WHY TROPES?

An inquiry into past and contemporary motivations for tropes

A dissertation presented by

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INTRODUCTION

Trope theory has rapidly gained a central position in the contemporary ontological debate. The term "trope" made its first appearance with the meaning today used in ontology in Williams (1953)[1]. This apparently bizarre name hails from a term originally used in rhetoric to identify a figurative use of language and was recently brought into ontology to distinguish particular properties[2]. Only recently most philosophers have decided to follow Williams (1953) in naming this category of entity "tropes", to avoid terminological confusion. In fact, the category of particular property has long been recognized by philosophers under different names throughout the history of ontology.[34] On the other hand, even if

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[1] Williams, Donald Cary (1953). "The elements of being". *Review of Metaphysics* (2):3-18, 171-92.

[2] Heil thinks that Williams preferred to adopt a term that lacked potentially misleading historical connotations (Heil, 2012, p. 90).

[3] For an historical overview of the idea that properties are particular and unrepeatable see (Mertz, 1996) and (Seargent, 1985, pp. 1-25). For a thoughtful discussion of individual attributes in Medieval philosophy see (de Libera, 1996) and (Gracia, 1994). In modern era, tropes-like entities are been admitted by Descartes, Locke and Hume under the label of "modes". For Leibinz, see (Clatterbaugh, 1973). For particular properties or "moments" in the German-speaking philosophy, see (Smith, 1982) and (Schnieder, 2006). In a list of XXth Century philosophers that have defended particular properties, Mulligan, Simons and Smith (Mulligan, et al., 1984) include Strawson (1959), (Anscombe & Geach, 1961), (Küng, 1967)

particular properties were well known by ontologists of the past, a complete ontology having only particular properties as its main category has been developed and strongly defended only in the second half of the XX century. Thus, for the sake of simplicity, I will refer to ontologies with particular properties using the name "trope ontology".

In the middle of the 20th century, Williams's seminal paper not only revived the discussion about particular properties but represented a first attempt to develop a complete ontological theory based only on particular properties. Today trope theory is not only recognized as a main position in ontological discussions[5], but tropes have found many applications in various fields external to pure ontology, as philosophy of mind and philosophical psychology[6], philosophy of language and semantics[7] and philosophy of physics[8].

In the next chapters I will present a survey of trope ontology of the 20th century. Because various models of trope theory have been presented, I have chosen to restrict the field of my research principally to those au-

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, Wolterstorff (1970a), Grossmann (1974), Kenny (1980). I think that Russell (1911), (Sellars, 1957) and (Sellars, 1952) should be added to this list as well. See also the lists in (Armstrong, 1989, p. 113), (Bacon, 2011) and (Heil, 2012).

[4] For some remarks and references on the variety of terms for particular properties or tropes see (Schnieder, 2004), pp. 155–161.

[5] Nowadays, all introductory textbooks or manuals on metaphysics consider trope theory among the main, most representative options in the ontological debate. See, for example, (Armstrong, 1989) (Loux, 1998), (Laurence & Macdonald, 1998), (Lowe, 2002).

[6] Virtues of tropes in philosophy of mind are examined in the essays collected in (Gozzano & Orilia, 2008). See also (Heil, 1992), (Robb, 1997), (Heil & Robb, 2003), (Whittle, 2007), (Lowe, 2008) and (Ehring, 1996), (Ehring, 2011).

[7] See especially the works of Moltmann e.g. (Moltmann, 2004), (Moltmann, 2013).

[8] This seems nowadays one of the most promising fields of application for trope theory. See, among others, (Morganti, 2009), (Wayne, 2007), (von Wachter, 2000), (Kuhlmann, 2010).

thors that have contributed to define the version of such theory that are more known and debated nowadays. The authors that above all contributed to formulate this model – that I will refer to as Standard Trope Theory, are two trope supporters, Donald C. Williams and Keith Campbell and a trope enemy, David M. Armstrong, who indeed contributed so much to the debate between trope theory and theory of universals. The Standard Trope Theory will be comprehensively presented in chapter One. Moreover, a great attention will be devoted to George F. Stout, even if he is not contemporary to the other authors. This choice has been made because of the great influence that Stout's defence of particular properties had both on Williams and Armstrong.

The most part of researches done so far on tropes have been focused on an analysis of the main characters of the theory, of a better definition of its basic tenets and of an enhancement of some problematic points of the primitive theory. A less well-trodden path has been the inquiry into the original motivations given in support of an ontology with particular properties. Trope theory often has been assumed in contemporary debate as a full-fledged and unitary theory, leaving aside the inquiry into the background within such theory arose. Even the authors that have provided a lengthy history of past particularist ontologies, as for example Mertz with his book *Moderate Realism*, have been mainly focused on the analysis of one or more traits of these theories and of their problematic points, instead of examining the background against which these theories emerge. However, I think that an analysis of this background may be of special interest in the framework of a better understanding of trope theories aimed at arguing for their validity and for their problem-solving ca-

pacities. I will fill this gap in research with a detailed analysis of the trope theories presented by Stout, Williams and the discussion arose about them in the Australian school of metaphysics[9].

In particular, the analysis of Williams's works dedicated to tropes may add something new: in fact, if the name of Williams is well known as the first famous promoter of trope theory in its contemporary form, little research has been devoted to an analysis of the basis of his trope theory. Furthermore, in this chapter I will briefly examine the influences of other authors, in particular Stout and Husserl, since they were important for Williams's elaboration of trope theory. The chapter on Williams is the central chapter of my dissertation, and I think that it contains some new contributions for a better understanding of the background from which trope theory arose. In particular, I found interesting, in Williams's approach to tropes, the attention he paid to the analysis of our perceptual knowledge of the external world. Tropes are considered as the privileged objects that allow our epistemic access to the reality. Some of most important trope theorists began their researches in philosophy of perception, philosophy of visual perception, discussions on non-conceptual content, phenomenology and analytic psychology[10]. Such attention can be found for example in Stout, who actually was an important source for

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[9] Australian metaphysicians as J. Anderson, D. M. Armstrong, C.B. Martin, J. Heil, M. Devitt have contributed extensively to debates over realism and nominalism. See (Trakakis & Oppy, 2010) for a comprehensive survey of the contribution of Australian universities and scholars to the debate in general metaphysics. See also (Srzednicki & Wood, 1992) for a focus on the influences on the development of philosophy in Australia after the war. For a personal reconstruction of the golden age of Australian philosophy, see (Armstrong, 2001).

[10] For others authors that worked on tropes within this background see the essays collected in (Smith, 1982). See also (Mulligan, 1995), and (Schnieder, 2006).

Williams. For such authors, and for the early Williams[11], motivations such as the role of tropes in account of the actual way in which we perceive the world were of primary importance in order to prefer tropes to universals.

Most part of contemporary tropes defenders instead avoid to appeal to arguments from perception and from the phenomenal character of experience and they prefer instead to defend tropes from the point of view of a scientific well-informed philosophy[12]. From that point of view, tropes are the basic entities in which all other natural entities can be analyzed. So tropes are, for example, properties of fundamental particles or of physical fields. In fact, whereas psychological and phenomenological motivations for supporting trope theories well fit our intuitions about particular properties (when you look at the sunset and you say to a friend "Look at this beautiful red", you refer to that particular non-repeatable red shade of the sky, and not to red in general), they apparently do not play a crucial role in new trope theories intuitions. However, I think that a discussion regarding the different focus of more recent trope theories with respect to early contemporary ones is interesting for a general evaluation of the theory. In fact, whereas contemporary trope theorists apparently wink only to science, and in particular to fundamental physics in order to find justification for tropes, intuitive examples from our phenomenal experience often recur in their writing in order to explain what

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[11] To our purposes, these early writings: "The Nature of Universals and of Abstractions" (Williams, 1931), "The Innocence of the Given" (Williams, 1933b), "Truth, error, and the location of the datum" (Williams, 1934c) are of special interest.

