fuller account of it. For the time being, it may be helpful to highlight the main elements of Scotus' view of God as the subject of metaphysics as they emerge from §§115-123:

- God is the subject of metaphysics because he is the subject of attribution of all beings;
- God is the subject of metaphysics because the consideration of God is the main goal of metaphysics;
- There is a distinction between metaphysics *considerata ex parte scibilium* and metaphysics *ut est nobis scibilis*;
- Metaphysics *ut est nobis scibilis* is a *scientia quia* of God and, as such, demonstrates the existence of its subject;
- God has attributes conceptually distinct from his essence;
- God's effects are employed as principles to demonstrate God's existence and attributes;
- All metaphysical knowledge is included *virtualiter* in the knowledge of the notion of God.

In order to grasp Scotus' position correctly, it is fundamental to underscore the presence of the technical notion of subject of science in §123. The argument against Avicenna in §123 suggests that all metaphysical knowledge should be contained *virtualiter* in God; in other words, that God should be the subject of metaphysics according to the technical notion of subject. On the other hand, the argument in §§116-118 rests on the idea that the subject of a science should be the item whose knowledge is the ultimate goal of the science itself. This being the case, §§115-123 as a whole argue that God is both the item in which all metaphysical knowledge is contained *virtualiter*, and the item whose knowledge is the ultimate goal of metaphysics. No distinction between two equivocal subjects of metaphysics can be detected here.

Actually, something more general can be said on the basis of the arguments in §§116-118 and §123. For both the arguments ultimately argue that God is the subject of metaphysics because, in general, the subject of a science should be such-and-such. Accordingly, the subject of a science should be, in general, both the item in which all knowledge of that science is contained *virtualiter*, and the item whose knowledge is the ultimate goal of that science. The two characterisations of the subject of science must coincide: the subject in its technical meaning must be the item whose knowledge is the ultimate goal of the science.

Said otherwise: in general, the ultimate goal of a science is the knowledge of the item which contains *virtualiter* all the science. This means, I suppose, that the task of a given science consists in nothing more or less than enquiring into its subject, achieving by demonstration all the knowledge which is included *virtualiter* in it. A science reaches its completion when it reaches a complete knowledge of its subject, all that is not contained *virtualiter* in the subject falling beyond its scope.

Returning to the specific case of metaphysics, we may now have a firmer grasp of the reason why Scotus maintains that God should be the subject of metaphysics, rather than being *qua* being. This is the case because, were being the subject, the ultimate goal of metaphysics would consist in the knowledge of being *qua* being, while the knowledge of God would fall entirely beyond its scope. Unless, of course, the knowledge of God is included in the knowledge of being *qua* being: something which is explicitly denied in §123, though.

The idea of a science reaching its goal in the perfect knowledge of its subject is going to be maintained by Scotus further in the *quaestio*. As we shall see, however, §§160-161 will try to tell us an alternative story on the relations between subject of metaphysics and knowledge of God.

[§124] This short paragraph, included between the criticism to the fourth erroneous view and the fifth erroneous view, is quite eccentric within the context of §§111-129. Having concluded §123 with a final statement of the criticism of the fourth error, Scotus notes in §124 that there are other, different difficulties standing against the opposite position as well, namely against the view that God is the subject of metaphysics. He also informs us that these difficulties would be discussed after the *solutio*; the reference is to §§137-163, which follow the *solutio* in §§130-136.

Admittedly, the presence of §124, which calls into question, with its brief remark, the long and complex criticism of Avicenna in §§115-123, cannot be altogether undisputed. First, it seems rather pointless for Scotus to weaken his criticism against Avicenna while he is going to maintain the *solutio* in §§130-137; basically, Scotus would be announcing difficulties in his own position even before expounding such position in detail in §§130-137. Second, it was noted that Scotus' reference, in §110, to sections [7.a.ii] and [7.a.iii], that is to §§111-129 and §§130-136, might suggest that the

introduction of §§137-163 was planned after §§110-136. Should this be the case, the reference to §§137-163 in §124 would be even more suspect. For completeness, one should mention that the paragraph is omitted in just one manuscript; this does not advance us much further in any direction, though.

All in all, it seems reasonable to take into consideration the possibility that §124 was originally absent from the text, and that it was introduced after §§137-163. Having said this, one should also reckon that there is no strong evidence supporting either the original presence or the original absence of §124.

[§§125-129] These paragraphs are directed against the fifth of the errors listed by Scotus in §111, namely Averroes' view that the genus of separate beings, including both God and Intelligences, is the subject of metaphysics. In commenting upon §§30-35 it was noticed that Scotus deems the position "God and Intelligences" as distinctive of Averroes' position; yet the refutation of Averroes in section [3], §§30-35, was directed against the position "God" as much as against the position "God and Intelligences". In section [7], by contrast, Scotus endorses some variant of the position "God", and indeed he has definitely overcome the rejection of this position he had stated in §§30-31. On the other hand, he keeps considering the position "God and Intelligences" wrong, and indeed, right at the beginning of §125, he recalls the argument against this position which had been stated in §34.

Even though the criticism of §34 remains one of the essential points of Scotus' rejection of Averroes in §§125-129, the latter has a slightly broader scope in so far as it deals with two ways in which that position may be maintained. The structure of §§125-129 can be summarised thus:

- [§§125-126] rejection of the position inasmuch as it is grounded on univocity;
- [§§127-128] rejection of the position inasmuch as it is grounded on *pros hen*;
- [§129] answer to Aristotle's *auctoritates* in favour of the position.

[§§125-126] As just mentioned, §125 repeats the argument in §34: there is no single science having something common to God and Intelligences as subject, simply because nothing is common to both God and Intelligences. The lack of something common to God and Intelligences, as said while analysing §34, can be interpreted in two different ways:

- (s) nothing at all is univocal to God and Intelligences
- (w) nothing is univocal *only* to God and Intelligences

While (s) – which presupposes the equivocality of being – is probably the view behind §34, Scotus' remarks in §126 clearly suggest that (w) is relevant here. This does not imply that Scotus has forsaken his view on the equivocality of being by the time he writes §§125-126 (apparently, nothing

can be said in this respect). It is worth observing that the argument in §§125-126, employing the weaker premise (w), turns out to be stronger than the argument in §34.

Basically, §126 provides support to the argument stated in §125 by means of the following claim: if something is univocal to God and separate substances, then it is also univocal to material substances. As a consequence, Scotus goes on, if both God and Intelligences fell within the subject of metaphysics, then by the same token also material substances would fall within the subject of metaphysics. As a matter of fact, the subject of metaphysics should be common to both God and Intelligences, and any such thing would be common also to material substances. In that case, metaphysics would enquire into separate substances and material substances with the same right, for – as Scotus underscores – a common science (or “science of what is common”; in any case, Scotus means a science having a given genus as subject) is not concerned with one of the species more than with another.

[§§127-129] Having clarified that “God and Intelligences” cannot be said to be the subject of metaphysics in virtue of a unity by commonness, Scotus takes into consideration the possibility that they are said to be the subject of metaphysics in virtue of a unity of attribution – in other words, in virtue of a *pros hen*. This possibility is rejected at once on two grounds.

First, when there is unity by *pros hen*, the subject of science is the subject of attribution in the *pros hen*, rather than the multiplicity which is unified. This view is not a new one: on the same grounds, in the first redaction Scotus had claimed that substance, rather than being in its entirety, had to be the subject of metaphysics. In the same way, §127 claims that, if the scientific consideration of all separate beings is unified by *pros hen*, then only God should be the subject of science, rather than “God and Intelligences”.

The second reason why there cannot be a science of God and Intelligences which is one by *pros hen* is parallel to the argument in §126 against the existence of something common to God and Intelligences only. Also in the case of *pros hen*, Scotus claims, if Intelligences and God were pulled together, then also material substances would, because they are attributed to God in the same way as Intelligences are.

This last point, Scotus notes, may be called into question, for one could argue (a) that Intelligences are more noble and more directly attributed to God than material substances are, and that for this reason Intelligences and God are considered in the same science, while material substances are not. Also, Scotus takes into consideration another argument to the effect that metaphysics enquires into God and Intelligences: (b) since men cannot have a science of Intelligences

as such, namely considered according to their proper nature, the little amount which is known about them would be best conveyed in the science about God.

Scotus acknowledges that, in a way, both (a) and (b) are effective to prove what they mean to. Yet, he underscores that (a) and (b) are valid only as far as sciences are possible to men; they have no value at all as far as the sciences in themselves, namely *ex parte scibilium*, are concerned. Here Scotus is using the distinction between a science *ex parte scibilium* and the same science *ut nobis scibilis* he had introduced in §121. It is *us*, for the scarcity of our knowledge of them and for their proximity to God, who include all that we can say about them into metaphysics – thus Aristotle’s description of metaphysics as concerning “immobile and separate” beings refers to metaphysics *ut nobis scibilis*. This does not entail, in any case, that Intelligences are the subject of metaphysics; they are not even part of the subject (as they were according to the first redaction), since the subject is God.

To conclude, it is interesting to highlight some information, as emerging in §§127-128, on the place of Intelligences within speculative sciences, both considered *ex parte scibilium* and *ut nobis scibiles*:

- *Ex parte scibilium*:

- Metaphysics: the subject is God, it is the science of all beings in virtue of their attribution to God;
- Science of Intelligences as such;
- Science of material beings as such (physics);
- Mathematics;

- *Ut nobis scibiles*:

- Metaphysics: the subject is God, it is the science of all beings in virtue of their attribution to God, it enquires into Intelligences as such for their proximity to God;
- Science of material beings as such (physics)
- Mathematics.

[§129] The paragraph is said to explain all of Aristotle’s *auctoritates* supporting Averroes’ “God and Intelligences” position. Actually, it seems to be only directed against a passage from Aristotle’s *Metaphysics A* mentioned in §14. According to that passage, metaphysics would enquire into first causes. §129 explains that Intelligences should not be included between such first causes, for they only cause through motion according to Aristotle. Rather, Aristotle’s usage of the plural

“causes” must be taken to refer to God only, the plural expressing the multiplicity of the perfections of his causality.

Aristotle’s reference to a plurality of causes had been explained in the first redaction, §43, in the following way: the first causes enquired into in metaphysics are both God and Intelligences; the former falls within metaphysical consideration as the cause of the subject of metaphysics, while the latter as part of the subject. The new explanation in §129 replaces the one in §43, no longer viable once the subject of metaphysics is said to be God and Intelligences are accordingly denied the status of “part of the subject”.

§129 concludes the criticism of the fifth error, and so closes section [7.a.ii], namely the first part of section [7], announced in §110 and devoted to the criticism of Avicenna’s and Averroes’ views.

[§§130-136] After the preliminary criticism of Avicenna’s and Averroes’ views, §130 opens section [7.a.iii], whose contents had been announced in §110 and are recalled right at the beginning of §130: §§130-136 are devoted to explaining how God can be the subject of metaphysics. In other words, §§130-136 provide a new *solutio* for the main problem of the *quaestio*.

This new *solutio* is ultimately based on a distinction between two meanings of “science”, which are mentioned in §131. They are the following:

- (A) Science as *habitus conclusionis*;
- (B) Science as aggregation of several *habitus*, both of principles and of conclusions.

The rest of §§131-136 then explains how God can be the subject of a science according to the two different meanings of science. The structure of the *solutio* turns out to be the following:

- §§131-132: God as subject of science (A)
 - §131: *Scientia propter quid*
 - §132: *Scientia quia*
- §§133-136: God as subject of science (B)
 - §133: Aggregation of conclusions (and principles) of demonstrations about God only
 - §§134-136: Aggregation of conclusions and principles, both about God and about all things attributed to him in the *pros hen* (metaphysics)
 - §135: *Scientia propter quid*
 - §136: *Scientia quia*

Given the fundamental role played by the distinction between (A) and (B) in the *solutio*, and also for a further problem which it poses, it is convenient to comment upon it before going into the details of its application to the case of God.

First of all, the distinction is not explained or justified; rather, it is simply mentioned and expressly presupposed: “*supposita distinctione scientiae [...]*”. It is no surprise, then, that no much information about it can be gained from §131. All that can be said is the following:

- Science (A) is a single *habitus* whose object is a single conclusion of a demonstration.
- Science (B), by contrast, is not a single *habitus*; rather, it is an aggregation of several interrelated *habitus*. No detail is given about the interrelation that should be displayed by the *habitus* in question. By contrast, something is said about the sort of *habitus* composing science (B) as an aggregate. In particular, a science (B) should be made of two kinds of *habitus*: of several sciences (A), on one hand, and of *habitus* whose objects are principles – rather than conclusions – of demonstrations, on the other.

In order to have a better grasp of Scotus’ point, it might be helpful to say in advance that his aim is to classify metaphysics as a science (B), in as far as it is an aggregation of principles and conclusions.

While providing few details on the distinction between science (A) and science (B), §131 also tells us that the distinction can be safely presupposed, as it remarks: “*de qua distinctione patet, scilicet quaestione prima VI huius*”. According to this indication, the distinction between (A) and (B) would be presupposed here because an explanation thereof is to be provided in *QM VI 1*. Should this be the case, it is worth remarking, section [7], at least from section [7.a.iii] onwards, would be likely to have been written after *QM VI 1*.

The distinction between science (A) and science (B) is not to be found in *QM VI 1*, though⁵⁵⁰. Moreover, the very same distinction between two meanings of “science” has already been found in §103: it is at least undeniable that they are stated in very similar terms. In §103, however, one finds no reference to *QM VI 1*, which makes the *later* reference in §131 even more problematic. All this considered, it is most plausible to maintain that §103 and §131 actually state the very same distinction between two meanings of science⁵⁵¹, and that such distinction can be presupposed in §132 just because it has already been introduced in §103. According to this scenario, the sentence “*de qua distinctione patet, scilicet quaestione prima VI huius*” could be the original text. More precisely, the words “*scilicet quaestione prima VI huius*” would not be Scotus’; they would rather be a later interpolation intended to explicate Scotus’ distinction (and eventually failing to do so).

⁵⁵⁰ This has already been maintained in [Wood 2013], p. 26.

⁵⁵¹ Cf. [Wood 2013], p. 26.

Reading §131 against the background of §103 allows us to understand immediately the nature of the interrelation of the *habitus* (see the phrase “*aliquam convenientiam habentium*”) composing a science (B). In particular, a science (B) should be made of principles and conclusions whose subjects are unified either by commonness or by attribution. The unifying item would thus play the role of subject of science (B). Since I believe that §103 and §131 make the same point about two meanings of “science”, I shall henceforth refer to science (A) and science (B) as “science¹” and “science²”, respectively.

[§131] Having mentioned the distinction between science¹ and science², §131 goes on to state that God can be the subject of a science¹ *propter quid*⁵⁵². In other words, God can be the subject of conclusions of demonstrations *propter quid*, which is to say that there are statements of the form “God is X”, where X is an attribute demonstrated of God *propter quid*.

In the light of the first redaction of the *quaestio*, the possibility of such statements cannot be taken for granted. Indeed, the first redaction had categorically rejected the possibility of a demonstration *propter quid* concerning God, and on this ground it had also rejected the possibility for God to be the subject of metaphysics. It is therefore appropriate for Scotus to provide some justification for his new claim that God can be the subject of conclusions of demonstrations *propter quid*. Surprisingly, the justification provided is not something new, at least apparently: rather, Scotus refers back to two earlier passages, namely §§25-26 and §32.

The first of these passages properly belongs to the first redaction of the *quaestio*, and is actually meant to demonstrate quite generally that God can have attributes, without any specific reference to demonstrations *propter quid*. Although this is stated from Averroes’ point of view, it seems safe to assume that Scotus would endorse it: in fact, even the rejection of Averroes’ position in §31 probably presupposes that God can have attributes (which are demonstrated *quia*: “*sed si aliquid tale demonstratur de Deo per effectum [...]*”). In other words, Scotus’ reference to §§25-26 is not sufficient to justify the possibility of demonstrations *propter quid* concerning God, and this is coherent with the fact that the first redaction of the *quaestio* would categorically reject that possibility.

By contrast, §32 is precisely concerned with the possibility of a demonstration *propter quid* concerning God; accordingly, it is no surprise that it does not belong to the first redaction properly, as it is an *additio*. We are allowed to conclude that §32, while being posterior to the first redaction of the *quaestio*, was written before section [7] – at least, before §131. Moreover, §32 stands as the only argument allowing Scotus to overcome §§30-31, in which the possibility of *propter quid*

⁵⁵² *QM* I 1, p. 60 ll. 6-7: “[...] Deus potest esse subiectum huius scientiae primo modo propter quid [...]”. It is possible that the word “*huius*” should be omitted.

demonstrations had been denied, in order to maintain that God can be the subject of science¹ *propter quid*, as he does in §131.

[§132] Granted that God can be the subject of a science¹ *propter quid*, §132 adds that God can also be the subject of a science¹ *quia*. This is to say that there are conclusions of demonstrations *quia* whose subject is God. The justification of this claim is based on the general structure of a demonstration *quia*. Such a demonstration should be grounded on the following assumptions: i) as for the subject of the conclusion – let it be X – one should presuppose “*quid dicitur per nomen*”; ii) one should presuppose an effect of X – let it be Y; iii) one should know that X is a necessary condition of Y. From these assumptions several conclusions can be drawn: 1) first of all, “that X is”, namely its existence; 2) second, “that X is A”, where A can be either (2.a) something essential to X or (2.b) some of its attributes⁵⁵³. As for (2.a), Scotus is basically claiming that the definition of X can be obtained by a demonstration *quia*, just like its existence and attributes. This being the case, the presupposition (i) “*quid dicitur per nomen*” is clearly weaker than assuming the definition of X – it simply amounts to assuming some description of X. In the case of God, one should presuppose (i) what is meant by the word “God”, (ii) an effect of God, (iii) and that God is a necessary condition of the effect in question, in order to demonstrate God’s existence, definition, and attributes.

In the framework of §132, I would recall, Scotus is referring to sciences¹: all the conclusions which are proved *quia* of the cause count as distinct sciences¹. The structure of a demonstration *quia* had already been described by Scotus in §112, while opposing the first of the five erroneous views of section [7.a.ii]. Unlike §132, in §112 Scotus speaks of a science *quia* as a science², including several demonstrations. Leaving aside this slight difference in perspective, §112 and §132 agree on the essential points of demonstrations *quia*, as the analysis above of both passages reveals. Here I would just add something about the presupposition concerning the subject which is required in §112 and §132, respectively: according to the former, “some concept” (*conceptus aliquis*) of the subject must be presupposed; according to the latter, “what is meant by the name” (*quid dicitur per nomen*). Is there any difference between the two requirements? Probably not. The reference to “some concept” of the subject, rather than to “the concept”, is probably due to the fact that §112, just like §132, does not demand that the proper definition of the subject be presupposed by demonstrations *quia*. The equivalence of the two expressions is further confirmed by §148: “*praesupposito quid dicitur, sive quantum ad aliquem conceptum*”.

⁵⁵³ A slight change in the punctuation of the critical edition may be helpful: “[...] ex effectu potest concludi tale et esse et hoc esse, et hoc tam quantum [...]”.

[§§133-134] §133 is opened by the claim that God can be the subject of a science². It goes on to describe one kind of science² whose subject would be God, another kind being described in §134.

First of all, God would be the subject of the aggregation of sciences¹ concerning God only; in other words, all the sciences¹ belonging to this aggregation must have the very same subject, which is God. Second, God would be the subject of the aggregation of sciences¹ concerning either God or other things attributed to God in a *pros hen*; in other words, the sciences¹ belonging to this aggregation have different subjects – and since all these subjects are attributed to God, God is to be the subject of the aggregation.

In both cases, the aggregation would be *one* science² in virtue of the unity of the subject, namely God, but in different ways. The first kind of science² is unified because all the conclusions therein have the very same subject – and this is the greatest degree of unity that a science² can enjoy. By contrast, the second kind of science² enjoys a lesser degree of unity – its conclusions have different subjects, but all of them are attributed to the very same being, namely God.

If we go back to §103, we may realise that the two kinds of science² described in §§133-134 are paralleled by Scotus' example of two sciences of figure: the one would demonstrate only attributes of figure as such, the other all the attributes of the species of figure. As argued above, in both cases Scotus is speaking of an aggregation of conclusions. However, one aggregation would be made of conclusions having the very same subject (figure); the other would be made of conclusions having different subjects, unified by their genus (figure). Again in §103 Scotus had mentioned that the an aggregation of knowledge should be unified either by commonness or by attribution. In this respect, the parallel between the science of the species of figure (§103) and the science of all beings (§134) highlights a difference between the two: the former is unified by commonness (in virtue of the genus "figure"), the latter by attribution (in virtue of the subject of attribution, God)⁵⁵⁴.

The kind of science² described in §134 is the true goal of Scotus' classification, and is therefore of utmost importance to us. Indeed, Scotus' answer to the question how God can be the subject of metaphysics lies exactly in the possibility of the kind of science described in §134⁵⁵⁵. In this respect, one should not forget the basic conception of metaphysics underlying all the *quaestio* as the science enquiring into all beings, namely the universal science. Accordingly, the possibility for God to be the subject of metaphysics can only be established by proving that the universal science can have God as subject, which is accomplished only in §134.

Why, then, should God be the subject of metaphysics? As it emerges from §134, that is why, in addition to being the universal science, metaphysics should also be the first science. Actually, the

⁵⁵⁴ Cf. [Wood 2013], p. 27.

⁵⁵⁵ I think it would be improper to say that Scotus is here distinguishing "four metaphysics", as in [Wood 2013], p. 27.

point made in §134 is nothing more or less than a reformulation of an argument already present in the first redaction of the *quaestio*, namely in §64 and §66: the *simpliciter prima consideratio* of all beings is the consideration of them inasmuch as they are attributed to the first being (God), rather than to substance – accordingly, God should be the subject of the first science⁵⁵⁶.

The reference to the possible univocity of being seems to me quite difficult to clarify, and it might very well be affected by textual problems. I shall restrict myself to observing two things. First, the univocity of being is in any case not definitely stated, given the hypothetical nature of the sentence⁵⁵⁷. Second, a variant reading in the critical apparatus seems to be better than the reading put in the text: “*et ens quodlibet, sicut contentum sub ratione primi entis, considerari potest in quantum ad ipsum attribuitur*”. If this was the original text, then some reference to univocity might have been added later, possibly by Scotus himself, which would have resulted in the text as we read it in the edition.

Having clarified that metaphysics should concern all beings inasmuch as they are attributed to God, Scotus closes §134 by drawing a further distinction. There are two ways in which all beings may be considered according to their attribution to God: either (i) they come to be known starting from a knowledge of God, or (ii) God comes to be known starting from a knowledge of them. (i) The former kind of consideration would be a science *propter quid* having God as subject; (ii) the second kind of consideration would be a science *quia* having God as subject. In other words, Scotus is here stating the distinction – which he had already mentioned in §121 – between two ways in which metaphysics, as the science of all beings *qua* attributed to God, may present itself. §135 and §136 deal with (i) and (ii) respectively.

[§135] The metaphysics *propter quid*, Scotus begins, is the way in which beings would be known by nature: of course, the natural order of knowledge proceeds from causes to effects. Moreover, the attribution of beings to God, the *simpliciter primum*, makes metaphysics the *first* science of all beings. In this respect, Scotus tries to prevent an error which may arise from his description of metaphysics: if beings are known according to their attribution to God, does this mean that they are not known in themselves? No, Scotus answers; rather, their very essences are known in virtue of their attribution to God.

⁵⁵⁶ It seems to me that there can be little doubt about the fact that this is the argument in §134; the text in the edition is not entirely clear, though. I would change at least the punctuation in the critical edition according to the interpretation given above: “[...] quia ad rationem subiecti alia attribuuntur. Cum consideratio illa de aliquo sit simpliciter prima quae considerat ipsum sub prima ratione sub qua est considerabile, et ens creatum, licet sit univocum sub ratione primi entis, considerari potest in quantum ad ipsum attribuitur, et (*om.* ?) ita prima consideratio de omnibus entibus erit talis in quantum attribuitur ad primum ens, non ad substantiam”. The conjunction “et” is omitted by two manuscripts, and the text would certainly improve with the omission.

⁵⁵⁷ As noted in [Wood 2013], p. 15, *contra* [Demange 2008], pp. 221-222.

The second part of §135 focuses on the question which intellect can have the metaphysics *propter quid*. As §136 will make explicit, men cannot attain the metaphysics *propter quid* in their present state. God, on the other hand, has just this kind of knowledge (for he knows all things through himself), except for one feature: God's knowledge is not a science, as it lacks any passage from premise to conclusion, from the knowledge of himself to the knowledge of his effects. A metaphysics *propter quid* which is properly a science, Scotus closes the paragraph, could have been the knowledge proper to angels in given conditions which must not concern us now. Suffice it to notice that Scotus might be not so much interested in finding an intellect whose knowledge is such and such, as in justifying the possibility of a metaphysics *propter quid* in principle.

[§136] The paragraph begins with the claim that men in the present state can only have a metaphysics *quia*: this is due to the fact that all human knowledge has its origin in sensation. Metaphysics *quia* is thus the first science for men which can be attained by natural reason.

Just like metaphysics *propter quid*, metaphysics *quia* has the following features: God is its subject, and all beings are its "matter". This, I would insist, is not accidental: metaphysics *propter quid* and metaphysics *quia* are actually supposed to be one and the same science, and therefore they must have the same subject and enquire into the same "matter". The divergence between the two ways in which metaphysics can be instantiated lies rather elsewhere, and is stated immediately afterwards: unlike metaphysics *propter quid*, metaphysics *quia* does not presuppose the existence of God, nor does it move from a knowledge of God to a knowledge of other things. Indeed, the structure of a science² *quia* mirrors the structure of a science¹ *quia* (cf. §132 for science¹, and §112 for science² – even though the distinction between science¹ and science² is not implied in §112): it assumes *quid dicitur per nomen* of its subject, and means to demonstrate both its existence and definition.

The claim that metaphysics *quia* must demonstrate God's existence rests on the view that this cannot be just demonstrated by another science and then assumed in metaphysics. This would be absurd in Scotus' view, as it had been impossible for Avicenna as well. The reasons behind Scotus' and Avicenna's claim, however, are slightly different from each other. For Avicenna, God's existence simply cannot be demonstrated by a science other than metaphysics. We have already how Scotus criticises this restricted Avicennian view (§113), maintaining that physics can demonstrate God's existence as well. On the other hand, Scotus repeats here in §136 the basic idea stated in §113: metaphysics enquires into the most immediate effects of God, which makes metaphysics somehow more entitled than other sciences to demonstrate God's existence (its starting-points are closer to God).

The paragraph is closed by two further remarks on the demonstration of the existence of the subject of science; apparently, they do not play any essential role in the general argument in §136. Actually, we may summarise both remarks in one sentence thus: neither a science *quia* nor a science *propter quid* demonstrates the existence (and definition) of the subject *propter quid*. The former, it is obvious, cannot provide the demonstration in question inasmuch as it is a science *quia*. As for the latter, Scotus underscores the fact that a science *propter quid* must presuppose existence and definition of its subject even though they might be demonstrated in virtue of its own causes, namely *propter quid*. We are not told why this is the case – plausibly, it is because a demonstration *propter quid* of the subject of a given science, if any, would belong to a different, higher science.

[§§137-163] §136 closes section [7.a], which is, strictly speaking, Scotus’ *solutio* to the *quaestio* in section [7]. Its main parts, namely the *pars destruens* (§§111-129) and the *pars construens* (§§130-136), had been announced in §110. Section [7.b], which is also the final part of the *quaestio*, is made of §§137-163; the only reference, earlier in the *quaestio*, to its presence is found in §124.

With respect to *solutio*³, §§137-163 play the same role as the one played by §§97-103 with respect to the *solutio* of the first redaction of the *quaestio*, namely *solutio*¹: Scotus puts forward some “*dubitationes*” concerning the *solutio* just stated. Reading through §§137-163, it is immediately clear that the paragraphs raise objections against *solutio*³ and try to provide answers to these objections. It is also evident that objections and answers are intermingled: an objection is answered before the subsequent objection is stated. Finally, Scotus gives us enough information as to the structure of the section, making the transitions explicit:

- §137: “Prima dubitatio...”
 - o §140: “Ad primam rationem istius dubitationis dicendum...”
- §144: “Item, secunda dubitatio...”
 - o §145: “Ad hoc dicendum...”
- §147: “Item, tertia dubitatio...”
 - o §148: “Respondeo...”
- §149: “Item, quarta dubitatio...”
 - o §150: “Respondeo...”
- §152: “Item, dubitatio quinta...”
 - o §153: “Responsio...”
- §154: “Item, sexta dubitatio...”

Following Scotus’ phrases, we can thus definitely recognise the presence of at least six distinct *dubitationes*. Moreover, expressions such as “*ad hoc dicendum*” and “*respondeo*” indicate the exact

end of a *dubitatio* and the beginning of the relative answer as far as the first five objections are concerned. No such indication is available for the sixth *dubitatio*, which makes it difficult to ascertain where the statement of the objection ends and whether an answer is given at all. In other words, while the structure of §§137-153 is clear, it is not obvious how to interpret the text from §154 onwards, until the end of the *quaestio*:

1) Prima dubitatio	§§137-139	Responsio	§§140-143
2) Secunda "	§144	"	§§145-146
3) Tertia "	§147	"	§148
4) Quarta "	§149	"	§150-151
5) Quinta "	§152	"	§153
6) Sexta "	§§154-?	"	?

According to the critical edition, Scotus would state the sixth *dubitatio* in §§154-155 and provide an answer starting from §156. In what follows, I shall argue that the sixth *dubitatio* is actually never answered. Rather, it poses a problem which is not overcome by Scotus in the *quaestio* and which may be considered a final objection to *solutio*³.

With this in mind, I would also read with some caution the answers Scotus gives to the first and second *dubitatio*, respectively. As we shall see, it is plausible that Scotus eventually did not deem his answers satisfying, for they are immediately invalidated by objections – sentences introduced by “*contra*” – in §142, §143, and §146. Moreover, the second *dubitatio* is closely connected to the sixth *dubitatio*, and §146 points to a difficulty which is essentially identical to the problem stated in §155.

It might be impossible to say whether the “*contra*” sentences were written together with the rest of §§140-143 and with §145, or were added later⁵⁵⁸: in other words, whether Scotus deemed his first two answers to be unsatisfying in the first place or not. What is certain, however, is that, by the end of the redaction of section [7.b], Scotus believed some *dubitationes* to be correct and effective against *solutio*³.

The refutation of *solutio*³ implied by some of the *dubitationes* forces us to assume that *solutio*³ cannot be Scotus’ final position on the subject of metaphysics. This brings us to the following questions:

- i. Does Scotus embrace a different position later?
- ii. If yes, does section [7.b] give us a clue as to such subsequent position?
- iii. If yes, does section [7.b] state itself this subsequent position explicitly?

I think all these questions can be given a positive answer. In particular, as for the first and second questions, I believe that a comparison of the *sixta dubitatio*, especially §155, with other places

⁵⁵⁸ The relevant sentences in §142 and §146 are found in the margin of one manuscript, while the sentence in §143 is omitted by another manuscript.

of Scotus' works strongly suggests that *solutio*³ is anterior to Scotus' view that being is the subject of metaphysics as expressed in *QM VI 4*, *Ordinatio I d. 3*, and *Reportata Parisiensis Prol. 3.1*.

Moreover, as far as the third question is concerned, I believe that Scotus states his new position, albeit in embryo, in section [7.b] itself, and in particular in §161 – which, accordingly, may be called the *solutio*⁴ of the *quaestio*.

[§§137-143] The structure of this section, which deals with the *prima dubitatio*, is as follows:

- §§137-139 Dubitatio
 - §137 First argument
 - §138 Second argument
 - §139 Third argument
- §§140-143 Answer
 - §§140-141 Answer to §137
 - §142 Answer to §138 (+ *contra* – objection to the answer)
 - §143 Answer to §139 (+ *contra* – objection to the answer)

The *dubitatio* is composed of three distinct arguments. Plausibly, they are put together in one *dubitatio* by reason of their common strategy: they are meant to point to a contradiction in the view that metaphysics is the science whose subject is God and, at the same time, the science of all beings.

Without going into details, the first argument (§137) claims that the consideration of all beings in themselves would be prior to the consideration of all beings inasmuch as they are attributed to God. Accordingly, if there is “a metaphysics” (namely, a science of all beings) whose subject is God, that cannot be the first science: there must be “another metaphysics”, prior to that, enquiring into beings in themselves.

The argument is answered in §§140-141. Basically, Scotus claims that the consideration of beings in themselves does not result in another metaphysics, but is part of the science enquiring into beings according to their attribution to God. The subject of this science is God, for the consideration of all beings according to their attribution to God is actually prior to the consideration of all beings in themselves. More precisely: even though the consideration of all beings in themselves enjoys a “*prioritas originis*” over the consideration of all beings according to their attribution to God, the latter enjoys a “*prioritas intentionis*” over the former – which is the relevant kind of priority in establishing the subject of science.

The second argument of the *dubitatio* (§138) points to the following problem: if the subject of metaphysics is God and, at the same time, metaphysics enquires into all beings according to their

attribution to God, then metaphysics cannot enquire *only* into being *inasmuch as being*. This is because all beings are attributed to God not only in universal, inasmuch as they fall under the general notion of “being”, which is attributed to God; rather, beings are attributed to God also in particular, inasmuch as they have a specific or individual nature. Accordingly, if metaphysics were the science of all beings according to their attribution to God, it would enquire into all beings also according to their specific natures (which, for example, contradicts the view that physics is a science distinct from metaphysics).

§142 provides an answer to the argument, explaining why metaphysics should enquire only into being in universal. This is the case, Scotus claims, because the main attributes metaphysics has to demonstrate of God are derived from the attributes of being *inasmuch as being*. Specific features of being, by contrast, do not allow us to demonstrate any attribute belonging to God primarily⁵⁵⁹.

The answer to the second argument is invalidated by the last sentence of §142. Scotus notes that every attribute of being *qua* being is also an attribute of God and that, accordingly, no attribute can be demonstrated of God *primarily* in virtue of the attributes of being *qua* being. The purport of this observation is not entirely clear. It might just point to the fact that the attributes of being are themselves attributes of God, and that no proper demonstration is needed to infer the inherence in God of the attributes of being. Even more, however, Scotus might be claiming the following: it is not possible to infer the attributes belonging *primarily* to God from the attributes of being, just as, in general, it is not possible to infer the attributes proper to one species from the attributes of its genus – which belong to the species, albeit not primarily. For example, it is not possible to infer the attributes proper to the isosceles triangle just from the attributes of the triangle *qua* triangle.

The third argument of the *dubitatio* (§139) is somehow connected to the second one, and calls into question the possibility of a science of all beings according to their attribution to God, both in universal and in particular⁵⁶⁰. The argument runs as follows: (P1) beings are attributed to God only inasmuch as God is their cause; (P2) God is not a cause of beings by necessity; (C) therefore, there cannot be a metaphysics enquiring into all beings according to their attribution to God.

§143 acknowledges that God is not a cause of the *esse* of beings by necessity; at the same time, it claims that God is by necessity a cause of the inherence of the properties of being *qua* being. For example: since God is pure act, being is divided by potency and act. The implicit point must be that a knowledge of the properties of being *qua* being can indeed yield a knowledge of God: if we grasp that being is divided by potency and act, we may infer that God is pure act.

⁵⁵⁹ I would propose a slight change in punctuation: “[...] condiciones principales concludendae de primo ente sequuntur ex proprietatibus entis in quantum ens (speciales enim condiciones entis non concludunt primo aliquid de ipso), ideo tantum considerat de ente in communi”.

⁵⁶⁰ This is how I would interpret the words “[...] primo modo, ita nec secundo”.

Again, the answer to the third argument is invalidated by the last sentence of §143 (cf. the end of §142 for the answer to the second argument). Apparently, Scotus simply calls into question the possibility that we can have the knowledge of the properties of being *qua* being which is needed to infer the attributes of God. For example: can we really know that being *qua* being is divided by potency and act? This cannot be taken for granted, for the attributes of being – as Scotus underscores – are not sensible.

To sum up: the first *dubitatio* is made of three arguments against *solutio*³; these arguments are followed by the respective answers in §§140-143. Yet the answers to the second and the third argument seem not to be satisfactory in Scotus' view, for they are called into question by the two “*contra*” at the end of §142 and of §143, respectively. Whether these two “*contra*” were written together with the rest of §§142-143 or added later is difficult or perhaps impossible to establish. Having said this, I would be inclined to think that they were added later, for two reasons. First, for a matter of style: the parenthetical “*contra*” sentences seem extraneous to the systematic exposition of *dubitationes* and answers. Second, for a doctrinal point: the “*contra*” in §142 clearly presupposes the univocity of being (*quaecumque insunt enti in quantum ens, insunt Deo*); however, in a later paragraph Scotus seems to hesitate on this very point (§153: “*dato quod ens sit univocum, adhuc principale subiectum erit hic Deus*”).

One last remark on the “*contra*” in §142: as we shall see, Scotus will come back on the problem of the correlation between attributes of God and attributes of being *qua* being by the end of the *quaestio*. He will try to clarify how metaphysics can demonstrate the attributes of God, but in a quite different framework: the idea of disjunctive transcendentals. In the end, the attributes of God “derive from” the attributes of being just because they are one part of the disjunction, as we shall see in §§158-161.

[§§144-146] The structure of this section, which deals with the *secunda dubitatio*, is as follows:

- §144: *Dubitatio*
- §145: Answer
- §146: *Contra* – objection to the answer

The *dubitatio* is expressed by a simple question: according to which notion in “first being” is first being (God) considered as subject of metaphysics? In other words, what is the underlying notion of “first being” presupposed by *solutio*³, when it states that the first being is the subject of metaphysics? The question is relevant, for we have seen that the notion of the subject of science must

be presupposed by the science itself – either its essential notion (*scientia propter quid*) or some other notion (*scientia quia*).

Scotus' answer to the question is complex and, in fact, quite obscure. I would restrict myself to considering the final statement of §145, which suggests – even though with some hesitation – a solution of the *dubitatio*. According to Scotus, the first being should be established as the subject of metaphysics according to the “*primitas unitiva continentia excellens*”, which is said to be “*primitas aliqua formalis*”. Understanding exactly what Scotus means by this is not essential for present purposes. Suffice it to know that, by the end of §145, Scotus has suggested a definite notion of “first being” according to which the first being would be the subject of metaphysics.

The “*contra*” in §146 argues that the solution in §145 is not adequate: the *primitas formalis* cannot be the characterising feature of the subject of metaphysics. In order to prove this, Scotus clarifies that the notion of “first being” according to which the first being can be the subject of metaphysics must be:

- a notion which is conceived “at the beginning” (*primo*);
- a notion according to which “*esse*” and then attributes are demonstrated of the first being.

In other words, Scotus is applying to the case of metaphysics the general principle, mentioned above, that the notion of the subject must be presupposed. Now, Scotus notes that the *primitas formalis* of God is demonstrated, rather than presupposed, in metaphysics (ultimately starting from God's effects). As a consequence, the *primitas formalis* cannot characterise the notion of the subject of metaphysics.

Just as in the case of the two “*contra*” in §§142-143, it might be impossible to determine whether §146 was written together with §§144-145 or added later. It must be noticed, however, that the argument in §146 is basically the same as the one in §155, which might suggest that Scotus came back to the *secunda dubitatio* after stating *sixta dubitatio*, never answered in the *quaestio*.

[§§147-148] The *tertia dubitatio*, stated in §147, proposes to draw a distinction between subject and goal of metaphysics, identifying being *qua* being with the former and God with the latter. In so doing, it suggests to reject *solutio*³ in favour of a more traditional, “Avicennian” view, in which the opposition between subject and goal of science is taken into consideration.

Scotus' answer in §148 restates his position that the goal of a science is to achieve complete knowledge of its subject – of which it presupposes “*quid dicitur, sive quantum ad aliquem conceptum*”. On the identification of subject and goal of science, see above the commentary on Scotus' argument in §§116-118. I would just notice here that the *tertia dubitatio* and the respective

answer implicitly focus only on the metaphysics *ut nobis scibilis* (it is evident that §§147-148 make sense only in that case).

[§§149-151] The same restriction to metaphysics *ut nobis scibilis* lies behind the *quarta dubitatio*. The *dubitatio*, stated in §149, calls into question the following view: it is possible to achieve a *propter quid* science of being *qua* being, but only a science *quia* of God. The fact that a science of being *qua* being can be *propter quid* is in fact not explicitly maintained in *solutio*³. This will not concern us now, though, for the main point of §149 is rather to argue for the possibility – for men – of a science *propter quid* about God. The argument for this is the following: once a first attribute of God has been demonstrated, all other attributes can be deduced therefrom *propter quid*.

Scotus provides two answers to the *dubitatio*, in §150 and §151 respectively; the second answer is stronger than the first one. §150 does not reject the possibility of demonstrations *propter quid* moving from one to another attribute of God; yet it highlights the fact that none of these demonstrations would be *simpliciter propter quid*, for their ultimate premise would necessarily be known by a demonstration *quia*.

§151, on the other hand, rejects the possibility of any demonstration *propter quid* concerning God in the first place. §151 claims that the chain of demonstrations of attributes of God can only proceed from the furthest to the closest to God's essence: accordingly, all demonstrations are demonstrations *quia*.

[§§152-153] The *quinta dubitatio* is interesting because it allows us to understand the relation between *solutio*³ and the problem of the univocity of being. As we know, *solutio*¹ was essentially based on the equivocity of being: being cannot be the subject of metaphysics just because it is equivocal. As far as we may know, also *solutio*² depends on the equivocity of being. By contrast, §§152-153 tell us that *solutio*³ does not: even under the hypothesis of univocity, God – rather than being – should still be the subject of metaphysics.

Going into details, §152 suggests that, were being univocal to God and all other things, then it would be the subject of metaphysics, for it would include everything falling under metaphysical consideration. Just to use the notions Scotus had introduced in §103 for the first time: §152 suggests that, if possible, metaphysics should be unified by commonness, rather than by *pros hen* – just like the subject of the science of all species of figure would be “figure”.

The answer in §153 insists on the fact that the ultimate goal of a science is to achieve perfect knowledge of its subject. As a corollary of this characterisation of the subject, Scotus clarifies that, if

a goal of a science is to achieve knowledge of a species of a given genus, the subject of science should be the species, rather than the genus. Indeed, if the genus were the subject, then the science would have to enquire into all the species to the same extent: for example, the goal of the science of “figure” is to enquire into the circle as well as into the triangle. In the case of metaphysics: since all the knowledge of being is aimed at achieving knowledge of God, the subject of metaphysics must be God, in spite of univocity.

I would make two final remarks on §153. First, I would repeat that Scotus is not asserting the univocity of being: apparently, he just takes into account the hypothesis of univocity as possible. Second, the idea that the science of the genus should concern its species to the same extent has already been found in an *extra* within the first redaction of the *quaestio* (in particular §52). The aim of §52 was quite different, though: the idea in question was used to argue that metaphysics should be concerned with separate and material substances to the same extent.

[§§154-163] These are the final paragraphs of the whole *quaestio*, and are introduced by the words “*item, sexta dubitatio est [...]*”. Accordingly, §§154-163 must include, at least as their first part, the statement of a sixth objection to *solutio*³. Unlike the sections devoted to the other *dubitatio*es, however, whose structure was clear enough, the structure of §§154-163 is difficult to perceive. More precisely, we can say the following:

- two arguments against *solutio*³ are stated in an ordered fashion in §154 and §155, respectively; they are distinct, but somehow correlated arguments, and may therefore be meant to fall together under the heading of *sexta dubitatio*;
- §§156-163 appear as a disordered set of objections, answers, and remarks, whose ultimate goal and final conclusions are not immediately clear.