[12] See (Maurin, 2010) for a stimulating discussion of this claim, especially regarding the place that traditional arguments of tropes would play nowadays.

tropes are[13]. What result from my research in the origins and developments of trope theory is that many of traditional reasons to adopt tropes in ontology are still alive in contemporary arguments on tropes, even if the resort to these reasons is not methodologically endorsed in a open way. In fact, even if the largest part of contemporary trope supporters are mainly interested in connecting trope ontology to the newest results of scientific inquiries – and this is a good way to find applications for this ancient theory – it seems that trope supporters cannot avoid to recur to traditional motivations for justifying tropes. Contemporary trope theories appear to be counter-intuitive constructions. In order to preserve intuitiveness of trope theory, even contemporary trope theorists recur to examples that come from the actual way in which we experience the world.

Another reason regards the motivations that are often provided to hold up tropes. Contemporary trope theorists assume the existence of tropes, then investigate how a theory that presupposes them will be construed, what problem it will face. So, their main working field is theoretical straightness, coherence and fruitfulness of theory with tropes in confrontation with rival theories. For example, Maurin's exposition of trope theory (Maurin 2002), while being one of the most accurate expositions of the theory – formally perfect – does not offer an argument for the existence of tropes, or motivations of why we should include tropes in our ontology. Given the completeness and the formal accuracy of contemporary accounts of tropes, they lack deep reasons to justify an endorsement

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[13] For example, Campbell gives the following examples of tropes: the redness of a piece of cloth, Julius Caesar's baldness, the colour bands in a rainbow, a wine's flavour (Campbell, 1981).

to tropes. Such motivations are instead provided by former trope theorists, as Stout and Williams. Since if whether these arguments and motivations are really successful in the debate against realist accounts of properties still remains an open question, I will not deal here with this evaluation, deferring an answer to my future researches in this direction.

To conclude this introduction, let me sum up briefly the structure of this dissertation. I decided to begin with a chapter devoted to the introduction of some terminology. This is not because I have personal notations that the reader should be aware of, but because the traditional terminology of ontology is sometimes used in the debate in a rather ambiguous way. Even if some terms are the same, the concepts attributed to them vary widely. Therefore, since these notions will be widely used in the subsequent part of the dissertation, their definitions ought to be clarified. The terms I believe to deserve a better definition are those of realism and nominalism, that of trope itself, and that of object. After having proposed a description of what I call the Standard version of trope theory, I devote the second part of the first chapter to the examination of the competitors of standard trope theory, so that the latter would be described by itself as well as by the comparison with the alternative theories. Finally, I try to evaluate standard trope theory regarding both its internal assumptions and development, and its advantages over the other theories.

The second chapter is dedicated to Stout. Since Stout's philosophy has recently enjoyed a new interest and many aspects of his philosophy are already discussed in literature (e.g. his exportation of topics from psychology in ontology and his debate with Moore on the nature of abstract

particulars), I will devote this chapter principally to discuss Stout's legacy and influence on successive authors, mainly Williams and Australian philosophers. Even if historical issues are rarely debated among contemporary trope theorists, what emerges from this research is that Stout's influence was important for the contemporary success of tropes. I hope therefore that this chapter will contribute to a better knowledge of the background in which the debate on trope theory arose, and of the formative influences on the authors that elaborated it.

Chapter three concentrates on those aspects of Williams's contribution to the elaboration of contemporary trope theory that are most related to his original conceptions of particular properties as "elements of being". The main focus will be on the explanation of this idiosyncratic conception of properties, highlighting the differences to the traditional discourse about substances and properties. I have highlighted those issues that will give the reader a clear view of the innovative approach of Williams to the theory of properties, stressing his importance in the recent revival of metaphysical discussion.

Chapter Four will be devoted to discuss how trope theory was received in the debate among Australian philosophers since the Seventies. There is, in the first place, an historical connection between this chapter and the two immediately precedent chapters. In fact, if trope theory is so largely discussed among Australian scholars, and developed and enhanced, this is due also to the knowledge that was diffused there of Stout's early trope theory. Stout's legacy was mediated by Anderson, Armstrong's teacher. Anderson was a key figure for reviving interest in particular properties since he drew attention to Stout's moderate nominalism and because his

interpretation strongly influenced Armstrong's understanding of trope theory. Stout's moderate nominalism interested Anderson especially for the treatment of universals: universals do not exist apart from particulars, and particulars conversely do not exist as separate from universals. I will highlight the influence that his view had on Armstrong who, just as his teacher, maintains that a strong contraposition between universals and particulars should be mitigated: he evaluates trope theory positively because it treats universals as derivative upon particulars, thus eschewing any strong contraposition between these ontological categories. I will then focus on some specific criticisms moved by Anderson, for instance his criticism of Stout's account of similarity as a primitive. I will then move on to Armstrong's discussion of trope theory – which strongly reflects Andersonian interpretations.

A large space will be then devoted to the analysis of Campbell's trope theory. Campbell's role is important since he reintroduced tropes in the ontological debate with great fervour and revived the interest for Williams's hitherto lesser-known work. In addition, Campbell discussed many problems of trope theory that later become fundamental in the subsequent debate [14]. In particular, I will analyze the specific flavour of Campbell's trope theory, a theory that is set in a scientifically informed scenario. This contribution, influenced by Armstrong's scientific meta-

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[14] See (Mertz 1996, p. 8): «Campbell is perhaps the foremost contemporary advocate of a nominalist version of unit properties and has argued for the theory both by demonstrating its economy and coherence in response of the weaknesses of classical two-category substance/attribute ontology and by showing its explanatory value in such areas as causation and the philosophy of mind» and (Moreland, 2001, p. 53): «The most articulated version of moderate nominalism currently available is the trope nominalism of Keith Campbell».

physics, is original with respect to precedent readings of trope theory. I will sustain that it marks a difference respect to Williams's approach and I discuss, in the conclusions, the extent of these different approach to tropes.

Obviously, there is much that falls beyond the scope of this work. For instance, I will not deal with problems specific to trope theories as difficulties with compresence and regresses of resemblance that are already largely discussed in literature and that they are not directly related to the historical background and to the genesis of trope theory.

TROPE THEORY IN THE FRAMEWORK OF CONTEMPORARY ONTOLOGY

2.1 SYNOPSIS OF THE CHAPTER

This chapter sets the terms of the debate that will be addressed in the second part of the thesis. It begins with some preliminary steps: the first one is a definition of what I mean for trope. There is in fact a conceptual confusion about this term, and some philosophers label under this category different entities that could be better considered as belonging to distinct categories[15]. In order to clarify this definition, I will compare the concept of trope which I will refer to throughout the following discussion, with other conceptions of trope that are present in various ontological models, and that differ very much from one to another. However, in order to offer such a definition and to analyze the differences among

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[15] Consider for example (Lowe, 2006) who regards tropes as instances of universals, and (Daly, 1994) who considers tropes as a type of states of affairs.

these concepts of trope, I have to first define the essential features of those various ontological models. The first section will start therefore with a presentation of the basic tenets of three models of ontology (realism, austere nominalism and moderate nominalism), and then will go on in detailing the relations that occur between trope theory (considered as a form of moderate nominalism) and realism and austere Nominalism. Since trope theory is typically defined in opposition to the other two traditional views, I give an overview of these approaches. Then I go on describing Trope Nominalism in his two major variants (trope theory with primitive objects and trope bundle theory), clarifying the fundamental distinctions which they rely on. Given these basic distinctions and performed a confrontation among different notions of trope, I can then offer a provisional definition of trope. The second and third sections of this chapter allow achieving a standard definition of trope. This definition is followed by considerations about the standard requirements for a genuine trope theory. This notion of trope will be at issue in the next chapters, where its features will be defined more in depth, taking also into consideration the most important philosophers that have contributed to outline such a notion.