In order to appreciate Scotus’ final position, it is therefore essential to understand the contribution of §§156-163, and especially the role they play with respect to the two arguments in §§154-155. Most importantly, it must be clarified whether §§156-163 refute the two arguments in §§154-155 – and, in so doing, restate *solutio*³ – or not. I am going to argue that §§156-163 do not refute §§154-155, and that *solutio*³ is not reaffirmed by the end of the *quaestio*. Yet §§156-163 definitely bring some correction and make remarks concerning §§154-155; also, the corrections lead to Scotus’ last pronouncement in §161, which might even be considered, together with its context, as a *solutio*⁴. The purport of §161 is itself unclear, though, and open to different interpretations. I believe that §161 basically explains how to maintain the view that being *qua* being is the subject of metaphysics.

Before going into the details of each paragraph, I would propose the following outline of the structure of §§154-163:

- §154: first argument
- §155: second argument
- §§156-161: adjustments of the argument in §155
- §§162: first remark
- §163: second remark.

[§§154-155] These paragraphs state two arguments against *solutio*³. As already said, they might be considered as composing together the *sexta dubitatio*. A comparison with the *prima dubitatio* is instructive: in that case, the *dubitatio* was actually made of three distinct arguments, united by a common strategy. Similarly, the arguments in §154 and §155 are distinct, but follow the same strategy in criticising *solutio*³: they call into question the possibility for human intellects to have a concept of God in virtue of which God may be adequately established as the subject of metaphysics. In this respect, the *sexta dubitatio* shows the same concerns as the *secunda dubitatio*. I think it is no coincidence that §146 presents, partially and in the essential lines, the very argument we find in §155. Scotus might even have returned to the *secunda dubitatio* after writing §155, in order to reject his no longer satisfying answer in §145.

The first argument of the *sexta dubitatio* is stated briefly in §154. Apparently, this argument is not rejected in subsequent paragraphs; in fact, it seems not to be mentioned at all later on in the *quaestio*, all subsequent discussion being triggered by the argument in §155. It is possible that Scotus did not attach much importance to the argument in §154. As a matter of fact, the second argument is somehow stronger than the first one, and all the evidence – especially external evidence – points to the following fact: the basic idea of §155 is the decisive argument for Scotus’ ultimate rejection of the theological stance on the question of the subject of metaphysics. Having said this, we may move to have a closer look to the two arguments.

[§154] The first argument is based on the claim that the only “quidditative” concept of God available for men is the general concept of being. In other words, the general concept of being enters any other concept of God’s quiddity, which in fact specifies the concept of being; none of such specifications is knowable by human intellects, though. The only specifications viable to men are rather *per modum descriptionis*. This means that the extension of the concept of being can be restricted to God only in virtue of attributes external to God’s essence, for example the attribute

“first”. “First being” is a “descriptive”, rather than “quidditative” concept of God, for it is composed of a general, quidditative notion (namely “being”) and a non-quidditative specification (“first”).

The argument is closed by the observation that, if God is the subject of metaphysics according to the concept of “first being”, then the subject of metaphysics would be an *ens per accidens* – namely, the subject of metaphysics would not be something according to its essence. This observation, together with the first part of the argument, tells us that in any case, if God is the subject of metaphysics, then metaphysics would deal with an *ens per accident*, for the only concepts of God humanly possible are concepts *per modum descriptionis*.

The implicit premise of the argument is, of course, that it is absurd, or at least inconvenient, that the subject of metaphysics should be an *ens per accidens*. Why this is the case is not made explicit, and it would be interesting to investigate how such premise interacts with the idea that a science only presupposes *quid dicitur per nomen* of its subject. For the time being, I shall leave this matter aside and move on to §155, which to some extent makes these problems “outdated”. In particular, two features of §155 are relevant in this respect:

- §155 is meant to prove that not even the concept of “first being” can be presupposed by human intellects as the concept of the subject of metaphysics (in other words: even if we admit that “descriptive” concepts may be used to identify the subject of a science, the concept of “first being” – and, for that, all other concepts of God – would still present a problem):
- §155 requires that something else, in addition to *quid dicitur per nomen*, be presupposed about the subject of a science.

Before analysing §155, we should notice one more feature of §154, which is also a feature of the whole section §§154-156. Even though Scotus does not make it explicit, §154 takes the univocity of being for granted, and so do the paragraphs which follow. To summarise: i) the univocity of being is explicitly rejected before section [7]; ii) in section [7] it is mentioned twice as an hypothesis, in §134 and in §§152-153; iii) it is definitely presupposed by §§154-163, and also at least by the “*contra*” sentence at the end of §142.

[§155] The second argument of the *sexta dubitatio* aims at showing that the concept of “first being” cannot be presupposed by metaphysics, and therefore cannot serve as its subject. I should say in advance that the following interpretation of the argument is based on a slight correction of the text in the edition: at p. 69 l. 4 read “*praecedit*” rather than “*praesupponit*”. The variant reading at stake is reported by the apparatus as present in three manuscripts, and I think it is required by the purport of the argument as a whole. Having said this, the argument can be summarised as follows.

First, the concept of the “first being” presupposes a demonstration by which “first” is proved of “being”. As a result of this demonstration, the concept of “first being” is known not to be a *ratio in se falsa*. The meaning of this is not explained here, but suggested by the example of the “*animal inanimatum*”; it becomes entirely clear if we take into consideration other places in Scotus’ works: a *ratio in se falsa* is a self-contradictory notion.

Second, a science must presuppose the “non-falsity” of the notion of its subject. It is the first time in the *quaestio* Scotus prescribes this requirement for the subject of a science, and I suppose it might be the first time in his career more generally; in any case, he states the same requirement in other places of his works. Scotus does not properly explain why the “non-falsity” of the subject should be required; he simply observes that, otherwise, “*animal inanimatum*” might be the subject of a science. We may follow Scotus in taking it for granted that the subject of a science should be a notion whose logical possibility is known for sure.

Third, Scotus goes deeper into explaining the significance of the demonstration of the “non-falsity” of a notion: the “non-falsity”, and therefore the respective demonstration, is not only presupposed to the *esse existentiae*, but also to the *esse quidditativum*. As a consequence, the “metaphysical demonstration of God’s *esse*” must be understood as referring to the *esse quidditativum*, rather than to the *esse existentiae*. Scotus’ brief remarks in this respect can be understood better in the light of other passages, which are well-known by scholarship. Basically, Scotus claims that there is no proper demonstration of God’s actual existence, for the premise of such demonstration – the existence of a created being – would not be a necessary premise. On the contrary, it is true that metaphysics demonstrates the *esse* of God if the *esse quidditativum* is meant. This demonstration would not move from the existence of a created being, but from a necessary premise: the inherence of an essential feature of a created being. The conclusion of the demonstration states the inherence of “first” in “being”, which entails that the concept of “first being” is not a contradictory notion, and thus that it corresponds to a certain quiddity.

So far I have expounded what may be called the “first part” of Scotus’ argument in §155, which I would isolate from the remaining “second part”. Before looking at the second part, it is appropriate to underscore some features of the first part. First of all, it is well known that many of the ideas Scotus introduces here heavily depend on Henry of Ghent. For example, the distinction between *esse existentiae* and *esse quidditativum* obviously derives from Henry’s distinction between *esse existentiae* and *esse essentiae*, and scholarship has already analysed similarities and differences between Henry’s and Scotus’ notions of quidditative being. Moreover, it has already been observed that Scotus’ requirement that the non-falsity of the notion of the subject be presupposed derives from Henry’s quidditative interpretation of the so called *quaestio si est*. The same is true about Scotus’

view of a metaphysical demonstration of God's *esse*. Here I shall not go through the relationship between Henry and Scotus on these points any further.

For present purposes, it is rather important to discuss the relationship of §155 with similar arguments in Scotus' own works, on one hand, and with the preceding sections of *QM I 1*, on the other. As for the former point, it is known that in several places of his works Scotus argues that God cannot be the subject of metaphysics because every science has to presuppose the "quidditative" *si est* of its subject, while metaphysics demonstrates the *si est* of God. Now, the main ingredients to formulate the same argument are also found in §155: the requirement that a science presuppose the non-falsity of the notion of its subject and the quidditative interpretation of the demonstration of God's *esse*. In other words, the "first part" of §155 seems to be formulating the same argument as the one found elsewhere in Scotus' works. However, the continuation of the argument in the "second part" of §155 diverges from the one found elsewhere. In particular, Scotus does not argue that God cannot be the subject of metaphysics because metaphysics has to demonstrate his *esse*, as we shall see. I believe that the divergence may be explained on the assumption that, when Scotus wrote §155, the argument was being formulated for the first time and had not still reached his final form. As a matter of fact, the second part of §155 is rejected already in §156, and §§156-161 propose a sequence of corrections to it – which, incidentally, lead closer to Scotus' other formulations of the argument.

Related to the claim that Scotus is formulating in §155 for the first time his argument involving the demonstration of God's quidditative *esse*, we have to discuss the second point mentioned above, namely the relationship of §155 with the preceding sections of *QM I 1*. In particular, Scotus often mentions in the *quaestio* – since §§1-2 – Avicenna's argument to the effect that God cannot be the subject of metaphysics because metaphysics demonstrates God's *esse*. On each occasion Scotus eventually rejects the argument, maintaining that in fact a science can demonstrate the *esse* of its subject. Throughout the commentary above I have expressly assumed that, in so doing, Scotus is claiming that metaphysics can demonstrate the *existence* of its subject. Does §155 not contradict my assumption? Quite the opposite, I would say that it confirms it. Specifically, the fact that in §155 Scotus explains at length and accurately how to understand the demonstration of God's *esse* suggests that he is actually introducing a new development in the *quaestio*. All preceding mentions of a demonstration of God's *esse* / *si est* must accordingly be interpreted in an alternative way, which can hardly be other than the more traditional demonstration of God's *existence*. In other words, §155 seems to be the first step towards a reinterpretation of Avicenna's argument (which had been repeated quite faithfully beforehand).

With these observations in mind, we can now turn to the second part of §155 and see how Scotus concludes his argument. Having established that the notion of "first being" presupposes a demonstration, Scotus argues that such demonstration cannot be *per naturam entis*, namely cannot

be grounded merely on the nature of being *qua* being. The reason behind this is that the demonstration in question has a particular conclusion, namely “some being is first”. Demonstrations *per naturam entis*, by contrast, may only have universal conclusions, such as “every being is *x*”: the *x* in the conclusion is what §155 calls a transcendental attribute of being.

Scotus goes on to claim that demonstrations of transcendental attributes are prior to demonstrations having particular conclusions, such as the demonstration of “first being”. As a consequence, Scotus concludes, the “transcendental metaphysics” would be entirely prior to the divine science. The former would concern being *qua* being, demonstrating its transcendental attributes; the latter would concern God. According to this picture, the theoretical sciences would be four: one transcendental science, and three particular sciences (divine science, mathematics, physics).

To recapitulate, §155 calls into question the view that God is the subject of metaphysics arguing that, in that case, such metaphysics/”divine science” would not be the first science: another science would be required prior to it, namely transcendental metaphysics; moreover, theoretical philosophy would be divided into four, rather than three sciences.

It seems to me, however, that Scotus’ argument suffers from inconsistency. In particular, Scotus claims that the notion of “first being” presupposes a demonstration, by which “first” is demonstrated to be an attribute of “being”. Which science has the task of carrying out this demonstration? Both possible answers contradict Scotus’ statements. It cannot be divine science, for the subject of this science should be the first being – however, Scotus maintains that a science has to presuppose the non-falsity of the concept of its subject, which in turn presupposes the demonstration in question. It cannot be the transcendental metaphysics either, for Scotus explicitly claims that this science only demonstrates universal conclusions about being, while the demonstration in question concerns a particular conclusion.

I believe that Scotus is well aware of the problem involved in his argument, created by the two requirements (i) that the non-falsity of the concept of God be presupposed by the divine science and (ii) that the science of being *qua* being demonstrate only universal conclusions. As a matter of fact, he corrects his argument starting from §156 – rejecting, in particular, requirement (ii).

[§§156-161] These paragraphs make adjustments on the argument just stated in §155. I would underscore once more that these adjustments do not amount to a full rejection of the argument in §155 in favour of *solutio*³. Rather, they start with the denial of the view that the science of being *qua* being should demonstrate only universal conclusions, which triggers an investigation into the relationship between the first being and the science of being *qua* being. By contrast, the “first part” of §155 – and in particular the requirement that the non-falsity of the concept of “first being” be demonstrated –

remains unaffected. As a consequence, §§156-161 provide no answer to the main problem raised in §155, namely how it would be possible for metaphysics to presuppose the “first being” as its subject.

§§156-161 are definitely not a polished section. In particular, they do not display a clear structure, and it is difficult to follow Scotus’ line of reasoning through the whole section, at least reading the paragraphs as they are found in the manuscripts (and, for that, in the critical edition). On the other hand, there is quite a general agreement in the manuscript tradition as to the disposition of the text. The only piece of evidence worth mentioning is a second hand in one manuscript marking §159 as an *extra* in the margin. For present purposes, however, the relevance of this, as of an isolated case, is practically nil. Accordingly, an interpretation of the structure of the text will have to rely only on the contents of Scotus’ exposition.

In this respect, I believe that two observations can be made with a fair amount of certainty. First, the reasoning Scotus begins in §156 appears to be split into two parts, separated from each other by a digression on whose contents I shall return later. As a matter of fact, it seems clear enough that §159 just continues the line of thought of the first sentence of §156. Accordingly, the digression would begin in §156 with the words “*hoc conceditur*”, extending until the end of §158. Just to confirm this, one may also add a vague remark on the variation in style characterising the text from the words “*hoc conceditur*” until the end of §158: Scotus’ exposition becomes fragmented and less polished, and conveys the impression that the author is seeking an answer while writing.

Second, even though §§160-161 may seem to be well connected with the end of §159 at first sight, at closer inspection such connection can be called into question. One may argue, for example, that the restriction “*quantum est ex parte scibilium*” at the end of §159 makes the connection implausible, for §§160-161 can hardly be stated from the point of view *ex parte scibilium*. On the other hand, §161 reveals a strong connection of §§160-161 with a problem mentioned in §158; more generally, it must be said that §§160-161 would make sense most of all as a continuation of §158.

On the basis of the two observations just made, I would put forward a hypothesis on the composition of §§160-161. I believe it is plausible that Scotus wrote §§156-161 in the following order:

- a. first sentence of §156 (up to p. 69 l. 25 “*subiecto*”) and §159;
- b. §§156-158 (from “*hoc conceditur*” onwards);
- c. §§160-161.

In particular, §§156-158 start with a deeper investigation into a point just assumed in (a), which would justify the fact that they were not just written and copied after §159, and therefore their position in the midst of (a). In this respect, it is interesting to notice that (b) might indeed be read as a continuation of the first sentence of §156; more plausibly, however, it was meant to be attached to

the words “*demonstratione particulari*” in §159. The fact that (b) would make more sense as a continuation of a claim in §159, if correct, would be further evidence in support of the original absence of (b) in the midst of (a).

In what follows I shall comment on §§156-161 according to my hypothesis above, namely separating (a), (b), and (c); most of what I am going to say, however, does not depend on the hypothesis and provides an interpretation of the text regardless of its structure.

[§156 up to p. 69 l. 25 “subiecto” – §159] Here Scotus rejects the view, maintained in §155, that the science of being *qua* being should only demonstrate universal conclusions about being. Quite the opposite, Scotus claims, it is up to the same science⁵⁶¹ to demonstrate both universal and particular conclusions about the same subject. It follows, Scotus goes on, that one and the same science should demonstrate the following:

- 1) simple common attributes;
- 2) disjunctive attributes;
- 3) a single disjunct of a disjunctive attribute.

Attributes of kind (1) and (2) are co-extensive with the subject, and are therefore predicates of a universal conclusion. By contrast, attributes of kind (3) are demonstrated with a “particular demonstration”, namely a demonstration resulting in a particular conclusion.

As a consequence, the science of being *qua* being cannot be restricted to the consideration of universal attributes. Rather, Scotus draws the conclusion that metaphysics should demonstrate the following:

- 1) attributes of being such as “one”, “true”, and so on (simple common attributes);
- 2) attributes of being such as “first or second” (disjunctive attributes);
- 3) attributes of being such as “first” (single disjunct).

The relevant propositions would be of the following form:

- | | |
|-------------------------------------------|--------------|
| 1) Every being is one; | [universal] |
| 2) Every being is either first or second; | [universal] |
| 3) Some being is first. | [particular] |

It is clear that, by the end of §159, the second part of §155 has undergone a distinct modification. While §155 had expressly denied that the science of being *qua* being could demonstrate that “some being is first”, §159 states that it must. The inconsistency of the argument in §155 thus

⁵⁶¹ Or: “to the same person”.

disappears, for it is possible now to indicate which science would demonstrate the attribute “first” of “being”: the science of being *qua* being.

At the same time, the argument in §155, if properly modified, would still work against *solutio*³. The science whose subject is the first being presupposes the non-falsity of the notion of “first being”, which in turn presupposes the demonstration that “some being is first”. Therefore, were God the subject of metaphysics, there would be *another metaphysics*, enquiring into being *qua* being, *prior* to the science of God. To conclude: if metaphysics has to be the first science, its subject cannot be God.

A question remains, however, about the knowledge of God. Which science has to convey the knowledge of God? Scotus provides an explicit answer at the end of §159, which I find difficult to understand. He claims that the knowledge of God and of the other separate substances would belong to a different, particular science; however, he adds the restriction “*quantum est ex parte scibilium*”. This raises more questions than it answers. First of all: is it not true that, *ex parte scibilium*, the science whose subject is God is itself a universal science, or even the only universal science? Second: I would believe that the presupposition of the non-falsity of the notion of “first being” is not problematic *ex parte scibilium*; why then does Scotus speak about the knowledge of God *ex parte scibilium* in the context of the *sexta dubitatio*? Third: what can be said about the knowledge of God *ut nobis scibilis*?

In other words, the reference to the restriction “*quantum est ex parte scibilium*” makes Scotus’ position quite problematic. As we shall see, Scotus’ statements in §§160-161 do not give rise to the same problems, or also answer the questions above; plausibly, this happens just because §§160-161 are written – I believe – *only* from the point of view of sciences *ut nobis scibiles*.

[§§156-158, from “*hoc conceditur*”] As said, I assume that these paragraphs were added as a further investigation into Scotus’ claim that a science can demonstrate particular conclusions about its subject. More precisely, Scotus confirms the truth of his claim (*hoc conceditur*), but poses the following problem: what is the middle term in a particular demonstration? Most of §§156-157 are devoted to analysing the problem in a specific case: they focus on the demonstration of the proposition “some being is first”, looking for a middle term. This research must not concern us here; suffice it to say that no definite conclusion is reached, and the paragraphs are expressly aporetic (*quomodocumque sit de hoc*).

Much more important, for present purposes, is Scotus’ remark in §158, concerning the scientific knowledge of God. The question Scotus intends to answer may be formulated thus: is it the universal science of being or a particular science that carries out demonstrations about the first being? We have already seen Scotus claiming, in §159, that the knowledge of God should be the task of a

particular science, distinct from the science of being *qua* being, *quantum est ex parte scibilium*. The difficulties underlying this claim have already been highlighted.

Scotus' approach in §158 is quite different. First of all, he does not refer to the perspective *ex parte scibilium*; in fact, §158 seems to concern the knowledge of the first being *ut nobis scibilis*. Second, he does not provide a definite answer. Going into details, Scotus claims that, if some specific attribute (*passio specialis*) is demonstrated of the "first being", the demonstration would belong to metaphysics (the science of being) only if the attribute is "transcendental". Otherwise, the demonstration would presuppose a knowledge of specific quiddities, falling outside the boundaries of metaphysics. The final answer, which is not given in §158, thus depends on whether the attributes demonstrated of God may be said to be transcendental or not.

In order to understand the passage properly, it is essential to understand what Scotus means by "transcendental" here. In §155, the expression "*passio transcendens*" had been employed to refer to "universal attributes" of being, as opposed to its "particular attributes" such as "first". On the other hand, in §158 "*transcendens*" cannot refer to universal attributes, for the problem at stake is whether a given *passio specialis* of the first being is transcendental or not. This notwithstanding, there is a fundamental agreement on the meaning of "*transcendens*" in §155 and in §158: to use the words of §155, an attribute of being is transcendental if it can be demonstrated *per naturam entis*; to use the words of §156, if it does not presuppose the knowledge of the specific quiddities to which it belongs. The real divergence between §155 and §158 does not therefore concern the meaning of "*transcendens*", but must be traced back to their respective views on which attributes can be demonstrated solely *per naturam entis*. According to §155, only common attributes can; according to §158, apparently not.

As a matter of fact, it is possible to say which attributes would qualify as "*transcendens*" according to §158, for §159 lists three kinds of attributes which a science of being *qua* being should demonstrate: (1) common attributes, (2) disjunctive attributes, (3) single disjuncts of disjunctive attributes of being. Since attributes of kind (1) and (2) are universally predicated of being, only attributes of kind (3) could qualify as "*passiones speciales*" of the first being. If this is correct, §158 is ultimately claiming that, if a proper attribute of the first being is not of kind (3), its demonstration falls outside the scope of metaphysics.

We can now return to the question Scotus is trying to answer: is it the universal science of being or a particular science that carries out demonstrations about the first being? Scotus would answer thus: the universal science carries out demonstrations of transcendental attributes; a particular science would carry out demonstrations of non-transcendental attributes of the first being. This leads

us to the next question: is there a particular science of God? For what we have just seen, this amounts to asking: are there non-transcendental attributes demonstrated of God?

Scotus will deal with these questions in §§160-161. Here I would just make one remark on their meaning. In particular, it seems implausible to me that Scotus is asking whether God has non-transcendental attributes in general: plausibly, he would take it for granted that God has indeed attributes which presuppose his own essence and cannot be demonstrated *per naturam entis*. Rather, Scotus must be asking whether *human intellects* can demonstrate non-transcendental attributes of God. If this is the case, the problem posed by §158, as well as the developments in §§160-161, cannot concern the sciences *ex parte scibilium*. Reformulating the question above, Scotus would be asking: is there a particular science of God *ut nobis scibilis*? Or is all the knowledge of God *ut nobis scibilis* conveyed within the science of being *qua* being?

[§§160-161] §160 contains an argument against something (*contra*); apparently, the argument is accepted as valid and §161 draws a conclusion from it. §§160-161 must be read within the broader context of the argument in §155: this has already been modified with §§156-159 and §§160-161 provide the last adjustments.

According to my hypothesis, §§160-161 should be read as a continuation of §158. As we have just seen, §158 claims that, should we be able to demonstrate non-transcendental attributes of God, we would exceed the scope of metaphysics, so that the knowledge of the first being would be conveyed by a particular science having God as its subject. §160 states two arguments against this conclusion; if the arguments are successful, the possibility of a demonstration of non-transcendental attributes must be rejected.

The first argument of §160 runs as follows: the goal of metaphysical knowledge is the knowledge of being at its highest degree, therefore metaphysics has to enquire into the first being. The second argument is the following: according to Aristotle, happiness consists in metaphysical knowledge; but happiness also consists in the knowledge of the first being; therefore, metaphysical knowledge and knowledge of the first being must be the same.

The two arguments are accepted as valid: they prove that the knowledge of the first being must be entirely contained within metaphysics. Scotus states this explicitly (*vitando quattuor esse scientias speculativas, et hanc ponendo de Deo*), and therefore draws the conclusion that all attributes of God knowable by natural reason are transcendental. The expression “*naturaliter cognoscibilia*” confirms that Scotus is here speaking about the knowledge of the first being *ut nobis scibilis*.

The words “*hanc ponendo de Deo*” present us with an issue of interpretation. Is Scotus claiming that God should be the subject of metaphysics, and thus reaffirming *solutio*³? Since all the

quaestio is about the subject of metaphysics, this would be quite a natural interpretation. Moreover, one may notice that the two arguments in §160 had actually already been employed by Scotus in §§116-117. On that occasion, Scotus intended to prove that God must be the subject of metaphysics on the basis of the principle that the goal of a science consists in the knowledge of its subject. It would be only too reasonable to believe that the two arguments in §160 are meant again to prove that God is the subject of metaphysics, and that the words “*hanc ponendo de Deo*” must be interpreted accordingly. I think this is wrong, though.

First of all, we must not forget that §§156-163 are built on §155, for which they provide corrections and further remarks. Now, in the “first part” of §155 Scotus has claimed that a science must presuppose the non-falsity of its subject, and this claim has not been called into question in later paragraphs (which provide corrections for the “second part” of §155). As we have already seen, a consequence of the claim just mentioned is that, since the concept of “first being” presupposes a demonstration, the first being cannot be the subject of the first science.

Second, we should read the words “*hanc ponendo de Deo*” in their immediate context. §§156-159 speak of metaphysics as of the science whose subject is being *qua* being, and which has to demonstrate the transcendental attributes of its subject. In this respect, §158 observes that, if an attribute of the first being is not transcendental, its demonstration falls outside the scope of metaphysics, and exactly because metaphysics is the science of being *qua* being. Accordingly, the words “*hanc ponendo de Deo*” must just mean that the knowledge of God does not fall outside metaphysics, and this is true because all “*naturaliter cognoscibilia de ipso sunt transcendentia*”. The knowledge of God is included in the science whose subject is being *qua* being because the only attributes of God which can be known by natural reason are transcendental attributes of being.

Third, §163 will say that both metaphysics and physics are *de Deo*, and obviously this does not mean that God is the subject of both metaphysics and physics.

The last two statements of §161 confirm what has just been said, and also add further clarifications. First, Scotus states that the goal of metaphysics is the perfect knowledge of being, which is also the knowledge of the first being. The significance of this must not be underestimated, for it is how Scotus finally overcomes the argument *pro Deo* stated in §§116-117 against Avicenna. Scotus does not reject his view that the goal of a science consists in the knowledge of its subject. Rather, he explains that the goal of metaphysics consists exactly in the perfect knowledge of being *qua* being. Does this not contradict the idea that natural happiness and, with that, the goal of theoretical sciences, lies in the consideration of the first being? Not at all, for the natural knowledge of the first being consists in a knowledge of transcendental attributes of being; therefore, it is included in the perfect knowledge of being *qua* being.

Second, Scotus notes that *ens in communi* is what is most known to the intellect, and that starting from it metaphysics proves *primitas* and other things, in which its completion consists. The fact that *ens in communi* is most known to the intellect is tantamount to say that it can indeed be the subject of the first science, for it does not presuppose any demonstration of its non-falsity. Starting with its subject, metaphysics then reaches its completion in demonstrating the attributes of being, such as “first” and other transcendental properties, until this results in the perfect knowledge of being.

To sum up, §§160-161 make the last adjustments to Scotus’ argument in §155. If we go through the argument in §155 again, but modify and complete it as suggested in §§156-161, we can outline Scotus’ final position on the subject of metaphysics in *QM I 1*. God cannot be the subject of metaphysics because any science must presuppose the non-falsity of the notion of its subject. The non-falsity of the concept of “first being” presupposes a demonstration, though, namely the demonstration by which the attribute “first” is demonstrated of “being”, and whose conclusion is “some being is first”. The non-falsity of the concept of “first being” is thus demonstrated in the science of being *qua* being. As a consequence, the first being cannot be the subject of the first science, for the science of being *qua* being would be prior to the science of the first being. By contrast, being *qua* being can be the subject of the first science, namely metaphysics, for it is most known to the intellect and does not presuppose demonstrations. The goal of metaphysics is the perfect knowledge of being, which consists in demonstrating all transcendental attributes of being. Finally, since natural reason can only know God as far as his transcendental attributes are concerned, there is no philosophical science having the first being as its subject. Natural happiness, which is the knowledge of God, lies with the perfect knowledge of being *qua* being.

To conclude, §§155-161 do not only provide a refutation of *solutio*³, but also state a new position which may be called *solutio*⁴. At this point one may ask: why did Scotus not state his *solutio*⁴ in full detail? The answer might be as simple as the following: in fact, he did state his *solutio*⁴ in full detail and in a clear way. However, he did so in a new *quaestio* (*QM VI 4*), meant to replace the old one.

[§§162-163] The last two paragraphs of the *quaestio* add two final remarks. §162 concerns the demonstration of disjunctive attributes of a given subject. Scotus notes that correlative terms – as the disjuncts of a disjunctive attribute are – are such that, from the inherence of one term in something, one may conclude the inherence of the other term in something else. For example, from the fact that something is caused one may conclude that something else is a cause. This is true, of course, also for the demonstration that “some being is first”. The main point of §162, however, is that such conclusions do not concern existence, but the *esse quidditativum*: in other words, the demonstration

that something is a cause amounts to demonstrating the non-falsity of the concept of cause. Scotus is basically stating in general terms what he had said about the concept of first being in §155 and what would become an important aspect of his conception of metaphysics; I shall not analyse it further here.

§163 comments upon the fact that also physics enquires into God, for it deals with the first mover. Just to mention the main point of the paragraph, Scotus states that metaphysics and physics concern the same thing *per accidens*. At first, this would just seem to mean that the first mover is not essentially the same as the first being: there is no contradiction in stating that “the first mover is not the first being”. However, Scotus goes on to claim that physics is about God *per accidens* more than metaphysics, because the concept of first mover is further from God’s essence than the concept of first being. This would suggest another meaning for Scotus’ claim: both metaphysics and physics enquire into God *per accidens*, not according to God’s essence.

II – Scotus’ conception of the subject of metaphysics and its development

1. The notion of subject of science

According to some interpretations, in *QM I 1* Scotus would state that God is the subject of metaphysics according to an improper meaning of subject, distinct from the significant meaning of the term from the point of view of epistemology. Starting-point of these interpretations is a given characterisation of the subject of science, typical of Scotus’ thought, which is taken as the proper meaning of subject. Scotus’ identification of subject and goal of a science is then assumed to individuate a secondary meaning of subject, to be opposed to the proper meaning.

As for the proper meaning, Scotus’ characterisation of the subject of science is extremely interesting and highly original. I shall not investigate it here, restricting myself to reporting the essential points. Basically, the subject of science is said to be what includes *virtualiter* all the truths pertaining to that science. In order for this to be a good definition, the whole science must be implicitly contained in something, which is then assumed to be its subject by definition. Scotus argues that the whole science is indeed contained in something. To begin with, the conclusions are contained in the principles from which they are demonstrated. The first principles are in turn contained in their logical subject, for the latter includes the predicate (of the principle). In the end, all the science is traced back to a single item, namely the logical subject of its principles. Ultimately, the subject of science is well defined; it is precisely the logical subject of its principles.

Now, I do not deny that this is the fundamental characterisation of the notion of “subject of science” – quite the opposite, I would believe that it is, for Scotus, the very definition of the subject of science, at least from a certain point of his career onwards. On the other hand, I would call into question the idea that, when Scotus states that the subject is the goal of a science, he is actually employing the term “subject” in a different sense; in other words, I would call into question that, in so doing, Scotus is putting forward *another definition* of subject which would make the term “subject” equivocal. By contrast, I claim that, in saying that the subject is the goal of a science, Scotus is just affirming something about the subject of a science in its proper sense – in other words, he is stating an attribute of the subject of science.

Before arguing for my claim, it will be convenient to outline the opposite interpretation with a closer look at the relevant passages in the *Questions*. Scotus argues that God is the subject of metaphysics in the second half of *QM I 1*, from §110 onwards. In §§116-117, he puts forward an argument against Avicenna’s view that being *qua* being is the subject of metaphysics. One of the premises of the argument is the following:

Sed illud est subiectum in scientia, cuius cognitio principaliter quaeritur quantum ad proprietates et perfectiones eius, et etiam quantum ad esse in scientia quia, ergo etc⁵⁶².

The subject of a science must be the thing the knowledge of which is mainly sought after in that science. Accordingly, the subject of metaphysics cannot be being: the investigation of God is the reason why metaphysics takes being into consideration, not vice versa. It is the knowledge of God which is mainly sought after by metaphysics. In one passage of the *Prologue* (which we are going to analyse better shortly), Scotus also states that the subject of a science is a final cause with respect to that science; one of the arguments in favour of this statement is the idea that the knowledge of the subject is the main intention of the science. In yet another passage in *QM I 1* Scotus states that the “matter” and the “goal” of a science are the same thing⁵⁶³.

On the basis of this evidence, it has been maintained that in *QM I 1* Scotus must be employing the term “subject” as synonymous with “goal” or “final cause”, to be distinguished from the subject of science in its proper sense. By contrast, some interpreters remark, *QM VI* states without hesitation that being *qua* being is the subject of metaphysics just because it employs the term “subject” in its proper epistemological meaning. The proper meaning of “subject”, according to this interpretation, would be made available no earlier than *QM VI 1*⁵⁶⁴. Admittedly, in one passage in the *Reportatio Parisiensis*, where Scotus holds that being is the subject of metaphysics, he also acknowledges that metaphysics is said to be “*circa causas altissimas finaliter ad quas terminatur ipsius speculatio*”⁵⁶⁵. Apparently, this would agree with the unifying interpretation of the *Questions* I have reported so far: being and God can be said to be subjects of metaphysics according to two meanings of subject.

Now, I believe that the structure and contents of *QM I 1* are sufficient to show that this interpretation is not correct, and that in the second half of *QM I 1* God is not said to be the subject of metaphysics in an improper sense. In fact, we shall see that one of Scotus’ real problems is to determine whether and how something other than God may be the subject of metaphysics, granted that the subject of a science – in its proper sense – is also its final cause. In any case, I would state here some definite reasons why the interpretation is untenable.

First of all, the notion of “subject of science” as the thing including the whole science *virtualiter* is not introduced only in *QM VI 1*: as a matter of fact, it is already found in *QM I 1*, §123. Even more, in this case Scotus’ notion of subject is used precisely to prove that being *qua* being cannot be the subject of metaphysics:

Item, potest sic argui: notitia scientiae et habitus scibilis virtualiter includitur in notitia subiecti primi et formalis illius habitus, quia in eius notitiam omnia posteriora reducuntur secundum eorum cognitionem. Si ergo ens, et non Deus, ponitur subiectum in metaphysica, sequitur quod notitia sapientialis, quae habetur in metaphysica, virtualiter includitur in notitia entis. Sed impossibile est cognitionem perfectiorem includi virtualiter in cognitione imperfectiori. Ergo cognitio entis

⁵⁶² *QM I 1*, p. 56 ll. 9-11.

⁵⁶³ *QM I 1*, p. 67 ll. 5-8.

⁵⁶⁴ *QM VI 1*, pp. 15-16.

⁵⁶⁵ *Reportatio Parisiensis*, Prologus, Q. 3 a. 1.

perfectior est quam cognitio circa Deum et substantias separatas. Cum igitur in cognitione Dei et substantiarum separatarum ponatur felicitas naturalis, ut patet X Ethicorum, sequitur quod felicitas consistit in cognitione entis in quantum ens, quod falsum est, cum illa sit imperfectissima⁵⁶⁶.

The formulation of the argument even seems to leave no room for a sharp distinction between subject and goal of metaphysics, for it suggests that natural happiness must ultimately lie with the knowledge of the subject of metaphysics. More generally, the fact that the argument in §123 and the argument in §§116-117 are found in the same section of the *quaestio* and play the same role obliges us to assume that the term “subject” has the very same meaning in both arguments. As a consequence, the thing “*cuius cognitio principaliter quaeritur*” must be the same as the one including the whole science *virtualiter*.

Second, in *QMI* 1 Scotus repeatedly mentions some requirements that the subject of a science must fulfil. For example, the following requirements are the ground for the three main arguments *quod neutrum* stated at the beginning of the *quaestio*: of the subject of science one must know “that it is” and “what it is”; every subject must have demonstrable attributes; every subject has proper principles and parts. Now, when Scotus argues that God is the subject of metaphysics, he takes care to show that these requirements are satisfied, or that they do not need to be satisfied, as §§119-120 reveal. This would not make sense if Scotus intended to prove that God is the subject of metaphysics according to an improper meaning of “subject”.

Third, postulating two meanings of the term “subject” is not the most natural way to read the passages in which Scotus identifies the goal of a science with its subject. In order to see this, let us begin with the *Prologue* of the *Questions*. The last part of the *Prologue*, from §22 to §32, is devoted to “the causes of metaphysics”. By this Scotus does not mean the causes enquired into in metaphysics or employed in metaphysics; rather, he intends to clarify which are the causes of metaphysics itself, as a science. The section is so divided:

- §22 efficient cause;
- §23 final cause;
- §24-§§26-27 formal cause;
- §32 material cause.

The subject of a science is identified with its material cause in §32, even if in a very definite sense: it is neither a matter *ex qua* (namely the matter of a matter-form compound) nor a matter *in qua* (the substratum in which an accident inheres). It is rather the matter *circa quam est scientia*.

In addition to the paragraphs already mentioned, the section includes §25 and §§28-31, which are likely to be later *additiones*, as the edition points out. §25 is an objection against §26⁵⁶⁷. On the other hand, §§28-31 deal with a question which is highly relevant for present purposes, and which

⁵⁶⁶ *QMI* 1, p. 57 l. 14 – p. 58 l. 5.

⁵⁶⁷ §25 should be placed after §26; the critical edition follows a misplacement found in part of the manuscript tradition.

might have been prompted by §32: which cause is the subject in a science? No definite answer is given; rather, Scotus mentions some reasons in support of all four possible answers:

[§28] Quaeritur quae causa sit subiectum in scientia?

Quod effectiva, videtur, quia in eodem genere causae est aliquid respectu potentiae et respectu habitus eius (exemplum: ut bonum est finis voluntatis et caritatis), quia habitus non variat rationem obiecti potentiae, sed dat modum operandi; sed obiectum intelligibile videtur causa efficiens respectu potentiae intellectivae, cum sit passiva.

[§29] Quod autem sit finis respectu scientiae, videtur, quoniam obiectum voluntatis est finis; ergo et scientiae. Probatio consequentiae: quod est finis finis, est finis ordinati ad finem; actus voluntatis est finis actus intellectus. – Item, cognitio subiecti principaliter intenditur, alioquin esset scientia plures. – Item, a fine denominatur unumquodque, et a subiecto scientia, ergo etc.

[§30] Quod autem habeat rationem causae formalis subiectum respectu scientiae, videtur, quia subiectum tribuit speciem, unitatem, ordinem et dignitatem; haec autem conveniunt formae.

[§31] Quod autem habeat rationem materiae, communiter dicitur. – Sed est differentia: quia subiectum confuse praecognoscitur, distincte quaeritur; materia nullo modo praecognoscitur in actu, sicut materia et subiectum in naturalibus. Similiter a subiecto habet scientia unitatem, distinctionem et ordinem, et necessitatem, non autem a materia⁵⁶⁸.

According to §31, the identification of subject of science with matter would be the common opinion; Scotus speaks about it with a certain skepticism. In so doing, he does not really contradict §32, where he had tried to justify the same identification; in any case, his attitude in the two paragraphs seems to be quite different. §§28-30 mention the possibility of identifying the subject of science with efficient, final, and formal cause of the science. For what concerns us now, §29 mentions three reasons why the subject of science would play the role of a final cause; the second reason is the one we have already met, namely the fact that the main intention of a given science is to achieve knowledge of its subject.

Now, the question asked in §28, together with the answer given in §§28-31, must be properly understood. In particular, it is not a matter of identifying the subject of a science, as though Scotus were selecting the subject of science from among the four causes of the science itself. In that case, the identity of the four causes of a given science would be presupposed; which of them is the subject, by contrast, would be unknown. In that case, Scotus' answer would be drawing a distinction between not just two, but even four meanings of the phrase "subject of science".

Scotus is rather asking which cause the subject of a science is; in other words, which causal role is played by the subject of a science with respect to the science itself. In this question, the subject of a science is, we may say, the term which is already known; what is unknown is rather its causal role. Scotus' answer can be reformulated as follows: in a way, the subject behaves like an efficient cause of the science; in another way, it behaves like its final cause; and so on. It is presupposed in this answer that the term "subject of science" has just one meaning, and that there is just one subject for a given science. The very same thing, Scotus tells us, seems to be efficient, final, and formal cause of a given science for different reasons, and is also commonly held to be its matter.

⁵⁶⁸ *QM* Prologue, p. 13 l. 12 – p. 14 l. 15.

As already said, one of the reasons why the subject of a science plays the role of a final cause is that the main intention of a science is to achieve knowledge of its subject. Such role of a final cause, as §29 of the *Prologue* notes, is inherently linked to the unity of the science: it cannot be said that the main intention of a given science is to enquire into both *x* and *y*, for in that case there would actually be two distinct sciences. The subject of one science is then unambiguously identified as the one thing the knowledge of which is sought after in that science.

Along these lines we should interpret also the passages in *QM I 1* which highlight the role of final cause of the subject of science, in particular §117 and §148. In stating that the subject of science is the goal of the science “*quantum ad cognitionem perfectam eius*” (§148), Scotus is not isolating an improper meaning of subject. In fact, he is stating something which might be considered quite trivial: the goal of any science is to reach a perfect knowledge of its subject, where the term “subject” has its proper meaning. There is no contradiction between this statement and Scotus’ “standard characterisation” of the subject of science. If the subject of science, according to its proper meaning, is what contains *virtualiter* the whole science, then the goal of a science is to explicate in a demonstrative form, starting from principles and proceeding down to conclusions, all the knowledge which the subject includes in itself.

2. Scotus’ first position: substance is the subject of metaphysics

Once it has become clear that Scotus does not employ two distinct meanings of the expression “subject of science”, his different assertions on the subject of metaphysics cannot be considered compatible with each other. In addition to his “standard position”, according to which being *qua* being would be the subject of metaphysics, he also maintains two other views in *QM I 1*, according to which “substance” and “God”, respectively, would be the subject of metaphysics. The incompatibility of these three views pushes us to seek a development in Scotus’ thought. Textual evidence conforms to the hypothesis of a development: for example, the two positions maintained by Scotus in *QM I 1* correspond to sections of the *quaestio* which, according to the tradition, date back to different times.

In particular, there is sufficient evidence to consider the whole second part of the *quaestio*, from §97 onwards, as a later *additio*. In addition to §§97-163, several paragraphs within §§1-96 can be considered *additiones*. The latter are meant to make corrections and add on definite points of the original redaction of the text; the longer, final *additio* in §§97-163, by contrast, is meant to call into question the main conclusions drawn by the end of §§1-96 and to defend an entirely new position. The first part of the text, from §1 to §96, thus contains the original core of the *quaestio*; in order to isolate it, one should be able to remove – and therefore to identify – all the *additiones* found within §§1-96. Whether such original core of the *quaestio* can be circumscribed with absolute certainty or

not, however, its general purport is quite clear: in the first redaction of *QM I 1*, Scotus maintains that substance is the subject of metaphysics.

In outlining the development of Scotus' views on the subject of metaphysics, our starting point will just be Scotus' defence of the position "substance", which must be considered the view he endorsed first. Indeed, the position "God" is stated in the long *additio* which is the second part of *QM I 1*, and is therefore posterior to the first part of *QM I 1*. On the other hand, the position "being" is stated in *QM VI* and in Scotus' theological works, including the quite late *Reportatio Parisiensis*: for what we know about the early beginning of the composition of the *Questions*, the original core of *QM I 1* is with all likelihood earlier than those texts. The latter point is then confirmed by doctrinal considerations, as for example Scotus' statements on the univocity of being⁵⁶⁹, and can therefore be taken for certain.

Scotus' endorsement of the position "substance" in the first redaction of *QM I 1* is quite surprising for the one who reads the opening lines of the *quaestio*. Here Scotus opposes two alternative positions on the subject of metaphysics, Avicenna's "being" and Averroes' "God and Intelligences", asking which one is correct. His choice, as we already know, eventually falls on a third position. Why is this the case? Why does Scotus not list his third option from the beginning? Leaving aside stylistic considerations, one fact is extremely relevant in this respect: Scotus' endorsement of the position "substance" depends essentially on the rejection of the two positions "being" and "God". This is to say, both "being" and "God" would make better candidates to be the subject of metaphysics, if they did not lack some necessary requirement to play that role. In itself, substance can be the subject of metaphysics; the fact that it *is* the subject of metaphysics, however, presupposes that both being and God cannot.