2.2 COMPETING ONTOLOGICAL THEORIES

2.2.1 SOME KEY TERMS

Ontological categories are, to make a long story short, the highest kinds that provide a classification of what exists. The last decades of 20th cen-

tury featured the flourishing of a new interest in ontological categories. Ontological categories have been taken in various way, or as Aristotelian realist summa genera (Chisholm, 1996), (Johansson, 1989), or in descriptive way (Grossmann, 1983), (Lowe, 2006)[16]. I do not intend to enter the debate about the realist import of various ontological categorizations. I instead limit myself to observe that trope theorists assume that tropes are the basic entities of all reality. If this is to be intended as a commitment to a sort of realism (tropes are the ultimate entities of our actual world) or not (it is not stated if whether or not there are things in the world belonging to our conceptual category of trope) is left open. This is the view adopted by Maurin who assume tropes as an hypothesis on our world: if this world were a world of tropes, what problem a such theory about the world would be able to solve (Maurin, 2002)? Other authors, Campbell at first, assume tropes as the theoretical hypothesis on the basis of which we should investigate our physical world: whereas ontology can only provide a theoretical framework, science will instead determine what entities really exist (Campbell, 1976). So a role of ontology is to consider if such empirical evidences can offer a verification of the a priori hypothesis of trope existence.

After these preliminary remarks, I introduce taxonomy of ontological categories that can be used as a basis for, in turn, classifying ontological theories. In fact, a criterion to classify ontological theories may rely on their treatment of two basic categories: properties and objects. The concept of object is among the most general concepts in philosophy, as it is

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[16] For an exhaustive survey of contemporary approach to ontological classification, see (Thomasson, 2013).

also in the common language. But, as an ontological term of art, it has often been used to intend a less broad concept, that of a particular kind of basic entity. The term is therefore intended as a synonym for individual substance, familiar concrete thing or ordinary physical object. According to this meaning, the concept of object will be contrasted with that of bundle. I have chosen the category of object as a term of comparison between ontological theories since one of the peculiarities that characterize the theory that I will define as Standard Trope Theory (henceforth STT) is its revisionary (when not eliminativist) treatment of objects. So STT is considered as an interesting position in the recent debate regarding scepticism about ordinary objects[17]. Moreover, this notion of object has to be also contrasted with properties. In fact, among their other characteristics, properties can be *predicated* of objects.

So, in order to account for the differences among ontological theories, it is useful to refer to two traditional categories of entities: objects and properties. A preliminary remark about this binary classification: for ontologists who deny the existence of tropes, the distinction between object and property simply overlaps with the distinction between particular and universal entities: properties are universals, and objects are particulars. Instead, trope theory maintains the two aforementioned classifications distinct, avoiding the merge of the two classes (i.e. object\concrete and property\universal). It does so by introducing a further entity, that of trope: a trope is indeed a property, but at the same time it is also a particular. For a comprehensive and clear terminological summary of these

[17] A cornerstone in this debate is (Van Inwagen, 1990). See for some discussion on objects eliminativism: (Turner, 2011), (Tye, 1990), (Merricks, 2011), (Lowe, 2005), (Elder, 2004).

concepts, I refer to the definitions formulated by Lowe (Lowe, 2006, p. 10):

Object$_{def.}$ (or concrete particular): it is a property-bearing particular which is not itself borne by anything else. It exists in an unique place at every moment of time, and completely fills the region of space he occupies, so that there is no room for other concrete entities in the same place.

Universal$_{def.}$: it is a property conceived as a "repeatable" entity, which is something that may be held by many different particulars, at different times and places. A universal can be wholly exemplified by several different spatially discontinuous particulars. Unlike concrete objects, universals can be present in different places at the same time.

Trope$_{def.}$: to a first approximation, it is a property conceived as a particular, a "non-repeatable" entity that cannot be had by more than one object. As opposed to universals, tropes have a unique location in space (in this sense they are particulars), but, unlike, concrete objects, they do not fill completely the region of space they occupy, as many tropes can occupy the same position (in this sense they are abstract or non-concrete).

To set the stage, I present now a preliminary sketch of three competing ontological models, by means of their different intuitions about the existence and the ontological role of the three basic categories of universal, object and trope. I warn that this is a very rough schema, since it summarizes many different positions emerged in the history of ontology, and I advise that I am using it for the mere sake of simplicity. These general

models are, according to a standard classification: realism, austere Nominalism (in its various forms) and moderate nominalism[18].

I will distinguish here, in fact, between two variants of Nominalism: whereas moderate nominalism makes no reference to shared or common entities in explaining attribute agreement, austere nominalism tries to show that no theoretical account of attribute agreement at all is required. Nominalism holds that attribute agreement is a primitive fact that does not require further explanations. Trope theory is treated as a moderate nominalist theory. Instead, I will use sometimes the adjective "nominalist" as a generic characterization for theories that rejects universals.

2.2.2 REALISM

Realism, according to the meaning referred here, is aimed at providing an answer to the problem of universals. The problem of universals is ancient, but it has recently enjoyed a revival in metaphysical debates. The locus *classicus* for the contemporary discussion is Armstrong 1978 book, who formulates the central question regarding the problem of universals as «to understand how numerically different particulars can nevertheless be identical in nature, all be of the same type» (Armstrong 1978: 41). Realism explains identity in nature by means of universals, namely properties that can be common to many other entities, i.e. shared by numerically different objects.

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[18] Nominalism, as I take it here, is intended as a theory that rejects universals and admits only particular entities. Nominalism is in fact an ambiguous term, that has assumed varying characterization throughout the history of ontology.

Among the many other reasons to postulate universals, they are introduced in ontology in order to explain objective resemblances (Rodriguez-Pereyra, 2000, p. 257). The typical realist argument for universals starts from "a pre-philosophical truism" (Loux, 1998, p. 21), that there are similarities between things. The white mug on my desk is similar in its form to another mug that lies in the cupboard. It is also similar to this sheet of paper because they share the same colour. This fact is acknowledged by everyone: it is therefore plain evidence, not a theory-laden observation. Everyone agrees on the existence of objective similarities, thus the realist thinks that these similarities should be explained. Objective similarities reflect an *ontological fact*: they do not depend on epistemic resources (e.g., we perceive as similar objects that really have imperceptible differences) and language (e.g., we have not an adjective for all the shades of red, so we simply use the general term "red"), but are a feature of the world. Objective similarities are real facts about the world that cannot be analyzed away (Armstrong 1978, p. 49)[19]. The Realist argues that we will be unable to explain such facts unless we suppose that there are things features like properties that are common to all the similar objects. Objects are similar *because* their properties are identical, being instances of the same universal. Another way to put this is that similarity is *grounded* in universals. For example, the white of my cup is similar to the white of the paper because there is a universal property in common between the two things. There is a reason for I have stressed the "because" in the previous statement: according to this account, in fact, similarity is not about the

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[19] Quine (1953), (Devitt, 1980), (Melia, 2005) all deny that there is some need for an ontological analysis of such facts.

applicability of our general terms, as (Loux, 1978) and (Moreland, 1990) suppose, but about ontological explanation[20]. Armstrong argues that it is not possible to recognize objective similarities without ontological commitment to things in reality that explain such phenomena (Armstrong, 1980, p. 443). Universals are such things: properties that different individual have in common, and that can exist simultaneously in different instances in space-time. By a naturalistic point of view, the fact that universals exist with such odd conditions of spatiotemporal location seems unacceptable. Naturalists typically admit in fact only the existence of physical things existing in space and time: all other kinds of entities are dismissed as they are unable to have an effect on physical world. However, many contemporary realist philosophers[21] admit universals and their theoretical assumption in order to provide a metaphysical foundation for some scientific facts as laws of nature. For them universals are nor supernatural or platonic entities, but entities that really have causal effects on the natural world.