Going into details, the first redaction of *QM I 1* is structured as follows:

- 1) Introduction
- 2) Main arguments
- 3) Discussion of Averroes' position
- 4) Discussion of Avicenna's position
- 5) *Solutio*

Having asked which position is correct between Averroes' and Avicenna's, Scotus puts forward in (2) three arguments *quod neutrum*, namely arguments meant to prove that neither Averroes' nor Avicenna's position can be correct. The three arguments have the same structure: they state an epistemological principle which the subject of a science should fulfil and then claim that

⁵⁶⁹ The first redaction of *QM I 1* maintains the equivocality of being, together with the first redaction of *QM IV 1*. On the other hand, the *additiones* in *QM IV 1*, together with *QM VI 4* and the theological works, definitely defend the univocity of being. See [Pini 2002], [Pini 2005].

neither God nor being *qua* being meet that requirement. The principles on which the three arguments are grounded are, respectively:

- i) The knowledge of *si est* and *quid est* of the subject is presupposed by the science itself;
- ii) The subject has demonstrable attributes;
- iii) The subject has principles and parts.

The three main arguments *quod neutrum* in (2) do not immediately lead to endorsing a third position, though – this will happen no earlier than (5). Rather, Scotus engages in a long discussion of both Averroes’ and Avicenna’s position. Both are eventually rejected, but on very different grounds; specifically, the final value of the arguments *quod neutrum* is different in the two cases.

As for the discussion of Averroes’ position, it might be helpful to clarify one point from the beginning, which will allow us to overlook non-essential matters. Averroes’ position, as Scotus reports it, is the view that God and Intelligences together are the subject of metaphysics. Scotus believes this position to be wrong throughout all his career; in particular, he will underscore that Averroes’ position is untenable even while maintaining that God – alone – is the subject of metaphysics. The discussion in (3), on the other hand, is valid for the most part for a generic view that God is the subject of metaphysics, including only one argument against “God and Intelligences” specifically. Accordingly, we shall focus on Scotus’ attitude about the generic view that God is the subject of metaphysics – which is far more interesting from the point of view of the development of his position.

Now, section (3) overcomes the difficulties posed by the three arguments *quod neutrum* as far as God is concerned. In other words, section (3) shows that the three requirements (i-ii-iii) do not prevent God from being the subject of metaphysics. Of greatest importance for us is the fact that the first argument *quod neutrum* is not effective against the position “God”: basically, Scotus claims that a science can demonstrate both the *si est* and the *quid est* of its subject, as long as the demonstration is *a posteriori*, namely a demonstration *quia*.

By contrast, section (4) does not overcome the difficulties posed by the arguments *quod neutrum*: more precisely, the first and the second argument are acknowledged to be valid by the end of (4). As for the second argument, Scotus proves that being cannot have attributes because of its commonness. As for the first argument, Scotus observes that, if being is equivocal, it cannot have a *quid est*. Then in §85 he claims that being is indeed equivocal, referring forward to *QM IV 1* for arguments in favour of equivocality⁵⁷⁰. Furthermore, §85 informs us about a more fundamental reason why an equivocal term cannot be said to be the subject of a science: it lacks the unity which is required of the subject. An equivocal term stands for different realities, while a single science must have a single subject, according to the *Posterior Analytics*. Given the equivocality of being, §85 draws the

⁵⁷⁰ The first redaction of *QM I 1* is therefore prior to the second redaction of *QM IV 1*, in which Scotus maintains the univocity of being.

conclusion that the only way to choose a subject for the science of all beings is to select *one* being, to which all other beings are attributed in a *pros hen*.

To sum up, in the first redaction of *QMI 1* Scotus maintains that being *qua* being does not meet requirements (i-ii) to be the subject of metaphysics, while God meets all the epistemological requirements (i-ii-iii). This notwithstanding, section (3) argues that God cannot be the subject of metaphysics either, introducing a new epistemological requirement – valid for metaphysics specifically – which God does not meet. Scotus argues that metaphysics must be a science *propter quid*; accordingly, it must carry out *propter quid* demonstrations about its subject. Since no such demonstration about God is possible, God cannot be the subject of metaphysics. The possibility of *propter quid* demonstrations is here considered indispensable. God cannot be the subject of the science of all beings even though he would make a perfect candidate to play that role, given that all beings are attributed to God in a vertical *pros hen*. The conclusion of section (3) is that God can only fall within metaphysical enquiry inasmuch as he is a cause – not as the subject of science.

The results of sections (3) and (4) allow Scotus to formulate his *solutio* in (5). Unlike being, the subject of metaphysics must be one. Unlike being, it must have attributes. Unlike God, it must allow for demonstrations *propter quid*. Finally, it must be the subject of the science of all beings, which is only possible – given that being is not univocal – if it is one being to which all other beings are attributed in a *pros hen*. The only thing which fulfils all these requirements, Scotus concludes, is substance – accordingly, substance must be the subject of metaphysics.

It is worth remarking once more the essential dependence of Scotus' *solutio* on the denial of the two other positions, namely “being” and “God”. In the first redaction of *QMI 1*, substance is said to be the subject of metaphysics only because being and God cannot: the former for the lack of univocity and of attributes, the latter for the lack of *propter quid* demonstrations. Moreover, Scotus takes it for granted that “substance” does meet the requirements which the other two positions do not fulfil. One must expect that, should Scotus' judgement on any of these points change, also his position on the subject of metaphysics would change accordingly. This is exactly what happens in the *additio* starting with §97.

3. The crucial development within *QMI 1*: from “substance” to “God”

In stating his *solutio* in the first redaction of the *quaestio*, Scotus takes it for granted that demonstrations *propter quid* about substance are possible. In the second half of *QMI 1* – the later *additio* – Scotus calls into question such assumption and eventually drops it. This being the case, the position “substance” turns out to be untenable for the very same reason which hinders the position “God”.

At this point, the *quaestio* seems to have reached a dead end, for the three positions “God”, “being”, and “substance” appear to be all untenable. In order to find a way out, in §103 Scotus abandons the requirement concerning *propter quid* demonstrations; actually, he abandons the requirement that demonstrations in general be possible about the subject of science. More precisely, Scotus claims that the requirement at stake concerns the logical subject of the conclusion of a single demonstration. On the other hand, if by “science” one means an aggregation of many pieces of knowledge, including the conclusions of many demonstrations, then the subject of science must be something unifying all the logical subjects of those conclusions. Such unification can take place in two different ways: either in virtue of something common to them, or in virtue of a single thing to which all of them are attributed in a *pros hen*. Of course, we already know that, in the case of the science of all beings, only the second option is viable.

However, not only substance, but also God can bring about the unification by *pros hen* of the science of all beings. The positions “substance” and “God” were untenable for the same reason before §103; §103 rescues both, even if it was originally prompted by a problem concerning “substance”. Quite surprisingly, Scotus concludes §103 mentioning only “God”:

Si haec distinctio est bona, Deus potest poni hic subiectum sicut in theologia, licet nulla passio de se sit demonstrabilis, quia omnia considerata hic reducuntur ad ipsum ut ad simpliciter primum⁵⁷¹.

In these lines, it emerges clearly something I mentioned above: the position “substance” is preferred over “God” in the first redaction only inasmuch as “God” was believed to be untenable, while “substance” was not. In §103, by contrast, the two positions are believed to be equally tenable. This makes Scotus prefer “God” over “substance”, for God is the *simpliciter primum* subject of attribution of all beings, to which substance itself is attributed in a *pros hen*. If this preference is still uncertain in §104, §110 opens a whole new *solutio* in which the position “God” is defended without further hesitation.

To sum up, the *additio* starting with §97 marks a change, within *QMI* 1, in Scotus’ position on the subject of metaphysics. Scotus abandons the view that substance is the subject of metaphysics, endorsing the position “God”. The crucial reason behind this transition consists in the following: Scotus realises that not even substance meets the strict requirements he had prescribed for the subject of metaphysics in the first redaction of the *quaestio*. As a consequence, he drops one of these requirements - exactly the one which prevented God from being the subject of metaphysics in the first redaction.

I believe that this is the first change in Scotus’ position on the subject of metaphysics; in other words, that Scotus did not endorse the position “being” before the position “God”. For one thing, §§97-103 allow us to see in a clear way how the assertion of the position “God” directly stems from

⁵⁷¹ *QMI* 1, p. 51 ll. 11-13.

a problem affecting the position “substance”. Moreover, the position “being” presupposes that being is univocal, while it is not at all clear that Scotus has already endorsed the univocity of being at the time he defends the position “God”. Finally, I will argue that one of the reasons behind Scotus’ endorsement of the position “being” is a new refutation of the position “God”, for which no answer is found in *QM I 1* – and, for that, in any place in Scotus’ works. An analysis of *QM VI 4* will be our starting point to see this.

4. Scotus’ position and arguments in *QM VI 4*: univocity and *si est*

At the beginning of *QM VI 4* it is asked “whether metaphysics is about being” (*utrum metaphysica sit de ente*). It becomes clear soon that the question should be interpreted in a strong sense, as asking whether the subject of metaphysics is being. The structure of the *quaestio* is the following:

- | | |
|-----------------------------------------------------------|---------|
| 1) <i>Quod sic</i> : Avicenna’s arguments | §1 |
| 2) <i>Contra</i> : Averroes’ argument | §2 |
| 3) Refutation of Averroes’ position | §§3-9 |
| 4) <i>Solutio</i> : clarification of Avicenna’s arguments | §§10-12 |

The *quaestio* – which is extremely brief if compared to *QM I 1* – ends with a defence of Avicenna’s position that being *qua* being is the subject of metaphysics. This is even more surprising when one takes a closer look at the contents of sections (1)-(2)-(3):

- 1) Two arguments *quod sic*. The arguments are said to be Avicenna’s, and to be stated in Avicenna’s *Philosophia prima* I. Scotus also refers to some place, different from *QM VI 4* (*alibi*), where the arguments may be found:

Nota rationes alibi Avicennae quod sic, I *Metaphysicae*, propter duo: Quia Deum esse probatur hic, et quia ens est commune ad omnia hic considerata⁵⁷².

It seems implausible that “*alibi*” should just anticipate the more precise reference “*I Metaphysicae*”. If it does not, then it must refer to some place in Scotus’ works. On the other hand, in *QM VI 4* Scotus restricts himself to mentioning the main points of the arguments:

- i. “The fact that God is” (*Deum esse*) is demonstrated in metaphysics;
- ii. Being is common to all things enquired into in metaphysics.

Both these points were already present in *QM I 1*. The first one was used there to argue against Averroes’ position, on the grounds that every science must presuppose the *si est* of its subject. The second one states nothing more or less than the univocity of being, which was used in *QM I 1* to defend Avicenna’s position. This being the case, “*alibi*”

⁵⁷² *QM VI 4*, p. 85 ll. 4-7.

might refer to *QM I 1*. However, it must be said that the two arguments at stake are not the ones used expressly in support of Avicenna's view in *QM I 1*, §§72-73.

- 2) One argument *contra*. It seems to be meant as an argument *ex auctoritate* – more precisely, it is based on Averroes' *Long Commentary on the Physics*, I t. 83. However, Scotus does not only report Averroes' view that separate substances are the subject of metaphysics, but also Averroes' criticism of the first of Avicenna's arguments in (1): only physics demonstrates "that God is". These views are reported to be Averroes' position also in *QM I 1* – and since its first redaction.
- 3) Scotus states several arguments to refute Averroes' position as reported in section (2). The last argument, namely the one in §9, is a refutation of the view that the whole genus of separate substances – rather than God alone – is the subject of metaphysics. The other arguments, namely the ones in §§3-8, are all refutations of the view that only physics demonstrates "that God is". It is remarkable that most of the fundamental ideas put forward in §§3-9 are also present in *QM I 1*. More precisely, *QM VI 4* §§3-9 seems to be closely related to *QM I 1* §113 (as far as *QM VI 4* §§3-8 is concerned) and to *QM I 1* §§125-127 (as far as *QM VI 4* §9 is concerned)⁵⁷³. The relevant paragraphs in *QM I 1*, namely §113 and §§125-127, are part of the later redaction of the *quaestio*; they are therefore part of a text in which Scotus maintains that God is the subject of metaphysics. In that text, they are meant to refute two erroneous views ascribed to Averroes⁵⁷⁴.

To sum up, the fundamental ideas expressed in sections (1)-(2)-(3) can also be found in *QM I 1*. The contents are the same; yet *QM I 1* maintains that either substance or God is the subject of metaphysics, while *QM VI 4* definitely endorses Avicenna's position: "*Tenetur ergo Avicenna*". I would also add that the refutation of Averroes' claims in §§3-9 would not be sufficient, in Scotus' view, to reject the position "God" – as said, the essential points of §§3-9 are also found in the later redaction of *QM I 1*, and must therefore be compatible with the position "God". Finally, it must be noticed that Scotus does not endorse Avicenna's position on the basis of some new argument; rather, his final pronouncement in (4) is grounded precisely in the two Avicennian arguments mentioned in §1. How then can we explain the divergence in Scotus' views between *QM I 1* and *QM VI 4*? Why are the two arguments not deemed conclusive in *QM I 1*, while they are so deemed in *QM VI 4*?

The answer comes from section (4), where Scotus states the arguments in their full form. What clearly emerges from §§10-12 is a decisive difference between *QM I 1* and *QM VI 4* in the value Scotus ascribes to the two arguments. Such difference, as I am going to argue, has two distinct causes. As for the first argument, it is Scotus' interpretation which changes: he believes the argument not to

⁵⁷³ Actually, the main idea of *QM VI 4* §9 traces back to the first redaction of *QM I 1* §34. However, its formulation in *QM VI 4* suggests a closer connection with *QM I 1* §§125-127.

⁵⁷⁴ Namely the third and the fifth view listed in *QM I 1* §111.

be effective if interpreted in a certain way, but valid according to a different interpretation. In the case of the second argument, it is rather Scotus' own position which changes: he believes one of the premises of the argument to be false in *QM I 1*, but true in *QM VI 4*. The other premise of the second argument is more of a problem, as we are going to see.

Let us begin with a brief exposition of §§10-12, which are quoted here in their entirety:

[§10] Tenetur ergo Avicenna. Prima ratio eius sic declaratur: 'si est' praesupponitur de subiecto, non de actuali existentia. Sed quod habet esse quiditativum – scilicet quod ratio eius non est falsa in se –, tale 'si est' ostenditur demonstratione 'quia' a metaphysico de primo ente. Ostenditur enim quod 'primum' convenit enti alicui, et ita quod iste conceptus 'ens primum', qui est perfectissimum subiecti – si esset hic subiectum –, non includit contradictionem. Ergo si aliqua scientia supponeret istum conceptum pro subiecto, alia esset prior de ente quae probaret primitatem de ente, quia conclusio demonstrationis illius esset prior tota scientia de primo ente.

[§11] Secunda ratio confirmatur de adaequatione quam importat primitas. Quaere libro IX, 5 quaestione. Quando ergo omnibus consideratis in scientia est aliquod commune per praedicationem, illud adaequat. Non quaeritur aliquod primum virtualiter adaequans nisi quia deficit commune formaliter adaequans. Ens autem unius rationis. Quaere alibi. Ergo adaequat.

[§12] Confirmatur: prima scientia est scibilis primi⁵⁷⁵.

The first argument is “clarified” (*declaratur*) in §10. Scotus mentions the epistemological principle according to which a science should presuppose “that its subject is”, or “the *si est* of its subject”. However, he specifies that the principle does not refer to the actual existence of the subject of science, but to its *esse quiditativum*. This amounts to saying that a science does not have to presuppose the existence of its subject; it must presuppose, on the other hand, that the notion of its subject is not false in itself; said otherwise, that it does not include a contradiction. Now, the *si est* of the notion of “first being” is shown by demonstrating that the attribute “first” belongs to some being. Accordingly, if the “first being” were the subject of a certain science, there would be another science prior to that – namely the science proving the inherence of “first” in “being”. The priority of such science, Scotus explains, would be due to the fact that one of its conclusions would be presupposed by the science of the first being as a whole – for a science as a whole must presuppose its subject. In other words, Scotus is proving that the science of being *qua* being would in any case be prior to the science of the first being. The implicit conclusion to be drawn is, of course, that the first being cannot be the subject of metaphysics, if metaphysics is supposed to be the first science.

The second argument is “confirmed” (*confirmatur*) in §11. The paragraph is quite succinct, though, and the first sentence is particularly obscure: “[...] *confirmatur de adaequatione quam importat primitas. Quaere libro IX, 5 quaestione*”. The reference to Book 9 helps us to understand Scotus' point, but is also interesting from the point of view of chronology: if the editors are right in maintaining that Book 9 originates from a late period in Scotus' career, then also *QM VI 4* must be quite late. Without going into the details of *QM IX 5*, and without speaking of the *first* object of a potency / *habitus* in general (*primitas* is meant as the characterising feature of a “*primum*” *obiectum*),

⁵⁷⁵ *QM VI 4*, pp. 87-88.

let us focus on the purport of the sentence quoted in the case of the “first subject” – henceforth only “subject” – of a given science. Scotus is basically claiming that the subject of a given science must be “the one thing in virtue of which all and only a certain set of things falls into the consideration of that science”. Let us call *adaequans* the thing defined between brackets. Now, Scotus observes that, if *x* is predicated univocally of all and only the things enquired into by a given science, then *x* is *adaequans*. Such *adaequans* is called by Scotus “*formaliter adaequans*”, and is opposed to what is “*virtualiter adaequans*”. Just to give an example, substance or God might in principle be “*virtualiter adaequans*” for the science of all beings. However, Scotus introduces the following rule: the first subject of a science can be something “*virtualiter adaequans*” only if a “*formaliter adaequans*” is lacking. This is not the case of the science of all beings, though; in Scotus’ words: “*ens autem unius rationis*”. Since being is univocal, it is *formaliter adaequans* for the science of all beings: accordingly, being must be the subject of metaphysics. §12 adds a further remark to “confirm” that being is the subject of metaphysics: “*scientia prima est scibilis primi*”.

To sum up, in section (4) Scotus endorses Avicenna’s position that being is the subject of metaphysics on the basis of the two Avicennian arguments mentioned in section (1). The arguments, however, are only stated in full in section (4), and – in spite of their Avicennian origins – in a way which is much peculiar to Scotus. The first argument, based on the requirement that the *si est* of the subject be presupposed, plays a negative role: it rules out the possibility that God may be the subject of metaphysics. The second argument is much more constructive, in as far as it establishes that being is the subject of metaphysics. On one hand, Scotus can draw this conclusion because of the univocity of being, which grants that being *might* be the subject of metaphysics. On the other, the final conclusion that being *must* be the subject of metaphysics presupposes a further premise: no *virtualiter adaequans* is the subject of science unless a *formaliter adaequans* is missing. Given the univocity of being, this claim surely rules out “substance” as maintained in the first redaction of *QM I 1*; it is more difficult to understand whether it would also rule out “God” as maintained in the later redaction of *QM I 1*.

As already said, the Avicennian arguments are not unknown to *QM I 1*. There are innovations in *QM VI 4*, though: the quidditative interpretation of the *si est*, on one hand, and the univocity of being, on the other. In what follows, I shall focus on these two points separately, comparing *QM I 1* and *QM VI 4*.

5. The *quaestio si est* and the demonstration of God’s *esse*

The presence of a quidditative interpretation of the *quaestio si est* in Scotus’ works has been already highlighted by Stephen Dumont, who has also analysed it in its several aspects⁵⁷⁶:

⁵⁷⁶ [Dumont 1984].

- the emergence of this doctrinal point in the thought of Henry of Ghent, the presence of a slightly different version of the same in Godfrey of Fontaines, Scotus' acquaintance with both the analyses of Henry and of Godfrey;
- the close connection between the quidditative interpretation of the *si est* and the concept of *ens* as something which *can* exist;
- the difference between Henry's and Scotus' notions of *ens*;
- the logical position of the *quaestio si est* in the knowledge of a thing as halfway between the *quid dicitur per nomen* and the *quid est*;
- the relevance of the quidditative interpretation of the *quaestio si est* in Scotus' argument to the effect that God cannot be the subject of metaphysics.

The last point is the one which we are presently concerned with. Dumont has taken into consideration three texts in which Scotus argues that God cannot be the subject of metaphysics on the ground that metaphysics has to demonstrate the quidditative *si est* of God: the one analysed above, namely *QM VI 4*; an annotation in *Ord. I d. 3; Rep. Par. Prol. 3.1*. As we shall see, one more text should be added to this list, namely the argument to be found in *QM I 1 §§155-161*. The last text, however, presents us with a far more complicated scenario: not only is its structure problematic, but also the conclusions it draws are not clear. I shall come back to this text in due course; for the time being, suffice it to notice its collocation at the very end of *QM I 1*, even after Scotus' "later *solutio*", in which, as we know, he maintains that God is the subject of metaphysics.

Having come to know the reason why, not only in *QM VI 4* but also in his theological works, Scotus categorically denies that God may be the subject of metaphysics, we may return to *QM I 1*, which now poses a problem. We have already seen that, already in the first redaction of the *quaestio*, Scotus puts forward an argument to the effect that God cannot be the subject of metaphysics based on the claim that the *si est* of God is demonstrated in metaphysics (*QM I 1 §§1-3*). We have also highlighted, however, how Scotus invalidates the argument while discussing Averroes' position: he claims that a science can in fact demonstrate the *si est* of its subject, as long as the demonstration is *a posteriori* (*QM I 1 §21*).

In a similar vein, in the later redaction of *QM I 1* Scotus holds that a science *quia* can demonstrate "that its subject is" (*QM I 1 §112*); accordingly, he affirms that the argument of the *si est* in favour of Avicenna's position – namely the argument meant to deny that God is the subject of metaphysics – is not valid, because metaphysics is a science *quia* of God (*QM I 1 §119*). As such, metaphysics does not have to presuppose "that its subject is". Indeed, Scotus makes it explicit that a science *quia* only presupposes something else about its subject: "some concept" or "*quid dicitur per nomen*" – expressions which are apparently employed as being equivalent (§112, §136, §148). Having presupposed that, the science then demonstrates both the *esse* and the attributes of its subject.

To sum up, unlike *QM VI 4*, where Scotus maintains that a science cannot demonstrate the *si est* of its subject, in *QM I 1* he holds that such demonstration is possible in certain cases, namely when the demonstration is *a posteriori*. The fact that the two redactions of *QM I 1* are united on this point suggests that they were both written before *QM VI 4*. In other words, it seems already possible to claim that Scotus endorsed the position “God” before endorsing the position “being”, and that the main reason behind the transition from “God” to “being” lies in a doctrinal shift concerning the requirement that the *si est* of the subject of science be presupposed.

It is now essential to investigate deeper into this doctrinal shift. Why did Scotus begin to affirm, at some point between *QM I 1* and *QM VI 4*, that the *si est* must be presupposed necessarily? It seems to me that two different answers are possible in principle:

- 1) The change in Scotus’ statements mirrors a genuine change in his views on what must be presupposed by a science. In particular, in *QM VI 4* Scotus states quite clearly that a science must presuppose that its subject enjoys the *esse quidditativum*, namely that its notion does not include a contradiction. Interpreting Scotus’ position in *QM I 1* against the background of *QM VI 4*, one should say that, according to *QM I 1*, a science can demonstrate that the notion of its subject does not include a contradiction. In other words, *QM I 1* and *QM VI 4* would diverge on answering the following question: must a science presuppose that its subject enjoys the *esse quidditativum*?
- 2) The change in Scotus’ statements mirrors a change in his interpretation of the *quaestio si est*. In particular, *QM VI 4* makes it explicit that the *si est* does not concern actual existence (*non de actuali existentia*), but the *esse quidditativum*. By contrast, in *QM I 1* the *quaestio si est* would refer to actual existence. In other words, in denying that a science must presuppose the *si est* of its subject, *QM I 1* is actually denying that a science must presuppose the actual existence of its subject – something to which *QM VI 4* would subscribe. On the other hand, Scotus would begin to hold the necessity of presupposing the *si est* of the subject of science as soon as he adopts a quidditative interpretation of the *quaestio si est*.

Let it be noticed that (1) would conform with the claim, in the later part of *QM I 1*, that a science *quia* only assumes “*quid dicitur per nomen*” about its subject, for the “*quid dicitur per nomen*” is exactly the one piece of knowledge which is supposed to be prior to the quidditative *si est*. This notwithstanding, I believe that (2) is far more plausible – and for several reasons.

To begin with, in *QM I 1*, where Scotus argues that a science can demonstrate the *esse* of its subject, there is no explicit explanation to the effect that the *esse quidditativum* is at stake. By contrast, Scotus takes care of specifying that the *si est* is a quidditative issue in the places where he requires that a science presuppose the *si est* of its subject:

[...] de qualibet tali est quaestio 'si est' et demonstratio quod ratio non sit in se falsa; ergo Deus secundum nullum conceptum viatori possibilem est primum subiectum metaphysicae⁵⁷⁷.

Sed nulla ratio propria conceptibilis de Deo potest statim esse nobis nota *si est*. Ergo nulla notitia acquisita naturaliter a nobis potest esse propria Deo. Minor patet. Quia prima ratio propria de Deo quam nos concipimus est quod sit primum ens. Sed primum ens non est primo notum ex sensibus, sed oportet prius concipere possibilitatem unionis terminorum, et antequam sciamus hanc compositionem esse possibilem oportet quod aliquod ens demonstretur esse primum. Concedo ergo cum Avicenna quod Deus non est subiectum in metaphysica⁵⁷⁸.

Second, the expressions Scotus employs in *QM I 1* to claim that a science can demonstrate the *si est* of its subject seem to refer to the existential, rather than to the quidditative, level. For example: “[...] scientia quia praesupponit conceptum aliquem apud intellectum de subiecto, et de illo conceptu arguit primo quod sit [...]” (§112); “[...] nisi primum movens sit et nisi primum ens sit” (§113).

Third, it is implausible that Scotus might have ever maintained the view that a science does not have to presuppose that the concept of its subject is not inconsistent. In fact, he deems this view to be totally absurd: “[...] sed hoc necesse est praesupponere de subiecto, quia alias ‘animal inanimatum’ posset poni subiectum” (§155).

All this evidence suggests that Scotus’ change of opinion on the requirement that the *si est* of the subject of science be presupposed should be ascribed to a change in his interpretation of the requirement itself. If the requirement is taken to refer to the existence of the subject of science, then it does not have to be fulfilled. When, on the other hand, Scotus adopts a quidditative interpretation of the *si est*, he also holds that the requirement must be met necessarily. Since it is practically certain that the first redaction of *QM I 1* antedates *QM VI 4*, *Ordinatio*, and *Reportatio Parisiensis*, we must draw the conclusion that, at a certain point of his career, Scotus must have abandoned the existential interpretation to endorse the quidditative interpretation of the *quaestio si est*⁵⁷⁹. The fact that he takes care to specify, in some passages, that the *si est* is a quidditative matter, is the mark of a transition from an “obvious and common” interpretation (existential) to a more refined one (quidditative).

This transition has important consequences for the development of Scotus’ views on the subject of metaphysics. In *QM I 1*, Scotus attaches no value to the argument which would become the main reason behind his rejection of the position “God”. As a consequence, after having overcome all other difficulties, Scotus can maintain that God is the subject of metaphysics in the later section of *QM I 1*. It is the transition from the existential to the quidditative interpretation of the *si est* which then provides Scotus with a new and decisive argument against the position “God”, causing him to endorse his final view that being *qua* being is the subject of metaphysics.

According to the new argument, the quidditative *si est* of the “first being” should be demonstrated by the science of being, which is therefore prior to any hypothetical science of the “first

⁵⁷⁷ *Ord.* I d. 3.

⁵⁷⁸ *Rep. Par.*, Prol. q. 3 a. 1.

⁵⁷⁹ As already mentioned, the fact that the two redactions of *QM I 1* are united on the existential interpretation of the *si est* suggests that also the later one should antedate the texts in which the quidditative interpretation is stated.

being”. The possibility for being *qua* being to be the subject of a science, however, is based on the further assumption that being is univocal. Accordingly, Scotus’ transition from “God” to “being” presupposes that Scotus has already endorsed the univocity of being – which is confirmed by the second Avicennian argument in *QM* VI 4. I shall now turn to some brief remarks on this argument and on Scotus’ attitude towards univocity in *QM* I 1.

6. On the role of univocity in the transition from “God” to “being”

It is known that Scotus endorsed the view that being is univocal after having maintained that it is equivocal. It has also been noticed that the *Questions* show the signs of this transition from equivocity to univocity: most notably, in *QM* IV 1 two distinct redactions can be isolated, the original one maintaining equivocity, the later one arguing in favour of univocity⁵⁸⁰. The transition from equivocity to univocity is absolutely relevant for Scotus’ views on the subject of metaphysics. This emerges clearly from the texts we are considering, namely *QM* I 1 and *QM* VI 4.

Let us begin with the first redaction of *QM* I 1. Here Scotus definitely holds that being is not univocal, and indeed the equivocity of being is one of the two reasons why Avicenna’s position is rejected. Since being is equivocal, the unity of the science of all beings cannot be based on commonness; the subject of science must therefore grant a unity by attribution. Scotus’ choice falls upon “substance” for the reasons we have already seen. It is worth remarking again that Scotus’ endorsement of the position “substance” is dependent on his rejection of the other alternatives. In particular, he would not endorse the position “substance” if he believed that being was univocal (and that it could have attributes).

Things are different if we move to the later redaction of *QM* I 1, in which Scotus maintains that God is the subject of metaphysics. To begin with, here Scotus does not defend explicitly either the equivocity or the univocity of being. In fact, when the problem of univocity emerges as relevant for his discourse, Scotus deliberately does not take a stand. He takes into account the view that being is univocal as possible, but without endorsing it. This happens in the following texts⁵⁸¹:

[§126] Confirmatur: quia in nullo speciali magis uniuntur Deus et substantiae separatae quam Deus et substantiae corporeae. Ergo si propter aliquam unionem sit totum illud genus entium ponendum unum subiectum, pari ratione et genus substantiarum corporearum⁵⁸².

[§§152-153] Item, dubitatio quinta est: si ens est unius rationis Deo et aliis, quare non potest ens poni primum subiectum sub quo continentur omnia cognita, tam primum quam alia?

Responsio: dato quod ens sit univocum, adhuc principale subiectum erit hic Deus, quia non traditur scientia propter cognitionem de ente in se habendam [...]⁵⁸³

⁵⁸⁰ As already indicated, see [Pini 2002] and [Pini 2005].

⁵⁸¹ There is also another text which is relevant in this respect. However, I am not sure of its exact meaning, and also suspect that the text may be corrupt. It is *QM* I 1 §134, p.

⁵⁸² *QM* I 1, p. 58 ll. 14-17.

⁵⁸³ *QM* I 1, p. 68 ll. 4-8.

It is possible that these texts should date back to a transitional phase, in which Scotus had not firmly endorsed “univocity” yet⁵⁸⁴. Be this as it may, §§152-153 state one point clearly: the question of the univocity of being is completely irrelevant for the way Scotus holds the position “God” in *QM* I 1. Whether being is univocal or not, Scotus would still claim that God is the subject of metaphysics, for the ultimate goal of metaphysics would in any case be the knowledge of God and – as we have seen – the ultimate goal of a science consists in achieving knowledge of its subject.

To sum up, the following can be said about the role of univocity in establishing the subject of metaphysics. On the basis of the first redaction of *QM* I 1, we know that the univocity of being is a necessary condition for the position “being”: if being is not univocal, it cannot be the subject of metaphysics. On the other hand, from the second redaction we know that it is not a sufficient condition. In detail: it is sufficient in order to rule out the position “substance”⁵⁸⁵, while it is not sufficient to rule out the position “God”.

Let us now move on to *QM* VI 4. In this case, Scotus definitely endorses the thesis that being is univocal. For what has been said so far, this should be sufficient to exclude the position “substance”, but not enough to exclude the position “God”. The position “God” is excluded by the argument based on the quidditative *si est*, though, so that *QM* VI 4 definitely presents enough reasons to conclude that being is the subject of metaphysics.

Having said this, a closer scrutiny of the second Avicennian argument in *QM* VI 4 poses a question. The argument can be outlined thus:

(P1) In order to identify the subject of a science, one should not look for a *virtualiter adaequans* unless a *formaliter adaequans* is missing

(P2) Being is *formaliter adaequans* for the science of all beings

(C) Being is the subject of the science of all beings

I have made (P2) explicit here; Scotus states the univocity of being instead – which entails (P2). However, it is (P1) which interests us now, with its opposition between *virtualiter* and *formaliter adaequans*. It should be noticed that both “substance” and “God” would count as a subject *virtualiter adaequans* for the science of all beings. The application of (P1) to metaphysics has thus the following meaning: neither substance nor God can be the subject of metaphysics if being is univocal. As for substance, this conforms to what emerges from *QM* I 1. As for God, however, it does not. Apparently at least, (P1) is at odds with *QM* I 1 §§152-153, quoted above.

⁵⁸⁴ It seems to me that in some passages the univocity of being is implicitly presupposed. However, there are also independent reasons to suspect that the passages in question were not written together with the rest of the “second redaction” of *QM* I 1. Accordingly, the assumption of univocity in these passages may very well be a confirmation of their chronological posteriority, rather than a proof of Scotus’ endorsement of univocity in the whole “second redaction”. Examples are the last sentence of §142 and the argument starting with §155.

⁵⁸⁵ This is not completely exact as far as the first redaction is concerned, for the position “being” presents an additional problem in as far as Scotus holds that being cannot have attributes.

Has Scotus simply changed his mind on the consequences of univocity for the position “God”? Has he simply introduced a new hierarchy between the unity by commonness and the unity by attribution? Without presuming to provide certain answers, I shall restrict myself to pointing to an alternative explanation. It is possible that, in spite of appearances, (P1) and *QM I 1* §§152-153 are not really inconsistent; said otherwise, it is possible that the Avicennian argument based on univocity would not be sufficient to reject the position “God” as it is defended in *QM I 1*. The Avicennian argument demands that a subject *virtualiter adaequans* for the science of all beings be chosen only if a *formaliter adaequans* is missing. However, *QM I 1* does not simply claim that God is the subject of metaphysics because it is *virtualiter adaequans* for the science of all beings, as also “substance” might be. In this respect, “God” and “substance” would be nearly equivalent positions, except that God is prior to substance as a subject of attribution of all beings. In its full formulation, the position “God” is rather maintained on the grounds that the ultimate goal of metaphysics is the knowledge of God. Metaphysics thus becomes mainly the science of God, and all other beings fall into metaphysical consideration only inasmuch as they serve to reach full knowledge of God. In this context, God turns out to be a *formaliter adaequans* subject for metaphysics, rather than *virtualiter adaequans*.

If this is correct, then the first Avicennian argument in *QM VI 4* (the one based on the quidditative *si est*) remains the only conclusive rejection of the position “God” as it is stated in *QM I 1*. It is noteworthy that, both in *Ordinatio* and in *Reportatio Parisiensis*, Scotus denies that God is the subject of metaphysics solely on the basis of the *si est*.

7. Two objections

According to my reconstruction of the development of Scotus’ views, Scotus endorsed three different positions on the identity of the subject of metaphysics, and in the following order: “substance”, “God”, and “being”. This order would correspond, of course, to a definite relative chronology about the texts in which the three positions are stated: first, the original redaction of *QM I 1*; second, the later redaction of *QM I 1*; third, *QM VI 4* and the relevant texts in the theological works. In arguing in favour of this order, I have tried to highlight the reasons why Scotus initially endorsed the position “substance” and, most importantly, the reasons why he changed his mind twice. In particular, Scotus abandoned the position “substance” to adopt the position “God” after dropping the requirement that there be *propter quid* demonstrations about the subject of metaphysics. Then he abandoned the position “God” to endorse the position “being” after adopting a quidditative interpretation of the requirement that the *si est* of a science be presupposed by the science itself.

There are, however, at least two objections which could be made against my reconstruction. I shall restrict myself to mentioning them here and to providing a brief answer. First, in the later redaction of *QM I 1*, and precisely in *QM I 1* §131, one finds a reference to *QM VI 1*:

Et dicendum est quod, supposita distinctione scientiae prout dicitur habitus conclusionis et prout dicitur aggregatio multorum habituum, tam principiorum quam conclusionum, aliquam tamen convenientiam habentium – de qua distinctione patet, scilicet quaestione prima VI huius [...] ⁵⁸⁶

Naturally, this would suggest that Scotus wrote *QM VI 1* before *QMI 1* §131. Now, *QMI 1* §131 opens a section in which Scotus explains how God can be the subject of metaphysics. On the other hand, in *QM VI 1* Scotus maintains that being is the subject of metaphysics⁵⁸⁷. Accordingly, it seems that Scotus must have endorsed the position “being” before endorsing the position “God”, contrary to my reconstruction.

At closer inspection, however, it turns out that the reference to *QM VI 1* is quite problematic. For one thing, there is no exact match, in *QM VI 1*, for the distinction mentioned in *QMI 1* §131⁵⁸⁸. On the other hand, such distinction had already been drawn earlier in *QMI 1*, namely at §103; on that occasion, however, the text did not refer to *QM VI 1*. I would conclude that the reference to *QM VI 1* must be absent in *QMI 1* §131 as it was originally written by Scotus, and that therefore it is not a problem for my reconstruction.

Having said this, one may wonder how the reference to *QM VI 1* ended up in the text. In particular: why was a reference to *QM VI 1* added? And who is the author of this addition? As for the first question, it is plausible that the reference in question actually indicates one specific passage in *QM VI 1*, namely §39, where Scotus draws a distinction which is closely connected to the one mentioned in *QMI 1* §131. Just to be clear, *QMI 1* §131 and *QM VI 1* §39 do not state precisely the same distinction; yet the latter may be considered a more refined variant of the former. The last point leads us to the second question: I would not rule out the possibility that Scotus himself may have added the reference to *QM VI 1* as a reference to a relevant, more mature passage. In this respect, it must be noticed that the critical apparatus does not report omissions of the reference in the manuscript tradition – which makes the hypothesis that Scotus was its author quite appealing.

Let us now turn to the second objection. I have analysed Scotus’ argument concerning the quidditative *si est* as it is expounded in *QM VI 4*. However, the same argument – or, to be precise, a nearly identical argument – is already found in *QMI 1* §155, among the *dubitationes* Scotus puts forward after having maintained that God is the subject of metaphysics. Since the *dubitationes* are in general followed by Scotus’ answer reaffirming his position “God”, the presence of §155 may suggest a scenario quite different from my reconstruction. In particular, it may suggest that, when Scotus maintains his position “God” in *QMI 1*, he has already adopted a quidditative interpretation of the *si est*; even more, it may suggest that Scotus has finally overcome the difficulty stated in §155 – and in *QM VI 4* – against the position “God”. Were this the case, Scotus would have endorsed the position

⁵⁸⁶ *QMI 1*, p. 60 ll. 2-6.

⁵⁸⁷ *QM VI 1*, from §46 onwards (see especially §47).

⁵⁸⁸ See [Wood 2013].

“being” before endorsing the position “God”, and would have endorsed the latter position after solving the problem of the quidditative *si est*.

For a full answer to the objection, I would refer to the commentary provided above on the interpretation of §§155ff.; I shall restrict myself to the essential points here. First of all, Scotus does not provide an answer to §155 in *QM I 1* as he does for the other *dubitationes*. Second, the argument in §155 is rather corrected and modified in the following passages: the corrections make the argument closer to the one stated in *QM VI 4*, even though Scotus never states the argument in its final form in *QM I 1*. Third, the argument in §155, together with its corrections, eventually result in the defence of the position “being” in the last paragraphs of *QM I 1*, from §155 onwards. Ultimately, in *QM I 1* Scotus does not only defend the position “substance” (original redaction) and “God” (second redaction), but even the third and final position “being” in the last paragraphs.

I suppose that §155 is the very first place where Scotus states his argument of the quidditative *si est* against the position “God”; §155 would thus mark the transition from the position “God” to the position “being”. However, the argument is found here in a provisional form and the position “being” is not stated in a clear and orderly fashion. It is possible that Scotus preferred not to attach a whole new *solutio* to *QM I 1*, and to write a new *quaestio* instead, which would explain the presence and the origin of *QM VI 4*.

8. Natural happiness: the knowledge of God as the perfect knowledge of being

According to a view originating from Aristotle’s *Nicomachean Ethics*, human happiness would consist in contemplative activity. In the framework of a hierarchical system of sciences, the Aristotelian view is easily interpreted as identifying human happiness with the acme of the whole scientific endeavour. If this is metaphysics – the “*regina scientiarum*” – then human happiness would consist in metaphysical knowledge. In particular, if the end of metaphysical knowledge is maintained to be a knowledge of God, then human happiness should lie in such knowledge. The close connection between human happiness (more precisely: natural happiness), metaphysics, and knowledge of God plays a relevant role in Scotus’ determination of the subject of metaphysics, interacting in interesting ways with his conception of the subject of science.

At the beginning of this reconstruction of the development of Scotus’ views on the subject of metaphysics, it has been highlighted how Scotus identifies the ultimate goal of a science with the knowledge of its subject. This characterisation of the subject of science is employed by Scotus in the second redaction of *QM I 1* in order to deny that being *qua* being may be the subject of metaphysics and to maintain the position “God” instead. In particular, §§116-117 note that the ultimate goal of metaphysics should be an enquiry into first causes – in which also natural happiness would consist. Accordingly, the subject of metaphysics cannot be being *qua* being.

In addition to this, even Scotus' standard characterisation of the subject of science (as the thing which includes *virtualiter* the whole science) turns out to be problematic for the view that being *qua* being is the subject of metaphysics. In *QM* I 1 §123 Scotus argues that, since a more perfect knowledge cannot be included in a less perfect one, and since human happiness is said to consist in the knowledge of God, then being *qua* being cannot be the subject of metaphysics. Otherwise the knowledge of being, including the knowledge of God, would be more perfect than the latter – and human happiness would consist in the knowledge of being. This is said to be absurd, because the knowledge of being is most imperfect.

To sum up, according to the second redaction of *QM* I 1, the fact that natural happiness should lie in the achievement of metaphysical knowledge leads to the conclusion that the subject of metaphysics is God. Now, I have argued above that Scotus eventually rejects the position “God” to endorse the position “being”. How can this be possible? Apparently, Scotus would have to drop either the connection between knowledge of God, metaphysical knowledge, and natural happiness, or his conception of the subject of science.

As a matter of fact, he does not. Rather, he succeeds in overcoming the two arguments mentioned above against the position “being”. The key point in this respect is a clarification of the extent to which the knowledge of God is attainable by natural reason.

At the very end of *QM* I 1, Scotus deals with the following problem: if metaphysics is the science of being *qua* being, then the only attributes of God which can be demonstrated in metaphysics are transcendental attributes, i. e. they are attributes of being *qua* being. Does this entail that the natural knowledge of God finds its completion in a science other than metaphysics, and that natural happiness is actually reached in this further science? It does not, Scotus answers, for natural reason cannot come to know divine attributes depending on God's proper essence. All divine attributes knowable by natural reason are indeed transcendental:

Ideo vitando quattuor esse scientias speculativas, et hanc ponendo de Deo, omnia naturaliter cognoscibilia de ipso sunt transcendentia. Finis huius est perfecta cognitio entis, quae est cognitio primi. Sed primo occurrens et notissimum intellectui est ens in communi, et ex ipso probatur primitas et alia, in quibus est consummatio⁵⁸⁹.