2.2.3 AUSTERE NOMINALISM

In one sense, austere nominalism is a theory that rejects universal properties. According to austere nominalist philosophers, the existence of objective resemblance can be explained without the admission of properties in our inventory of existing things. Nominalists typically insist that real-

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[20] For the notion of ontological explanation, see (Swoyer, 1999) and (Schnieder, 2006).
[21] Among others, (Armstrong, 1997), (Armstrong, 1983), (Lowe, 2006) and (Ellis, 2014).

ists actually do not have an advantage in terms of explanatory power: properties look as mysterious entities, with odd conditions of existence. This is seen as a cost for a realist theory. Austere nominalists instead try to offer an adequate account of similarities and predication within an explanatory framework which eliminates reference to properties of any sort – whether transcendent (Platonic) universals, immanent (Aristotelian) universals or particularized properties (tropes). Some models of nominalism (predicate nominalism, concept nominalism, class nominalism, mereological nominalism, resemblance nominalism) try to account for objective resemblances without appealing to properties: properties really do not exist, but we have predicates or concepts that we apply to similar things or classes and mereological sums that collect all similar objects.

Some other nominalists (that Armstrong famously calls "ostrich nominalists"[22]) argues that there is nothing at all to be explained about objective resemblance[23]: objective resemblances are primitive and not further analyzable features of reality, and we do not need properties to account for it (Devitt 1980, p. 97). A paradigmatic example of this view can be found in Quine: «the word "red" or "red object" denotes each of sundry individual entities which are red houses, red roses, red sunsets; but there is not, in addition, any entity whatever, individual or otherwise, which is named by the word "redness", nor, for that matter, by the word "househood", "rosehood", "sunsethood". That the houses and roses and sunsets are all

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[22] See Armstrong (1978.I, p. 16) for the first denomination of the "Ostrich Nominalism", now very common in the literature about universals.
[23] For a defence of such form of nominalism see (Quine, 1954), (Devitt, 1980), (van Cleve, 1994) and (Parsons, 1999).

of them red may be taken as ultimate and irreducible» (Quine 1954, p. 195). Armstrong (1978) makes a distinction between Quine's Nominalism – a theory that refuses to countenance universals while denying any sort of reductive analysis of them – and other nominalists who, instead, try to get rid of the alleged reference to objective universal properties in different ways (with reference to predicates, classes, concepts or mereological sums). Armstrong (1978, p. 16-17) is very stern against Quine's nominalist style. He is charged with the "privilege of the ostrich" since, in the same way as the African bird, the ostrich nominalist buries his head in sand to avoid providing any account of the phenomenon of attribute agreement. Lewis thinks instead that Armstrong's attack does not hit the target (Lewis, 1999). The central question at issue does not regard analysis (the Quineian nominalist is legitimate to assume resemblances as a primitive fact), but about truthmaking: however, the Quineian nominalist is not requested to provide truthmakers for statements about objective resemblances. Lewis proposes therefore a different definition of such nominalist as «one who can't see why true predications have to have truth-makers» (Lewis, 1999, p. 203).

All other forms of nominalism try to offer an account of objective resemblance without making appeal to properties as truthmakers for statements implying reference to general terms: predicates, concepts, mereological sums, classes or primitive resemblance play the theoretical role of properties. For example, according to class nominalism properties are classes of things (the property blue is the class of all blue things), whereas for mereological nominalism the property blue is the sum of all the blue things. According to predicate nominalism, a thing is blue in vir-

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tue of the fact that the predicate blue fully applies to the thing; concept nominalism is a variant of it. Resemblance nominalism instead accounts for properties assuming resemblance as a primitive prerequisite: blue things are not blue by virtue of a property, but because they resemble one another[24]. These variants of nominalism are very different from one another, but all of them converge towards replacing abstract properties and fulfilling their explanatory roles with other strategies. It is on this point that a confrontation with moderate nominalism would be interesting, because moderate nominalism allows for the possibility of fulfil the ontological role of properties with a new kind of entity.

2.2.4   MODERATE NOMINALISM AND TROPE THEORIES

Moderate nominalists partially agree with realists regarding the existence of properties. Properties exist, but, like all other entities, they are particular entities. Some moderate nominalists (for example Stout 1923) admit that the category of universal properties is not empty, but, however, universals are considered as not fundamental. I would clarify the sense of the claim saying that refusing to recognize universals as a fundamental category does not imply a denial of universals at all. Universals can hold a place in the ontological inventory of the moderate nominalist: for example, according to some moderate nominalists, universals supervene on particular properties – supervenient things are not addition of being – or

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[24] See (Loux, 1978), (Loux, 1998) and (Moreland, 2001) for further discussion of these forms of nominalism.

they can be considered as ways of classify particulars. However, in moderate nominalist accounts, all the explanatory work is done by particular entities, that can be either objects or particular properties.

Moderate nominalism emphasizes that exact similarity of properties and numerical identity are two distinct notions. Properties can be exactly similar, yet numerically distinct: each particular red is perfectly similar to each other red trope but they remain individual, distinct entities. This is exactly what realism of universals denies: for realism, if the property$_a$ of the object$_1$ is exactly similar to the property$_b$ of object$_2$, then property1 is one and the same with property$_2$. That exist several indiscernible properties, but numerically distinct, could been criticized as uneconomical, but moderate nominalism does not care for ontological economy with respect to the number of entities admitted in ontology: instead, ontological economy is searched for the kinds of categories admitted by the theory.

Some further remarks on the notions of numerical and qualitative difference for properties will serve to elucidate in more detail the nature of tropes[25]. Some critics of moderate nominalism have pointed out that it is problematic for trope theory to distinguish between these two notions[26]. If property red$_a$ and property red$_b$ have the same nature, it is not clear what founds their being distinct individuals. Critics argue that such alleged numerical individuality has to be founded somewhere, in bare particulars or in substrata bearing the trope. However, Moreland has pointed out that to consider mere numerical individuality as an aspect distinct

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[25] See (Adams, 1979) and (Tegtmeier, 2003) for more on these notions.
[26] For a discussion of this point see Mertz (1996), Hochberg (2004), (Armstrong, 2005).

from trope nature (the fact that the trope manifests a certain quality) has some unpleasant consequences for trope theory: each trope results to have two distinct aspects, losing its simplicity (Moreland, 1985). Trope theorists, in fact require, that tropes have to be ontologically simple Campbell (1990, p. 20), Maurin (2002, p. 15), (Morganti (2009, p. 190). Contra Moreland, I think that, even if numerical individuality of the trope has to be kept conceptually distinct from its qualitative difference, this does not imply a metaphysical difference, i.e. the real existence of two components in the trope. Most trope supporters argue that numerical individuality has to be accepted as a primitive fact about tropes (Williams, 1966) (Maurin, 2002) and, since I agree that this is an unanalysable feature, which does not introduce any complexity in the trope, I will do not deal anymore with this issue.

I will focus now more specifically on full-fledged trope theories. Trope theory was defined in its standard form by Williams (1953) and it has been defended by numerous authors, as (Campbell, 1990), (Bacon, 1995), (Schaffer, 2001), (Maurin, 2002), (Molnar, 2003), (Moltmann, 2004), (Ehring, 2011), (Keinänen, 2011). Williams's importance can hardly be overstated. In fact, if tropes-like entities have been defended by various philosophers in the history of philosophy, Williams has been the first to present a theory of tropes with systematic attention. We cannot therefore speak properly of a full-blown trope theory before the seminal Williams's 1953 paper. There are therefore two aspects that I would emphasize, and that will be useful in order to distinguish Standard Trope Theory, as originally presented by Williams, from other ancient forms of moderate nominalism (some scholastic philosophers, Locke, Spinoza, Leibniz

among others[27]) and from other contemporary ontologies with tropes like Lowe's four-category ontology.

In being basically a theory about the nature of properties, trope theory is a form of moderate nominalism: tropes are properties that exist as particular entities, as unique, non-repeatable property-cases. The first tenet of trope theory regards the status of properties that are admitted in onto-logical domain. This tenet is shared by all models of moderate nominalism that have occurred in history of ontology. But this it is not sufficient in order to have a fully-fledged trope theory. What identify Standard Trope Theory (as originally defined by Williams) with respect to other variants of moderate nominalism are another couple of assertions. A major tenet of Standard Trope Theory is, in fact, that all other kinds of entities (e.g. universals and objects), are not fundamental. Therefore, they are reducible to tropes by way of different logical operations. As summed up by Campbell (1990), trope theory is a one-category ontology. There are two primitive relations that connect tropes in order to generate other not-primitive categories of entities. First, there is the relation of exact similarity. Exactly similar tropes f1, f2,…fn can form a set, the similarity set with respect to an aspect, f, which in trope theory is an ersatz for the universal F. Second, tropes can be connected by relations of compresence: compresent tropes make up objects. This does not means that trope theory is necessarily eliminativist: in fact, speaking about universals and concrete objects is not considered meaningless. Many versions of

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[27] For historical surveys of tropes-like entities from Plato to the present, see the first part of (Mertz, 1996) and (Seargent, 1985). For a focus on individual properties from the late Antiquity to the Middle Ages see also (de Libera, 2002).

trope theory are, in different ways, reductionist theories: statements with universal terms and names for objects are meaningful, although truthmakers for them are only tropes.

2.2.5 A VARIETY OF CONCEPTS OF TROPES

The standard model of trope ontology that I will analyze in chapters four and Five conceives tropes as little substances, namely as independent entities. However, tropes are admitted in several different ontological theories, so it seems quite difficult to delimit the exact boundaries of this category. In fact, tropes are admitted by theories that have different ontological assumptions, so various concepts of trope are available. For example, apart from tropes as conceived by Standard Trope Theory, according to which they may be considered the fundamental building blocks founding all other categories and independent like substances, there are other concepts of tropes, either in other nominalist ontologies or in realist ontologies. Some realists (Husserl 1970, Lowe 2006), for example, conceive tropes as cases or instances of universals properties. Moreover, another difference between standard tropes and tropes conceived as particular instances of universals is that the latter ones are necessarily instantiated by something, i.e. they necessarily belong to some object. To make a long story short, for some contemporary philosophers tropes are particular attributes of objects (Lowe 2006) (Denkel, 1996), while for others they are individual simple entities (Campbell 1990,

Maurin 2002, Morganti 2009)[28], and for others they are reducible to states of affairs (Daly, 1994). Husserl (1970) thought tropes (that he calls moments) as dependent entities, enjoying various kinds of dependent relations with other tropes and entities of which they are parts, and today a similar view is defended by (Mulligan, et al., 1984), (Simons, 1994), (Denkel, 1997) and (Keinänen, 2011)[29].

To offer a comprehensive overview of the issue, I will recur to two broad classifications of ontologies with tropes: (1) with respect to the ontological structure of concrete objects, we have substrate theory and bundle theory; (2) with respect to the number of fundamental categories admitted, we have many- category ontologies and one-category ontologies. I will cross these models with the category of trope in order to offer a classification of various models of ontologies with tropes and of the concepts of trope defined by them. Then I will go on trying to offer a definition of trope corresponding to what most contemporary philosophers have in mind when they use that term, excluding other entities as, for instance, Husserlian moments and states of affairs (against (Daly, 1994) who argues for an identification of tropes with states of affairs). The resulting definition will be the notion of trope I will refer to henceforth.

Regarding to the first distinction, ontologies can be distinguished on the basis of the *assay* of the ontological structure of objects. To give an assay of an object means (1) to identify the kinds of entities that are constitu-

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[28] Against this hypothesis, see Bacon (1995). He argues that the difference between these two concepts of trope (as properties of objects vs. simple individual particulars) is for the most part verbal.

29 For a discussion of trope-dependence theories, see (Simons, 1994), (Schaffer, 2003b), (Garcia, 2014) and (Keinänen, 2005).

ents of it and (2) to give a definition of the relation between these entities. Accordingly, there have been trope ontologies that assumed a substrate-attribute assay of objects and others that assumed a bundle model. Both these families of ontologies can be reductionist about objects, if they assume that objects are metaphysically secondary to their constituents. For example, a substrate-attribute theory can conceive objects as nothing more than structures constituted by a particular substrate (or bare particular) plus its properties. On the other hand, Bundles theory typically considers objects to be exhausted by their properties, without addition of further constituents such as substrata or bare particulars [30]. Another model of trope ontology that we can distinguish regarding to their ontological assay is trope theory with relations of dependence among tropes (Mulligan, et al., 1984), (Simons, 1994) (Keinänen, 2005). These models introduce relations of dependence in order to explain how tropes combine into complexes.

The second distinction I will make is between one-category and many-categories ontology. Whereas Standard Trope Theory is a "one-category ontology" (Campbell 1990, p. 4), i.e., the only fundamental category is that of trope, there are trope ontologies that admit other categories as fundamental. It is possible to describe ontologies that admit, beside tropes, primitive objects (i.e., non-reducible) (Heil, 2003), substrata (Martin 1980), universals (Husserl, 1900/1901 (2001)) (Lowe, 2006) or primitive relations (Mertz, 1996). When objects as irreducible substances are admitted, tropes will be typically defined as entities that are dependent on

[30] Bundle theory considers, in fact, substrata as suspicious on the basis of empiricist worries: what we could know entities deprived of any property of their own?

them. On the other hand, a relation of instantiation between universals and tropes will be defined within realist ontology.

This work of thesis will present some ontological models that deal with tropes. If it is true, as Maurin argues, that apart from the very thin core assumption «*that there are tropes* - different trope theories need not have very much in common» (Maurin, 2014), I think that a specific model of trope theory has a major importance for our work. This is a theory that is nominalist about universals, that assumes a bundle theory of composition and admits only one fundamental category. I shall refer to this model as Standard Trope Theory. I define this model Standard Trope Theory since it is the most widespread version of trope theory nowadays, and the theory commonly pointed at when one refers to tropes in the literature. There are a couple of reasons motivating that choice. First of all, when trope theory has presented itself as a complete and interesting theory, it has insisted on its nominalist claim. I am inclined to consider theories like Martin (1980) and Heil (2004) as models of trope theory because, even if they are not standard, they are however nominalist. Because of this, Mulligan-Simons-Smith (1984) and Simons (1994), are, in my classification, non-standard versions of trope theory. On the other side, I do not consider Lowe's four category ontology as a model of trope theory for the same reason: Lowe is, in fact, realist about universals.

The second reason is a consideration of ontological economy. Lowe presents a theory with tropes, universals, kinds and substances as irreducible categories (Lowe, 2006), and there are many-category trope ontologies that are genuinely nominalist (Martin, 1980), (Heil, 2003). Instead, standard trope theory aims to have the same explanatory power admitting a

unique ontological category. I agree that ontological economy should not be the only good-making feature of a theory, but we should however consider a theory that attempts to gain the same explanatory results getting fewer primitive categories as significantly deserving our interest. Since the ontological scenario offers a theory that presents itself as able to explain how things are dropping all other categories but tropes, I think it deserve the main consideration. Therefore, Standard Trope Theory is the favoured framework with which the next chapters deal. However, in the remaining part of this chapter I will offer a survey of non-standard models of trope theory proposed by supporters of tropes.