In addition to the universal properties of being *qua* being, Scotus is also – and especially – referring to disjunctive transcendentals, in which one of the two disjuncts is proper to God. To sum up, the humanly possible knowledge of God consists in a knowledge of universal and disjunctive transcendentals, which falls within the knowledge of being and thus belongs to the science of being *qua* being.

It is on this basis that Scotus can finally overcome the arguments against “being” in *QM* §§116-117 and §123. “*Finis huius est perfecta cognitio entis, quae est cognitio primi*”. Being *qua*

⁵⁸⁹ *QM* I 1, p. 71 ll. 8-12.

being is the subject of metaphysics, but it is still true that the ultimate goal of metaphysics is the perfect knowledge of its subject. It also remains true that all metaphysical knowledge is included *virtualiter* in its subject. In spite of appearances, all of this coincides with the fact that natural happiness lies in the humanly possible knowledge of God – for this knowledge consists precisely in the perfect knowledge of being, and is therefore neither more nor less perfect than the latter.

Conclusion

Scotus' views on the subject of metaphysics undergo a complex evolution which remains invisible to the one who investigates solely into his "standard position" as it emerges from his theological works. From this point of view, the *Questions on the Metaphysics* have proved to be essential to individuate the presence of a development in Scotus' thought. However, due to the nature of the *Questions* as they have come down to us, a full understanding of the process which led Scotus to modify his views more than once is not easily achieved, as also the amount of divergent scholarly interpretations testifies. The major problems in this respect lie, on one hand, in the presence of two distinct *quaestiones* devoted to the subject of metaphysics, in which different positions are maintained; on the other, in the presence of several chronological layers within *QM I 1*, with substantial doctrinal variations. The identification and "separation" of these layers is in certain cases difficult, and may also be impossible in its full extent; also, the relative chronology of these layers with respect to *QM VI 4* and the relevant passages in Scotus' theological works is not obvious.

The commentary provided above has tried to analyse the structure and contents of *QM I 1* in detail, highlighting the most relevant doctrinal transitions and, hopefully, contributing to the clarification and identification of chronological layers, following on the essential steps taken by the critical edition. As a result of the analysis, it has been noticed how Scotus maintains three different positions on the subject of metaphysics within *QM I 1* itself – in order, "substance", "God", and "being". That Scotus maintains the position "being" at the end of *QM I 1* is something which does not emerge from the text in a clear way and has therefore gone unnoticed. Yet it seems difficult to me to provide a satisfactory interpretation of the last arguments of the *quaestio* which is substantially different from the one stated in the commentary. Once this interpretation is accepted, it has important consequences for outlining the development of Scotus' views. For one thing, it entails that Scotus endorsed the position "being" after having endorsed and then rejected the positions "substance" and "God". Moreover, a close scrutiny of the final paragraphs of *QM I 1* suggests that they are Scotus' first defence of the position "being", and therefore that *QM I 1* is entirely prior to *QM VI 4* and the other passages from *Ordinatio* and *Reportatio Parisiensis* which have been analysed.

An understanding of the development of Scotus' thought also contributes to gain a deeper insight into his "standard position". Scotus' views undergo changes because of new arguments introduced at a certain stage, old arguments which are reinterpreted, difficulties which are eventually overcome, or modifications in related but independent doctrinal points. A study of these changes allows one to read Scotus' final position against the background of the difficulties it has overcome, and to appreciate the value of the arguments by which it is supported.

As for Scotus' final view that being *qua* being is the subject of metaphysics, it has been underscored the repeated connection – made by Scotus himself since the beginning of *QM* I 1 – of such view with the name of Avicenna. Even more, in *QM* VI 4 Avicenna's position is defended on the basis of two arguments which are themselves ascribed to Avicenna. The same two arguments, on the other hand, had already been stated in some form in the original core of *QM* I 1 and rejected as invalid. This being the case, Scotus' final endorsement of the position “being” may be characterised as a *rethinking Avicenna*: not only in the sense that Avicenna's position is eventually accepted, but also – and especially – because Scotus' change of views is caused by rethinking the value of two Avicennian arguments initially dismissed⁵⁹⁰.

This happens in two different ways. As for the first argument, Scotus completely rethinks the significance of the requirement that a science presuppose the *si est* of its subject. In particular, he moves from an existential interpretation of the *si est* – according to which, Scotus believes, Avicenna's argument is not compelling – to a quidditative interpretation, which finds its origins in Henry of Ghent. God – under the notion of “first being” – cannot be the subject of metaphysics because metaphysics has to prove that the notion of “first being” does not include a contradiction.

As for the second argument, Scotus rethinks the truth of the view that being is univocal. The univocity of being is considered a necessary condition for the position “being” already in the original redaction of *QM* I 1. In this text, however, Scotus holds that being is equivocal, and therefore that it cannot be the subject of metaphysics; in *QM* VI 4, by contrast, he definitely asserts the univocity of being.

Of course, it is reductive to explain Scotus' final endorsement of the view that being is the subject of metaphysics solely on the basis of the two Avicennian arguments just mentioned. As the commentary on *QM* I 1 must have made clear, Scotus' final position presupposes the assessment of several doctrinal issues which are discussed at length in the *quaestio*. It is true, however, that the two Avicennian arguments, as they are expounded in *QM* VI 4, are the two decisive elements in Scotus' final pronouncement.

These two elements, it is worth remarking, are not made of marginal ideas with respect to Scotus' overall philosophical framework. Rather, they are the expression of pervasive conceptions which have influence on several aspects of Scotus' thought and which are basically traceable to a given understanding of the notion of “being”. On one hand, the notion of “being” is not explicated as referring to what actually exists, but, in Scotus' famous formulation, as that “*cui non repugnat esse*”. In this respect, if we refer to the origin of the doctrine of primary concepts in Avicenna's *Philosophia*

⁵⁹⁰ Modifying an expression found in [Gilson 1927], one may say that, in a sense, Avicenna is “the point of arrival” of Duns Scotus' reflection on the subject of metaphysics.

prima I 5, Scotus' notion of "being" seems to resemble more closely Avicenna's notion of "thing", rather than his notion of "being"⁵⁹¹. It is known that this understanding of the notion of "being" has important connections with several aspects of Scotus' thought, concerning topics such as the order of scientific procedure, the necessity of premises of demonstrations, and the demonstration of God's existence. On the other hand, the notion of "being" is maintained to be univocal. On the importance of this doctrine for Scotus' mature views on the possibility itself of philosophical and theological discourse there is no need to insist.

If the univocity of being makes the theoretical investigation about God possible, Scotus also indicates the limits of natural reason in the knowledge of God. In his mature works, he claims that human intellects cannot have a quidditative concept of God which is more specific than the concept of "being". Moreover, all attributes which can be known of God are actually transcendental attributes, namely attributes of being *qua* being, either universal or particular. As a consequence, God cannot be the subject of any philosophical science. This is the last piece of evidence in support of the view that being is the subject of metaphysics, for natural happiness is supposed to lie in the peak of metaphysical investigation: this is the perfect knowledge of being, which is also the knowledge of God humanly possible.

⁵⁹¹ I shall not discuss Avicenna's notion of "thing" and its influence on Latin medieval philosophy, including its relevance for some notions of "being"; I shall restrict myself to pointing to some scholarly works. For hypotheses on the origins of the notion of "thing", see [Wisnovsky 2003], ch. 7, [Rashed R. 2002]. Avicenna's account has received much attention; see for example [Marmura 1984], [Druart 2001], [Wisnovsky 2003], [Rashed M. 2004]. For the Latin developments see [Aertsen 2012].

CONCLUSION

**Reception and development
of the Avicennian conception of metaphysics**

The study of Albert the Great, Thomas Aquinas, and John Duns Scotus carried out in this thesis has highlighted the pervasive presence of Avicennian elements in their conceptions of metaphysics. To begin with, Albert and Thomas definitely adopt an ontological position on the subject of metaphysics; Albert explicitly criticises more than once the competing theological position, which he ascribes to Averroes. As for Scotus, his views undergo a gradual development, which eventually leads him to endorse the ontological position. Furthermore, the crucial steps towards Scotus' final endorsement of the ontological position consist just in a reevaluation of Avicenna's arguments supporting that position or refuting the theological one. Just like Albert, Scotus sees the opposition between the ontological and the theological positions as an opposition between Avicenna and Averroes. Scotus' final endorsement of the ontological position is thus equivalent to a sharp judgement of the two Arabic authors: "*Sed Avicenna bene dicit et Averroes valde male*".

The conceptions of metaphysics of the three authors also show more or less marked differences. Some of these differences are basically due to different underlying conceptions of the structure and unity of a science in general. In this respect, for example, the three authors' views on the "onto-theological unity" of metaphysics diverge. Thomas Aquinas definitely identifies God and separate substances with the causes of the subject of metaphysics and explicitly claims that a science ought to investigate into the causes of its subject. Albert the Great definitely maintains that separate substances are part of the subject of metaphysics, yet his views on the place of God in metaphysics are ambiguous. On some occasions, he is somehow reticent on the question; other passages seem to imply that God is the cause of the subject of metaphysics. The latter view is problematic, though, for Albert claims that a science in general ought to investigate into the parts and attributes of its subject, without mentioning its causes. As for Scotus, he definitely includes God as a part of the subject of metaphysics, endorsing the view that being is univocal and, in particular, common to infinite and finite being.

The different conceptions of metaphysics resulting, for example, from the different views on the relation between God and the subject of metaphysics may be more or less faithful to Avicenna's original account. In spite of this, they all preserve the Avicennian fundamental determination of metaphysics as the science of being in its totality, rather than of a specific kind of being. The features of commonality and transcendentalism which Latin authors ascribe to metaphysics are just expressions of the Avicennian standpoint. Aquinas calls the subject of metaphysics "*ens commune*". Albert mentions the fact that metaphysics is concerned with a knowledge of what is transcendental (*transcendentia*). Scotus calls metaphysics "transcendental science", because it deals with what is transcendental.

In addition to this general influence of Avicenna's conception of metaphysics on Latin thought, a more specific influence has emerged throughout this study, concerning particular doctrinal

points. In some cases, an in-depth examination of both Avicenna and Latin authors is required to detect such specific influence. An accurate analysis of the several particular aspects of Avicenna's and Latin authors' conceptions of metaphysics thus becomes a necessary prerequisite for future studies on the reception and development of definite doctrinal points in Latin thought. I would like to conclude this work by providing some samples of this kind of studies.

1. A new epistemological principle: on the notion of "first subject"

Twice in *Ilāhiyyāt* I 1-2 Avicenna refers to being *qua* being through the expression "first subject" (of metaphysics), instead of the simpler "subject". At first glance, this choice of Avicenna's appears to be meaningless and even out of place, for in *Ilāhiyyāt* I 1-2 he clearly endorses the view that the subject of a science can only be one. Yet a closer analysis reveals that the expression "first subject", while ultimately referring to the subject of science, is meant to convey a definite meaning which originates from Aristotle's notion of "first" in *Posterior Analytics* A 4.

The two occurrences of the expression "first subject" are found in *Ilāhiyyāt* I 1 [25] and in *Ilāhiyyāt* I 2 [18]. In the first passage, Avicenna observes that being is the first subject of the attributes belonging to causes inasmuch as they are being; he draws the conclusion that the subject of metaphysics cannot be the causes inasmuch as they are being. In this case, Avicenna's use of the expression "first subject" is a straightforward application of Aristotle's notion of "first" as it emerges from *Posterior Analytics* A 4. The second occurrence of "first subject", by contrast, cannot be adequately explained solely on the basis of Aristotle's *Posterior Analytics* A 4. The relevant passage is *Ilāhiyyāt* I 2 [18], where Avicenna states that being *qua* being is the first subject of metaphysics, and that metaphysics investigates into what attaches to being inasmuch as it is a being without further conditions. It turns out that the expression "first subject" is meant to qualify the relation of being to the things attaching to it inasmuch as it is just being. The latter can be divided into two classes: "species" and proper accidents. In order to apply the relation of "first-ness" to both species and proper accidents, an extension of Aristotle's notion of "first" is required, which Avicenna accomplishes within his account of primary predicates in *Burhān* II 3. In particular, Avicenna's notion of "primary genus" is required to understand how something can be "first" with respect to its species.

The two occurrences of the expression "first subject" in *Ilāhiyyāt* I 1-2 also point to the fact that Avicenna implicitly introduces and endorses a new epistemological principle, which may be labelled "the first subject principle": the subject of any science ought to be "first" with respect to both the species and the proper accidents investigated in that science.

Latin authors could read both *Ilāhiyyāt* I 1 [25] and *Ilāhiyyāt* I 2 [18], even though the translation of the former presents a case of double translations concerning the very expression "first

subject”. Despite this problem, Avicenna’s original notion of “first subject” seems to have passed into Latin philosophy, influencing, in particular, Albert the Great and Duns Scotus. From this point of view, it is noteworthy that Avicenna’s application of the notion of “first” to qualify the *relation between subject of science and species*, which is implied in *Ilāhiyyāt* I 2 [18], presupposes his own account of primary genus in *Burhān* II 3. This chapter of Avicenna’s *Burhān*, just like most of the work, was not translated into Latin⁵⁹²; as a consequence, the full purport of Avicenna’s notion of “first subject” probably remained opaque to Latin authors. Yet they could read *Posterior Analytics* A 4 and guess the non-trivial connection between Aristotle’s notion of “first” and Avicenna’s notion of “first subject”, as far as the *relation between the subject of science and its accidents* is concerned. As a matter of fact, this is just what they did.

As for Albert the Great, he reformulates Avicenna’s point by speaking of “immediate subject”, or attributes immediate to a given subject. The fact that he speaks of immediate attributes in order to deny that the causes may be the subject of metaphysics suggests a strong dependence on *Ilāhiyyāt* I 1 [25]. Moreover, a brief analysis of Albert’s commentary on *Posterior Analytics* A 4 reveals that he did draw the connection between Avicenna’s claims and Aristotle’s notion of “first”. It is also interesting to notice that Albert did not only grasp Avicenna’s views correctly, but also stated for the first time the “first subject epistemological principle”, which remained implicit in Avicenna’s *Ilāhiyyāt* (and, to my knowledge, in Avicenna’s works more generally).

As for Duns Scotus, he employs the very expression “first subject” in a technical sense, referring to the subject of science. In this case, the connection with *Posterior Analytics* A 4 is not in question, for it is Scotus himself who explains his notion of “first subject” in the terms of *Posterior Analytics* A 4. The following two passages leave no doubt about this:

[...] ratio primi obiecti est continere in se primo virtualiter omnes veritates illius habitus. [...] quid primitas hic accipitur ex I Posteriorum, ex definitione universalis, secundum quod dicit adaequationem [...] ⁵⁹³

Istud igitur recte dicitur scientiae primum subiectum, quid primo continet in se virtualiter notitiam pertinentium ad scientiam. Additur autem ‘primo’ continere, quid, sicut illud quod non dependet ab alio des alia ab ipso, est primum, ita illud dicitur primo continere quod non dependet ab aliis in continendo nec per rationem alicuius alterius continet [...] Sicut verbi gratia: isosceles continet virtualiter omnes conclusiones quas continet triangulus quid continet rationem trianguli. Sed non continet primo quia non per propriam rationem et specificam isoscelis sed per rationem trianguli ⁵⁹⁴.

Also in the case of Scotus, it is reasonable to maintain that he derives the expression “first subject” from Avicenna. In *QM* I 1 §68, he basically quotes the Latin version of *Ilāhiyyāt* I 2 [18], where the expression “first subject” is found; in previous paragraphs, Scotus had only used the

⁵⁹² Only *Burhān* II 7 was translated. See [Strobino 2017].

⁵⁹³ *Ordinatio*, Prol., Pars 3, Q. 3, p. 96.

⁵⁹⁴ *Reportatio I-A*, Prol., q. 1, a. 2, p. 5.

simpler expression “subject”. By contrast, he follows Avicenna in using the expression “first subject” in *QM I 1 §72*, where he also states the “first subject epistemological principle”.

To sum up, part of Avicenna’s notion of “first subject” passed into Latin philosophy thanks to Albert and Scotus, who were able to see the connection between some passages of *Philosophia prima I 1-2* and Aristotle’s *Posterior Analytics A 4*. This also marks the introduction, in the medieval doctrine of science, of a new epistemological principle, implicitly assumed by Avicenna and explicitly formulated by Albert and Scotus.

2. Establishing being *qua* being as the subject of metaphysics: Avicenna’s arguments

In *Ilāhiyyāt I 2* Avicenna makes use of two main arguments to establish his conclusion that being *qua* being is the subject of metaphysics. (A1) The first argument consists in the claim that being is the only notion which is common to a certain set of realities, which are known to be investigated in metaphysics. Basically, this claim can be reformulated by saying, more explicitly, that being is the only notion which is common to all the categories. (A2) The second argument is based on the view that metaphysics should take into consideration the common notions, which are left uninvestigated by particular sciences: Avicenna claims that the common notions are proper accidents of nothing other than being *qua* being.

To summarise Avicenna’s two arguments: being must be the subject of metaphysics (A1) because it is the only thing common to the categories (which are investigated in metaphysics) and (A2) because the accidents investigated in metaphysics are its proper accidents. The presence of these two relations of being (with the categories, on one hand, and with the common notions, on the other) is mirrored by Avicenna’s statement in *Ilāhiyyāt I 2* [18] that the things investigated in metaphysics are either (primary) species of being or (primary) proper accidents of being.

In examining the Latin reception of Avicenna’s views on the subject of metaphysics, it is interesting to notice that some Latin authors did not only endorse Avicenna’s ontological conception of metaphysics (as opposed to the one they ascribed to Averroes), but also vitally grounded their own views on Avicenna’s two arguments.

To begin with, Albert the Great read Avicenna’s two arguments against the background of *Posterior Analytics A 28*, which provided him with a conception of the unity of a science based on the triad “*subiectum, partes, passiones*”. In order for a science to be one, the things which it takes into consideration must be *partes* of the subject, and the attributes which it demonstrate must belong *per se* to the subject or to some of its parts. Accordingly, Avicenna’s two arguments may be interpreted as demonstrations of the fact that metaphysics cannot be one science unless being *qua*

being is its subject, for metaphysics investigates into realities which are “species” of being and into notions which are attributes of being.

Now, Albert does not actually use Avicenna’s arguments to establish that being is the subject of metaphysics, which he rather deduces in *Metaphysica* 1.1.2 from the conception of metaphysics as “first science”. In *Metaphysica* 1.1.3, however, Albert basically repeats the essential ideas of Avicenna’s arguments in claiming that being *qua* being does indeed make metaphysics *one* science. In particular, he underscores the fact that the *partes* investigated in metaphysics can be traced back to being (corresponding to (A1)), which enjoys an “analogical unity”, and that the *passiones* demonstrated in metaphysics are immediate to being (corresponding to (A2)).

In addition to this, Albert also makes a “negative use” of Avicenna’s arguments, which is already found in Avicenna himself as far as (A2) is concerned. In *Ilāhiyyāt* I 1 [21], Avicenna argues that metaphysics takes into consideration some notions which are not among the proper accidents of the causes *qua* causes, drawing the conclusion that the causes *qua* causes cannot be the subject of metaphysics. In *Metaphysica* 1.1.2 Albert follows Avicenna’s strategy (observing that metaphysical attributes do not belong to causes inasmuch as they are causes), and actually extends it in two directions:

- He adds a similar argument from the point of view of the *partes*: the notion of cause is not common to the categories (in other words, he makes a “negative use” of the main idea of (A1));
- He applies the two arguments (the one concerning *passiones* and the one concerning *partes*) to reject also the view that God is the subject of metaphysics.

To sum up, Albert makes use of the essential ideas of Avicenna’s two arguments in order to deny that the causes or God may be the subject of metaphysics, and to maintain that metaphysics is a unified science once its subject is identified with being *qua* being.

One of Avicenna’s two arguments, namely (A2), is also reported by Duns Scotus in *QM* I 1 §72, within the first redaction of the *quaestio*, and precisely in support of “Avicenna’s position” on the subject of metaphysics. As Scotus formulates it: “metaphysical attributes” do not belong (primarily) to anything except to being, therefore being must be the subject of metaphysics. In rejecting Avicenna’s position in the first redaction of the *quaestio*, Scotus does not refute this argument. We may thus assume that, when Scotus eventually endorses “Avicenna’s position” later in his career, he would indeed read (A2) as showing the scientific adequacy of the science of metaphysics: since being is its subject, metaphysics enquires into “metaphysical attributes” with good reason, for they are the proper accidents of being *qua* being.

At the same time, it is quite clear that Scotus would not deem (A2) conclusive strictly speaking. In particular, he would agree that metaphysics should investigate into given attributes, which I have called “metaphysical attributes” so far, on the basis of his fundamental conception of metaphysics as the science of all beings. Yet the identification of metaphysics with the science of all beings is not sufficient to maintain that being *qua* being is the subject of metaphysics. For example, metaphysics could be the science of all beings inasmuch as they relate to substance, or to God. In those cases, metaphysical attributes would still be investigated; yet the subject of science would be substance, or God.

As for (A1), it is not reported by Scotus as an argument in favour of “Avicenna’s position” in *QM* I 1. This notwithstanding, it must have had a very strong influence on Scotus’ interpretation of Avicenna, and on his reflection on the subject of metaphysics more generally. (A1) assumes that being *qua* being is the only notion common to all the categories, and thus the only notion which could unify the science of all beings. Is this really the case? In particular, is being a notion common to all the categories? According to Scotus, this is basically a question on the unity of the notion of being. If being is univocal, then it can indeed grant the unity of the science of all beings. If, on the other hand, being is equivocal, then there is no such thing as a notion common to the categories. In this case, metaphysics could be unified only by means of a *pros hen*, by which all beings are related to one first being, which would thus be the subject of science. The univocity of being thus proves to be one of the necessary conditions for Scotus’ final endorsement of “Avicenna’s position” on the subject of metaphysics.