2.2.6   TROPE ONTOLOGY WITH PRIMITIVE OBJECTS

I have stated above that particular properties have a long history in ontology, as they were already present in Aristotle's *Categories*[31]. In Aristotelian ontology, particular properties were conceived both as instances of universals and as non-substantial particular attributes dependent on objects[32]. Leaving universals apart – and consequently considering only minimalist ontologies – ontologists that nowadays recover the interest in

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[31] On individual accidents in Aristotle, see the commentary by Ackrill on (Ackrill, 1963). Other sources are (Anscombe, 1964), (Anscombe & Geach, 1961) and (Sellars, 1957) that all defend the traditional reading of Aristotelian non-substantial particulars as tropes. (Owen, 1965) instead argues against this traditional reading. See (Frede, 1987) and (Allen, 1969) for more discussion.

[32] Although the matter is disputed, this seems to be the argument of the famous passage of Categories 2a34-2b6, according to the interpretation given by Ackrill in his translation and commentary to Aristotle's *Categories* and *De Interpretatione: see* (Ackrill, 1963, pp. 4, 74ff).

the Aristotelian model[33] take up again the intuition that properties are dependent on objects. In this account, properties are considered as "ways objects are", to borrow an expression from Levinson[34]. Armstrong – that was a realist yet interested in trope ontology – prefers this conception of trope for the reason that «it gets us away from the idea that properties are like things. The underlying idea is that to consider properties as substances is a category-mistake[35]. Properties exist, they are entities, but they are not things. Rather they are *ways* that things are» (Armstrong, 1997, p. 25)[36]. So, it is contested that properties are "junior substances", to use Ayer's phrase for sense-data readopted by Campbell. This theory therefore is in direct opposition to trope theories that assume bundle composition. (Denkel, 1996, p. 11), observes that, against the "general attitude" of contemporary bundle theorists, in Aristotelian tradition and Scholastics, *inherence* to objects was essential for properties[37]. It is for that reason that I think we can correctly define trope ontology with primitive objects a neo-aristotelian model[38].

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[33] Aristotelian ontology has enjoyed a new popularity in recent years. For an overview see the essays collected in (Tahko, 2013).

[34] Today, talk of "ways objects are" was revived by Levinson in a couple of articles (1978, 1980), (Martin, 1980) and Seargent (1985) in his book on Stout's Particularism.

[35] This idea is shared by some contemporary philosophers, for example Seargent (1985), Armstrong (1997), Lowe (2006), Mertz (2004).

[36] For Martin's view on particular properties, see (Martin, 1980), (Martin, 1993) and (Martin, 2008). See also (Martin & Heil, 1999). Armstrong (1989:136 and 1997:25) argues that «we do better, with Locke and C. B. Martin, to hold the trope view in a substance–attribute form».

[37] This conception of properties as is common to most conceptions of particularized properties prior to the Twentieth century. An important exception is Hume, who preferred a bundle theory of composition without no primitive substances.

[38] In this context, Heil recovers the Scholastic term *mode* to name tropes.

Since tropes cannot exist without objects, such trope theorists have a non-reductionist approach to objects, refusing to adopt Bundle ontology. Objects are as fundamental as tropes. A genuine example of trope theory with primitive objects is Heil (2003). It is argued that our world is a world of objects (Heil 2003, p. 171), where "objects" has to be intended as a philosophical term of art, and not as a term expressly picking out ordinary objects of everyday life[39]. Heil prefers this view of tropes not so much for a predilection for everyday objects, rather because he considers absurd to think tropes as separate from objects: properties as separated would exist only in thought as objects of partial consideration. Whether or not objects are intended by Heil as the ordinary medium-size objects of our everyday experience, objects are the primary focus of our perception: we do not perceive properties separated by the objects that have them. In this model, both concrete objects and tropes as recognized as fundamental categories, while universals are reduced to classes of resembling tropes. The insight of this model is that properties are necessarily properties of something: properties conceived as ways are dependent entities, items the identity of which depends on the objects to which they belong (Molnar 2003 calls this characteristic of properties "ownership"). Against bundle theorists' intuitions, objects are not made up of properties: in fact, properties are not building blocks at all or mereological parts. Martin and Lowe – and we can add Simons too[40] – agree in arguing

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[39] Heil argues that what fundamental objects are is not a question that can be answered from the armchair (Heil, 2003, p. 177).

[40] (Simons, 1994, p. 563) discusses the differences between properties and parts in a mereological framework.

that properties are not to be thought of as parts[41], and that objects are not clusters that have properties as their parts.

Apart from considerations on the specific nature of properties, what are the specific advantages of this approach to trope ontology? Since theories that admit independent tropes seem to meet difficulties, according to many critics, to provide clear identity conditions for tropes, trope-dependence seems to offer instead a simple account of identity conditions for tropes. According to these critics, if criteria of identity for tropes are not determined with reference to the objects that have them, trope theory has to assume either spatio-temporal criteria of identity, or primitive criteria, being, in both cases, highly problematic. But, as I will show in chapter five, section 5.4.5 the problems for trope theories with independent tropes are not fatal[42]. Since this theory does not display clear advantages with respect to Standard Trope Theory, I still regard STT as

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[41] This idea seems to be already present in Aristotle's *Metaphysics*: «Further, substance means that which is not predicable of a subject, but the universal is predicable of some subject always. But perhaps the universal, while it cannot be substance in the way in which the essence is so, can be present in this; e.g. 'animal' can be present in 'man' and 'horse'. Then clearly it is a formula of the essence. And it makes no difference even if it is not a formula of everything that is in the substance; for none the less the universal will be the substance of something, as 'man' is the substance of the individual man in whom it is present, so that the same result will follow once more; for the universal, e.g. 'animal', will be the substance of that in which it is present as something peculiar to it. And further it is impossible and absurd that the 'this', i.e. the substance, if it consists of parts, should not consist of substances nor of what is a 'this', but of quality; for that which is not substance, i.e. the quality, will then be prior to substance and to the 'this'. Which is impossible; for neither in formula nor in time nor in coming to be can the modifications be prior to the substance; for then they will also be separable from it». (Met, 1028b 9-10), translation by W. D. Ross. According to this and other passage, genuine parts of a substance are not properties, but substances themselves. Properties are not present in substances as their parts.
[42] See for discussion (Lowe, 2005).

the most interesting among trope theories, for the reason that it relies on the idea of property as the sole category.

2.2.7 BUNDLE THEORIES WITH TROPES

In recent times Trope theories have generally assumed a bundle theory of composition[43]. Here Stout, Williams and Campbell constitute a line of succession, as Armstrong observes (Armstrong, 1989, p. 114). According to this model, tropes are the building blocks of all reality: at the ontologically most fundamental level, there are only tropes. Bundle trope theory is a nominalist one-category ontology that admits that properties not only exist but they are also the ontologically basic entities from which all other complex entities are derived. I think that this is the most interesting model of trope ontology because it admits only one category (Campbell 1990). In fact, universals and concrete individuals are mere constructions out of tropes. The underlying idea is that tropes are completely self-standing entities capable of independent existence, each of whom can be considered as isolated from its relations to other things: essential connections between properties and other entities are therefore excluded. This seems to develop a Humean intuition: "Every quality being a distinct thing from one another, may be conceived to exist apart, and may exist apart, not only from every other quality, but from that unintelligible chimera of a substance" (Hume, 2007, p. 147).

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[43] Among others, Maurin (2002 and 2010), Cameron (2008), Ehring (2011), (Wayne, 2007), Morganti (2009).

I would like to clarify a point here. I have said that tropes are, in this model, independent from concrete particulars. Supporters of this model have emphasized this aspect, stating that tropes enjoy the kind of existential independence that was traditionally attributed to substances. Substances are traditionally conceived as entities which do not depend on anything else for their existence. On the other hand, properties are often conceived to be dependent, for their existence, on the objects which possess them.

With an expression borrowed from Ayer, Campbell (1981:479) calls tropes "junior substances": like substances in Scholastic ontology, tropes are entities logically capable of independent existence but, differently from concrete objects, they are minimal size. A trope is able to exist as isolated either from concrete objects or from all other tropes[44]. I think that this feature represents the main original aspect of Campbell's version of this theory. One would expect to find in Campbell a clear definition of the notion of existential independence introduced in his book. It should also be taken clearly into account how tropes differ in their conditions of existence from concrete objects, as well as how different entities belonging to these categories are related ontologically to each other. Neverthe-

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[44] This tenet implies that there are not necessary connections between tropes. Campbell goes further denying the existence itself of relational tropes, for the reason that relational tropes are dependent on their relata. Campbell discusses at length his reductive account of relations and, contra Russell, defends foundationism (the view according to which relations supervene on non-relational foundational facts) in Campbell 1990, chap. 5. See for a critical discussion of this reductionist account of relation, (Mertz, 1996). Williams instead seems to admit the possibility of relational tropes. For a discussion, see (Trettin, 2004).

less, Campbell's work lacks a clear-cut definition of it[45]. In order to clarify it, I should analyze therefore some passages of Campbell where a notion of trope independence seems stated in terms of modality and conceivability.

According to Williams and Campbell, tropes are properties that do not depend necessarily on objects for their existence. "Not necessarily" here means that the question is not if, as a matter of fact, tropes exist independently from objects which possess them, but if it can possibly be true that tropes exist in such way (Campbell 1990, p. 21, 69-70), (Williams, 1953b, p. 178)). If there is a true possibility that a trope could exist as detached from the object of which it is a proper part, then the tropes are characterized by existential independence. To use the language of possible worlds, if we can imagine a possible state of the world in which a trope exists independently, even if this condition is not satisfied by our world, then this trope would enjoy existential independence. But it is in fact perfectly conceivable – so the argument runs – a world where all tropes exist as separate entities. The idea is that the existence of the object implies the existence of its tropes, but not the opposite. Since an object is nothing but the sums of its tropes, its conditions of existence are dependent on them, but the opposite is false: the existence of a trope does not imply the existence of a thing because it is possible to imagine the trope existing without it.

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[45] Campbell does not offer a formal definition of existential independence, as instead we can found in (Lowe, 1998). For accounts of dependence in terms of modality and existence see Johansson (1989) chap. 9, (Simons, 1987) chap. 8, and (Thomasson, 1999) chap. 2. See (Correia, 2005) for general discussion of different definitions of the notion of ontological dependence.

Lowe has raised a famous objection against trope existential independence. The objection consists in noting that we can identify a trope only by means of reference to the thing that has it. How could we identify and re-identify through its changes a trope if not as the trope of something? So, Lowe argues, the identity-conditions of tropes are dependent of certain other entities, then tropes cannot enjoy existential independence (Lowe 1998:156). Is Lowe's objection really harmful to trope theory? A defender of this version of tropes theory could be willing to admit that tropes, if considered apart from substance cannot to be easily identified without reference to objects. This is, indeed, an epistemological issue, because tropes have nevertheless their identity conditions on their own (Maurin, 2002, p. 19). It is an ontological fact that each trope is a distinct particular entity, and this is a fact different from the epistemological concern regarding the conditions of its *identification*. So some theorists would deny that there is a genuine ontological difficulty here. To identify and to count tropes in a certain location at a given time and to re-identify them at some later time would be questions that must be answered on an empirical basis and with pragmatic criteria.

I agree with Campbell and Maurin that there is not a difficulty here for trope theory with independent tropes. Tropes have their identity of their own, and no other entities are needed to ground their identity as distinct tropes. Morganti accepts Lowe's objection limited to the part which fulfils the requirement of clearly epistemological identification conditions: he states that fundamental tropes (that correspond to fundamental physical properties) are the only tropes that escape this difficulty (Morganti, 2009). In this sense, Lowe's objections turn out to be relevant with re-

spect to trope theory's recent involvement in physics: in fact, one of the reason for this interest is the idea to found tropes that, differently from manifest and common-sense tropes, have clear-cut conditions of identity.

2.2.8 TWO MODELS OF TROPE IN OPPOSITION

Martin (1980) raises the question whether tropes need a substrata, because of their attributive nature. In fact, properties are properties *of* something. Martin's analysis starts from Locke's discussion of substrata in the *Essay*[46], where possible reasons to admit these obscure and perhaps meaningless entities are examined. With the word "substratum" Locke means something that supports accidents without being supported by nothing. He at first stresses the obscurity of this notion, famously calling the substratum a "we know not what", but eventually he offers some arguments for the admission of substrata. The reasons Locke presents in support of substrata are (1) the need to explain persistence of objects through change, (2) the unification of compresent ideas and (3) the sustaining of properties. According to Martin's interpretation, the latter reason is the most important. In his mind, the idea itself of a property implies dependence from something. So a crucial question about the concept of property itself is raised. The concept of property would be a relative concept, as a property is essentially a property of something else, for example of a substrate, of a substance, of an object, of another property,

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[46] The reference is Locke, *An Essay Concerning Human Understanding*, Book II, chapter XXIII: Ideas of Substances.

of an event, etc. If properties need a bearer, something like a substratum, one may conclude that particular properties, or tropes, cannot benefit from the sort of existential independence that Campbell accords to them.

On this point, Lowe follows Martin saying that «it makes no sense to suppose that an object – something that has properties such as redness and roundness – can just be constituted by those very properties, being nothing over and above the sum of its properties. To suppose this is to make a "category mistake": it is to confuse an object's properties with its parts: for the parts of an object, if it has any, are themselves objects, with properties of their own» (Lowe, 2006, p. 14).

Levinson, the first who speaks explicitly of properties as ways (see (Levinson, 1978)) criticizes the notion of property as an independent substance and warns ontologists against "thinghify" properties, namely to regard them as if they were a strange kind of object (Levinson, 2006). But a supporter of Bundle Theory is not impressed by such objections. He can agree with Martin and Lowe when we remain at the descriptive level of ordinary language: we usually talk about substances, persons, concrete material objects we use every day. But, on the level of ontological serious analysis, objects and substances are nothing but bundles of properties[47]. The syntax of our language, by means of its elementary structure (subject, copula and attributes), can convey the idea that the object is the paradig-

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[47] For a critical discussion of the *pro et contra* of assuming basic substances in ontology, and for a defence of a reductionist account of basic substances, see (Simons, 1998).

matic subject of predication and a bearer of properties[48.] But it is possible to think that a likely substrate-properties construction does not correspond, on the ontological level, to such linguistic subject-predicate structure. Bundle theory therefore assumes reductionism about objects and substances. It is obvious that its concept of object is very distant from the common-sense idea we have, but this it is not a problem for the theory.

We can consider this topic over and we can move on to another question. In the next chapters I will examine only models of Bundle of tropes theories because I think that the conception of tropes as little substances that this model affords is metaphysically the most interesting. I try to justify this claim with the aid of a quote from an article of Chrudzimski: «Propositional tropes seem unable to full the crucial metaphysical purpose for which tropes were introduced. If we should like to develop a serious ontology of tropes, we shall have to operate with the unstructured variety.» (Chrudzimski, 2002, p. 147). With "propositional tropes" Chrudzimski means tropes conceived as aspects of individual things or properties that are essentially properties of something: in such sense each single trope is like a state of affair, namely a complex entity such as, e.g. "the being red of x". Propositional tropes are particular properties that imply an essential reference to a bearer. These tropes, like Martin and Lowe's tropes, are not simple (Chrudzimski says "unstructured") because the reference to the bearer brings in the tropes another aspect in addition to the qualita-

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[48] See for a critical discussion of this topic (Loux, 1978), (Wolterstorff, 1970a) and (Simons, 1998). See (van Inwagen, 1990) for eliminativism with respect to ordinary material objects.

tive aspect (a qualitative aspect is, e.g., the being red of the trope). If a trope has an essential connection to a bearer, this relatedness is part of its nature itself. The trope is not simply "this particular red" but "the particular red of this rose", where the tropes cannot exist if not as the red trope of this rose at this time and at this place. That trope's nature implies a second aspect (the reference to a bearer or to a spatiotemporal location) which introduces a serious problem for trope theory.