It is no coincidence that Scotus ascribes the doctrine of the univocity of being specifically to Avicenna. In the first redaction of *QM* I 1, in particular in §74, he claims that Avicenna would deny equivocity. In order to substantiate this claim, Scotus mentions two Avicennian passages, namely the famous beginning of *Philosophia prima* I 5 (where “being” is included among the primary notions) and an unspecified passage from *Philosophia prima* I 2 (which might well be the conclusion of (A1)). There is also another Avicennian passage from *Philosophia prima* I 5 which is interesting for present purposes, even though Scotus does not mention it explicitly:

Dicemus igitur nunc quod quamvis ens, sicut scisti, non sit genus, nec praedicatum aequaliter de his quae sub eo sunt, tamen est intentio in qua conveniunt secundum prius et posterius; primum autem est quidditati quae est in substantia, deinde ei quod est post ipsam. Postquam autem una intentio est ens secundum hoc quod assignavimus, sequuntur illud accidentalia quae ei sunt propria, sicut supra diximus. Et ideo eget aliqua scientia in qua tractetur de eo, sicut omni sanativo necessaria est aliqua scientia⁵⁹⁵.

Avicenna underscores that being is not a genus, and that it is not predicated in a uniform way of all that is subordinated to it: for example, it is predicated of substance in a primary way and of accidents in a secondary way. The final mention of the *sanativum* recalls *Metaphysics* Γ 2, in

⁵⁹⁵ *Philosophia prima* I 5, p. 40 ll. 46-53.

particular one of the examples of *pros hen* in Aristotle's discussion of the unity of the science of being *qua* being. Yet it is difficult to avoid the impression that Avicenna's justification of the unity of the science of being *qua* being is not equivalent to Aristotle's. Avicenna does not ground the unity of metaphysics on the fact that all beings are related to substance. Rather, he simply argues that being is *una intentio*; as such, it also has proper accidents and requires a science undertaking its investigation.

Scotus grasps very well this difference between Aristotle's and Avicenna's accounts. In the first redaction of *QM* I 1, he denies that being is univocal and, accordingly, rejects "Avicenna's position" on the subject of metaphysics. In the *solutio*, Scotus states that the subject of metaphysics is substance, which unifies all beings by means of the *pros hen*; Aristotle is assumed to have endorsed precisely this position, as he is quoted in support of it in §§93-95.

Later in his career, Scotus reconsiders the univocity of being, which he ascribes to Avicenna. As a consequence, he would no longer reject Avicenna's argument (A1) on the grounds of equivocity. Quite the contrary, in *QM* VI 4 he basically reports (A1) among the arguments in favour of Avicenna's position:

Nota rationes alibi Avicennae quod sic, I Metaphysicae, propter duo: quia Deum esse probatur hic, et quia ens est commune ad omnia hic considerata⁵⁹⁶.

In the *solutio*, Scotus endorses Avicenna's position and makes clear that the second argument is valid:

Quando ergo omnibus consideratis in scientia est aliquod commune per praedicationem, illud adaequat. Non quaeritur aliquod primum virtualiter adaequans nisi quia definit commune formaliter adaequans. Ens autem unius rationis. Quaere alibi. Ergo adaequat⁵⁹⁷.

Avicenna's argument (A1) is therefore valid, and its validity depends on the following point: there is no need to unify metaphysics by means of a *pros hen* with respect to substance, unless a notion common to all beings is missing. Since the notion of being is indeed common to all beings, being *qua* being must be the subject of metaphysics.

3. God cannot be the subject of metaphysics: Avicenna's argument

In order to reject the view that God is the subject of metaphysics, in *Ilāhiyyāt* I 1 [12] Avicenna employs the following argument: (P1) the existence of the subject of a science must be presupposed in that science; (P2) the existence of God is sought in metaphysics; (C) therefore, God cannot be the subject of metaphysics.

⁵⁹⁶ *QM* VI 4, p. 85 ll. 4-7.

⁵⁹⁷ *QM* VI 4, p. 88 ll. 1-5.

In the chapter, Avicenna argues in favour of (P2), maintaining that God's existence must be sought by some science, and that all other sciences do not seek it. As for (P1), it is said to be known "from other places". Plausibly, Avicenna refers to his *Burhān*; in any case, (P1) is an epistemological principle ultimately deriving from Aristotle's *Posterior Analytics*. It does not come as a surprise that Averroes does agree with Avicenna in maintaining (P1); by contrast, he rejects (P2) in his *Long Commentary on the Physics* I c. 83, where he claims that the demonstration of God's existence pertains to physics, rather than to metaphysics.

Avicenna's rejection of the "theological stance" passed into Latin philosophy as a decisive point in the discussions about the subject of metaphysics. Authors such as Albert the Great and Duns Scotus explicitly opposed Avicenna's and Averroes' views, ascribing the "ontological position" (i. e. "being is the subject of metaphysics") to the former and the "theological position" (i. e. "God is the subject of metaphysics") to the latter. The final evaluation of the two positions could thus not avoid to take into consideration Avicenna's argument against the "theological position".

The reception of the argument in Albert the Great and Thomas Aquinas is not difficult to outline. As for Albert, he faithfully employs Avicenna's argument both in *Physica* 1.3.18 and in *Metaphysica* 1.1.2 in order to deny that God may be the subject of metaphysics. The only difference from Avicenna's original account is the following: in Albert's formulation, the argument would concern both God and separate substances (in *Physica* 1.3.18), or both God and *divina separata* (in *Metaphysica* 1.1.2). For example, in *Physica* 1.3.18 Albert has in mind Averroes' claim that the genus of separate substances is the subject of metaphysics. In order to criticise Averroes, Albert extends the validity of Avicenna's argument: not only God, but also separate substances are sought in metaphysics; accordingly, neither God nor separate substances can be the subject of metaphysics.

Unlike Albert, Aquinas does not really use Avicenna's argument to reject the theological position on the subject of metaphysics. This notwithstanding, the main ideas of the argument seem to find a place – albeit in some looser form – in *Super de trinitate* q. 5 a. 4. In the *solutio*, Aquinas claims that immaterial beings (including both God and separate substances) cannot be the subject of metaphysics just because they are furthest from the capabilities of human intellects. That is to say, natural reason cannot provide an adequate basis for immaterial beings to be the subject of a philosophical science in general, and of metaphysics in particular. We may suppose that the "adequate basis" at stake would include at least the knowledge of the existence and of the essence of immaterial beings – and Aquinas would deny that the latter may be grasped by natural reason at all.

More complex – and far more interesting – is the reception of Avicenna's argument in Duns Scotus. Scotus mentions the argument at the very beginning of *QM* I 1, in §§1-2, to reject Averroes' position on the subject of metaphysics. In §1, he makes clear that the assumption of *si est* and *quid*

est of the subject of science is prescribed by Aristotle himself in the *Posterior Analytics*. In §2, Scotus basically quotes Avicenna’s argument in *Philosophia prima* I 1 to the effect that the *si est* of God is sought, rather than assumed, in metaphysics. To sum up, Scotus knows Avicenna’s argument perfectly well and is aware of the central role it plays in rejecting the view that God is the subject of metaphysics. It is thus noteworthy that his evaluation of the argument changes throughout his career. In particular, we may draw a distinction between two phases: in the later one, Scotus deems the argument valid, while in the earlier one he does not.

Nearly all of *QM* I 1 belongs to the earlier phase, including the first redaction – where Scotus maintains that substance is the subject of metaphysics – and the second one – where Scotus maintains that God is the subject of metaphysics. In the first redaction, and precisely within the exposition of Averroes’ position, Scotus claims that a science can demonstrate the *si est* of its subject as long as the demonstration is *a posteriori*. Accordingly, the fact that metaphysics should demonstrate the *si est* of God does not prevent God from being its subject. Interestingly, Scotus does not reject the view that a science can demonstrate the *si est* of its subject in the first redaction, even though he refutes Averroes’ position on other grounds. It is therefore reasonable to assume that he does believe that a science can demonstrate the *si est* of its subject, and, as a consequence, that he deems Avicenna’s argument invalid. This assumption is confirmed by the second redaction of *QM* I 1; §119 is particularly explicit: “*Rationes etiam pro Avicenna principales, de ‘quia est’ et ‘quid est’, nihil valent*”⁵⁹⁸. In his new *solutio*, Scotus maintains that the subject of metaphysics is God: metaphysics assumes only the meaning of the term “God”; it then demonstrates the *si est* of God first and his attributes afterwards.

Scotus’ evaluation of Avicenna’s argument changes completely in the later phase. The final paragraphs of *QM* I 1 are probably the first text belonging to this phase, which definitely includes *QM* VI 4 and relevant texts from *Ordinatio* and *Reportatio parisiensis*⁵⁹⁹. In these texts, Avicenna’s argument is not only accepted and used as *the* rejection of Averroes’ position, but also serves as one of the essential pieces of evidence for the truth of Avicenna’s view that being *qua* being is the subject of metaphysics.

A comparison between the texts belonging to the earlier phase and the ones belonging to the later phase reveals the reason behind Scotus’ reconsideration of Avicenna’s argument. In all and only the texts belonging to the later stage, Scotus takes care of explaining in detail the epistemological principle according to which a science must presuppose the *si est* of its subject. To quote Scotus’ own words in *QM* VI 4: “*‘si est’ praesupponitur de subiecto, non de actuali existentia, sed quod habet*

⁵⁹⁸ *QM* I 1, p. 56 ll. 18-19.

⁵⁹⁹ More precisely, the text in the *Ordinatio* is an annotation by Scotus published in the Vatican edition in *Ordinatio* I d. 3. The other text is *Reportatio parisiensis* prol. q. 3 a. 1. See [Dumont 1984] for an analysis of these two texts together with *QM* VI 4.

*esse quidditativum – scilicet quod ratio eius non est falsa in se*⁶⁰⁰. Along the lines of Henry of Ghent’s quidditative interpretation of the *quaestio ‘si est’*, Scotus specifies that a science must presuppose the “quidditative being” of its subject (which in his view means that its notion is not self-contradictory), rather than its actual existence.

The specification “*non de actuali existentia*” indicates that Scotus believes the “existential interpretation” of the *quaestio ‘si est’* to be the obvious one, the “quidditative interpretation” being less trivial and in need of clarification. This being the case, it is reasonable to assume – *e silentio* – that the texts belonging to the earlier phase must be read according to the existential interpretation of the *si est*.

Against the background of the two interpretations of the *si est* we may thus understand Scotus’ reevaluation of Avicenna’s argument properly. The modifications of Scotus’ views do not concern whether a science can demonstrate the existence of its subject or not; it is rather plausible to assume that Scotus consistently thought that a science can demonstrate the existence of its subject. By contrast, Scotus’ very interpretation of the *si est* changed at a given point, with the final adoption of the quidditative interpretation. According to the latter, Avicenna’s argument is eventually taken as valid: God cannot be the subject of metaphysics, because the fact that the notion of God – or, more precisely, the notion of “first being” – does not include a contradiction cannot be assumed without a previous demonstration. According to Scotus’ final position, that demonstration is indeed carried out in metaphysics, belonging to an investigation into the *passiones* of its subject, namely being *qua* being.

4. God, separate substances, and principles of being

That metaphysics should investigate in some sense into the principles of being is a view which may be traced back to Aristotle’s *Metaphysics*, for example Γ 1. According to (at least most) medieval authors, the metaphysical enquiry into the principles of being allowed for a conciliation of the ontological and the theological dimensions of metaphysics. Once the subject of metaphysics was said to be being *qua* being, the metaphysical investigation into God and possibly separate substances could be identified precisely with an enquiry into the principles of being, or at least some of them.

This scenario posed a problem, though, from the point of view of the doctrine of science – and in particular from the point of view of the *Posterior Analytics* – which may be summarised in one question: why should a science investigate into the principles of its subject? In the case of metaphysics, why should it investigate into the principles of being *qua* being? According to the *Posterior Analytics*, scientific demonstrations prove the inherence of *per se* accidents in their

⁶⁰⁰ *QM* VI 4, p. 87 ll. 13-15.

subjects. To be sure, “principles” are one of the main ingredients of Aristotle’s doctrine of science, in addition to subject and attributes; yet by “principles” Aristotle refers to indemonstrable premisses, rather than to ontological principles.

In Avicenna’s *Ilāhiyyāt* I 2 [20], we find a clear pronouncement as to the place of the metaphysical investigation into the principles of being. Avicenna is here replying to an objection mentioned in [19], according to which the task of a science should consist in examining the attributes, rather than the principles, of its subject. Avicenna answers that the investigation into the principles of being falls within the investigation into the attributes of being *qua* being, for “principle” is precisely such an attribute. In this way, Avicenna basically makes the metaphysical investigation into the principles of being fit in with the doctrine of science of the *Posterior Analytics*.

In spite of this clear pronouncement, *Ilāhiyyāt* I 2 does not provide us with an unambiguous picture. Just a few paragraphs later, in *Ilāhiyyāt* I 2 [22-24], Avicenna proposes the following tripartition of metaphysics: i) investigation into the ultimate causes; ii) investigation into the accidents of being; iii) investigation into the principles of particular sciences. According to this scheme, the investigation into principles would not fall under the investigation into attributes; they would rather be two distinct sections of metaphysics, namely (i) and (ii). Furthermore, in *Ilāhiyyāt* I 2 [22] Avicenna tells us the reason why metaphysics should include section (i): the ultimate causes are the causes of every caused existent *from the point of view of its existence*. For example, God – who is indeed one of the ultimate causes – is investigated in metaphysics inasmuch as every caused existent derives from him *inasmuch as it is a caused existent*.

To sum up, Avicenna provides us with two different explanations of the fact that the principles of being are investigated in metaphysics: [Exp1] he claims that “principle” is an attribute of being *qua* being; [Exp2] he claims that the principles at stake are causes of every being inasmuch as it is just a caused being, rather than a physical or mathematical being. [Exp1] fits in well with the doctrine of science of the *Posterior Analytics*, according to which a science demonstrates the attributes of a given genus. [Exp2], by contrast, seems to presuppose an epistemological principle extraneous to the *Posterior Analytics*, according to which a science ought to take into consideration the principles of part of its subject, *in addition to* its attributes.

Leaving aside the specific aspects of Avicenna’s account, the two explanations follow a different strategy: [Exp1] makes the investigation into principles an investigation into attributes, which is known to belong to scientific enquiry (*Posterior Analytics*); [Exp2] justifies the investigation into principles on independent grounds, as a task of a science distinct from the investigation into attributes. As we shall see, both strategies are to be found in Latin authors, at least in their essential ideas. In what follows, we shall restrict our attention to a specific kind of principles of being, namely

God and separate substances. Accordingly, we are not going to examine in detail the general question why the principles of being are investigated in metaphysics. Rather, we are going to analyse how some Latin authors would answer the following question: why are God and separate substances investigated in the science whose subject is being *qua* being?

Aquinas gives a simple and unifying answer: both God and separate substances are investigated in metaphysics inasmuch as they are the principles of being *qua* being. In this respect, Aquinas expressly states – both in *Super De Trinitate* q. 5 a. 4 and in the prologue of his *Commentary on the Metaphysics* – that a science ought to investigate into the principles of its subject. Even more, in the latter text he characterises the subject of science as the item whose attributes and causes are investigated in that science. Aquinas thus makes the investigation into the principles and the investigation into the attributes of the subject two distinct tasks which a science should carry out. In other words, Aquinas’ approach resembles Avicenna’s [Exp2]. It is very well possible that Aquinas was directly influenced by Avicenna’s [Exp2], even though it is difficult to substantiate this possibility with certain evidence.

A more complex scenario is the one found in Albert the Great. In *Physica* 1.3.18, in order to criticise Averroes’ view that God and the genus of separate substances are the subject of metaphysics, Albert observes that “separate” is an attribute of being. Hence he draws the conclusion that “separate” is a division and an attribute of the subject of metaphysics, rather than the subject itself. According to *Physica* 1.3.18, the investigation into separate beings would therefore belong to the investigation into the attributes and divisions of being: the resemblance with Avicenna’s [Exp1] is obvious. In this case, we are probably allowed to assume a direct influence of Avicenna’s [Exp1] on Albert, for *Physica* 1.3.18 explicitly opposes Avicenna’s and Averroes’ views.

For what has been said so far, it would seem that Albert simply follows the strategy of [Exp1]. However, *Physica* 1.3.18 is not explicit on one point: is God included within the division of “separate being” together with separate substances? In fact, Albert’s reticence on this point seems to suggest that he is not. In any case, in his later *Metaphysica* Albert will explicitly maintain that the subject of metaphysics is to be meant as restricted to created being. This being the case, Albert should explain why God falls within metaphysical consideration. At least once he seems to maintain that God is considered in metaphysics inasmuch as he is the cause of being *qua* being. On the other hand, in the *Metaphysica* he keeps maintaining that “separate” is an attribute of being *qua* being, which must be the reason why separate substances fall within metaphysical consideration.

To sum up, Albert seems to explain in two different ways – which roughly correspond to [Exp1] and [Exp2] – the metaphysical consideration of separate substances, on one hand, and of God, on the other. “Separate” is an attribute of being and the class of separate substances is the

corresponding division of being; God does not fall within being and is rather its cause. This picture is not unproblematic. Unlike Aquinas, Albert does not state that a science in general should investigate into the principles of its subject. In fact, he repeatedly makes use of the triad “*subiectum, partes, passiones*”, meant to capture the articulation and unity of a science in general. The investigation into the ontological principles of the subject seems to remain outside the scope of scientific consideration. In the case of metaphysics, God should remain outside metaphysical consideration, which is a view Albert would definitely not endorse.

Finally, let us take into consideration Scotus’ views. In the *solutio* of the first redaction of the *quaestio*, where Scotus maintains that substance is the subject of metaphysics, no mention is made of the metaphysical consideration of God and separate substances. A passage before the *solutio*, however, contains the relevant information. The passage at stake is the end of Scotus’ criticism of Averroes’ view that God and separate substances are the subject of metaphysics. Apparently, the final outcome of the criticism is stated in §43, as well as in §62 and §65: separate substances are investigated in metaphysics inasmuch as they are the “main part” of the subject, while God is investigated in metaphysics inasmuch as he is the cause of the subject.

Scotus’ position in the first redaction thus resembles closely the one which I have tentatively ascribed to Albert: there are two different explanations for the metaphysical considerations of God, on one hand, and of separate substances, on the other; the two explanations take into account the fact that separate substances fall within the scope of the subject of metaphysics, while God does not. As a matter of fact, in the first redaction of the *quaestio* Scotus maintains that no notion is common to God and other beings.

We can thus compare Scotus’ earliest position on the subject of metaphysics with Albert’s (at least as it emerges from the *Metaphysica*) and Aquinas’: for all of them, the subject of metaphysics extends only to the created – for Scotus it is substance, for Aquinas and Albert it is created being. “The earliest Scotus” and Aquinas, and plausibly Albert as well, maintain that God falls within metaphysical consideration as cause of the subject of metaphysics. On the other hand, in *QM I 1* §38 Scotus expressly criticises the view that separate substances may be causes of the subject of metaphysics – a view endorsed, as we know, by Aquinas. Scotus claims that, since separate substances can only cause through motion, their consideration as causes only belongs to physics.

In spite of similarities, some passages suggest that Scotus’ conception of the investigation into the principles of the subject of science is different, for example, from Aquinas’. In Aquinas’ formulation, the enquiry into the principles of being appears to be the goal, or at least one of the goals of metaphysics. By contrast, Scotus seems to assume that a science takes into consideration the principles of its subject *only inasmuch as they contribute to the knowledge of the subject*. This

conception is definitely implied by one passage (which I have argued to be a later *additio*) in *QM I 1* §30, where an argument is put forward to the effect that God does not fall within metaphysical investigation at all. In particular, according to the argument God could not be considered as cause of the subject of metaphysics because he is not a necessary cause, while only necessary causes – as clarified in *QM I 1* §39 – yield some knowledge of their effects.

The argument in §30 thus indicates Scotus' dissatisfaction for his original conception of the role of God in metaphysics as cause of the subject. As we know, in a second stage of his reflection Scotus changes his position on the subject of metaphysics, endorsing the view that it is God, rather than substance. Accordingly, the question how God falls within metaphysical consideration becomes trivial. As for separate substances, they would in principle be considered in metaphysics just like all other beings, namely in virtue of their attribution to God in a "vertical *pros hen*". However, in practice – or better, from the point of view of the knowledge humanly possible – the little knowledge of separate substances in themselves that human intellects are able to achieve is conveyed in metaphysics (unlike the knowledge of material substances in themselves, which is conveyed in a dedicated science, namely physics).

To conclude, let us take into consideration the final stage of Scotus' reflection, when he maintains that being *qua* being is the subject of metaphysics. As we have seen, the univocity of being plays a prominent role in Scotus' endorsing his final position, as it is one of its necessary conditions. Univocity does not only concern the created, so that being is taken as a notion common to substance and accidents. It rather concerns all realities: being is a notion common to both finite and infinite being. Accordingly, God falls within the subject of metaphysics, as he is one of the two parts into which being is divided immediately: infinite being, as opposed to finite being (or first being, as opposed to posterior beings).

The other necessary condition of Scotus' final position is his criticism of the view that God may be the subject of metaphysics. God is not the subject because the *si est* of God (meant as a quidditative question) is demonstrated in metaphysics. Scotus also tells us how the *si est* of God is demonstrated in metaphysics, for example in *QM VI 4*: "first" is demonstrated to belong to some being. Said otherwise, the *si est* of God is expressed by the conclusion of a demonstration, which says that "some being is first". Following quite faithfully Avicenna's [Exp1], Scotus thus identifies the metaphysical demonstration of God's (quidditative) *esse* with a demonstration of the attributes of being *qua* being, namely of the subject of metaphysics. In this sense, Avicenna is the basis for Scotus' connection of the demonstration of God's *esse* with the "modal explication" of being (that is the

investigation into the *passiones entis disiunctae*), which in turn grounds his conception of the “onto-theological unity of the transcendental science of being”⁶⁰¹.

⁶⁰¹ The expression is in [Aertsen 2012], p. 431. See pp. 429-431 for a discussion of the “modal explication” of being and its connection with the proof of God’s *esse*.

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