A rationale of trope theory is in fact to substitute universals by classes of similar tropes. The class of all and only the tropes with a certain quality in common are, in trope theory, an ersatz for the corresponding universal in realist theories. The necessary condition under which tropes can form a class that supplies as an ersatz for universals is their exact similarity. But consider what will be the case if tropes have an intrinsic space-time location. For the sake of example, one can take exactly similar red tropes: exactly similar red tropes result to be complex entities, since each trope is not only red, but also essentially located at a specific space-time. So, the nature of such red tropes present many aspects of similarity: the red of this rose is not exactly similar to the red of the book, because they are located in different positions. The red trope of the rose at place s1 and the red trope of the book at place s2 result therefore not to be exactly similar. As a consequence, red tropes cannot group in a class of exact resemblance, hindering trope theory the possibility to offer a semantic device for treat alleged reference to general terms. To be metaphysically useful as substitute of universals a trope should be similar in a unique aspect to other tropes. So, tropes have to be defined without do an essential reference to the spatiotemporal position of its bearer. A red trope should not

have other essential aspects besides redness: tropes should be unstructured, simple tropes.

2.3 ONTOLOGICAL ECONOMY

A second reason to prefer Standard Trope Theory to other tropist ontologies regards ontological economy. According to the principle of ontological economy, we ought to prefer a theory which can explain more while having the less luxuriant ontology. However, there is a sense of ontological economy according to which trope theory is a very expensive theory. If we count the number of entities instead of the kinds of entities in this theory, it is clear that trope theory admits a huge number of entities: if in realist theory we count, for example, only a universal property Red common to all individuals similar in that respect, trope theory has to count an individual red property for each red object or red shade. So we have to distinguish two kinds of ontological economy: quantitative and ideological[49]. Quantitative economy regards the number of entities present in the ontological dominion of the theory, whereas ideological economy concerns the number of undefined (or primitive) concepts assumed by the theory. According to this second sense of ontological economy, Standard Trope Theory is more economical than the other ontological theories analyzed previously in this chapter. Standard Trope Theory admits in fact only two fundamental concepts, namely the category of trope and a primitive notion of resemblance. All other entities (primitive con-

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[49] See for this distinction (Oliver, 1996, p. 7), (Bacon, 1995, p. 87) and (Lewis, 1973, p. 87).

crete individuals, substrata, primitive universals and primitive classes) are dismissed or reduced to basic tropes.

Moreover, (Campbell, 1976) emphasizes trope theory's ontological economy arguing that it requires no primitive relations of inherence, which are instead necessary for Substance-attribute theories. Arguments against inherence are well known in philosophical tradition. Some critics refurbish the argument known as the "Third Man Argument" from Plato's Parmenides, according to which inherence involves an infinite regress[50]; others deny that inherence is an ordinary relation, and try to define it as a – in my opinion – rather obscure notion as a "non-relational tie". This criticism affects both Aristotelian ontology and the scientific realist Armstrong's ontology. Armstrong (1997) is unable to explain better than with an ambiguous metaphor the nature of the tie that binds particulars and universals in a state of affairs. Standard Trope theory instead, assuming a Bundle theory of composition, seems free from the criticism of admitting such obscure entities as relations of inherence or non-relational ties à la Bergmann[51].

Another point regarding ideological ontological economy is the status that should be given to the relation of compresence (that makes up bundles) and to the relation of exact resemblance (that groups tropes in order to origin ersatz for universals). The most common solution is to consider

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[50] See for example Ryle, "Plato's Parmenides", Mind, 1939, p.138 and (Strawson, 1959, p. 167). Campbell argues against inherence and other non-relational ties among properties in (Campbell, 1990, pp. 14-15). See also (Vallicella, 2002) for a criticism of this kind of relations.

[51] The classical reference for an endorsement of non-relational tie in order to explain instantiation is (Bergmann, 1967). Bergmann call it a "nexus".

the relation of exact similarity as internal or supervenient (Williams 1963, Campbell 1990, Armstrong 1989, Maurin 2002), that it means that there is not addition of being on the resemblant tropes. Resemblance among tropes is primitive, and classes of exact resembling tropes supervene (they are an "ontological free-lunch in Armstrong's words) on the distinct resembling tropes[52]. Things are more disputed regarding the relation of compresence, but the most shared solution is to consider it as an internal relation: it simply exists given the existence of their relata[53].

2.4 REFINING TROPE DEFINITION

Stout and Williams were the first to sketch an ontology based on the notion of trope. Both philosophers defined tropes as "abstract particulars". Campbell, which offered a full-fledged exposition of an ontological system based on the category of trope, revived this early denomination of tropes naming his seminal article "The metaphysics of abstract particulars" (1981) and his 1990 book "Abstract particulars". Therefore, I chose the definition of "abstract particular" as the starting point from which my analysis of concept of trope will go forward. I think in fact that the analysis of such definition can offer some insight on what tropes are. Still, as I try to show, for Williams and Campbell "abstract" means something

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[52] For an opposite view on the priority of resembling tropes over classes of resemblance, see Ehring (2011). Ehring defends class primitivism in the framework of a bundle trope ontology.

[53] In this dissertation I will not discuss the problems concerning compresence and the issue of the internality of relations in trope theory. For an exhaustive overview I refer to (Maurin, 2010b) and Cameron (2008).

slightly different but, nonetheless, I think that to start from a clarification of the meaning of the term "abstract" will be useful for the sake of providing a definition of trope. To this traditional characterization of tropes as abstract and particular entities, I will add another character, simplicity, which is stressed by some contemporary supporter of tropes[54].

2.4.1 ABSTRACTNESS

Tropes have been defined as "abstract entities". But this definition risks creating misunderstanding. In fact, there are many entangled meanings that have been attributed to the term "abstract" in philosophical language. According to different authors, this notion has been understood as meaning atemporal, immaterial, non-real or not subject to empirical laws, entirely outside the temporal domain or not causally efficient. As Lewis points out, it seems that this notion of abstractness results to be very ambiguous, and lacking a common ground of agreement among contemporary philosophers (Lewis, 1986, pp. 82-86). If this is true, there should be a privileged way according to which trope philosophers have meant this notion, a sense that is historically founded, even if it is not so frequent in contemporary philosophical discussion. In this section, I try to clarify the meaning according to which tropes are "abstract", comparing the definitions offered by Stout, Williams and Campbell.

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[54] I follow, as a guide for dividing this section, the characterization of the concept of trope presented by Maurin (2002), chap. 2.

I begin from Stout's definition of abstract particular presented in his articles of the 1920s[55]. Stout strengthens the distinction between the couples of terms abstract/concrete and universal\particular. According to his view, the two conceptual couples are to be kept distinct. Abstract is not synonym for universal, nor concrete of particular. A consequence of this distinction is the possibility of defining something that is abstract but non universal. Whereas the term "concrete" picks out entities that are complete, because they are seen in their relations to others entities, and present full determinations, "abstract" is characterizes entities that cannot exist as separated from a comprehensive whole. Particular properties are abstract entities because they are partial aspects of more comprehensive wholes[56].

Another aspect of Stout's definition of abstract which is interesting for our discussion is that it does not conflate abstractness non-spatiotemporality. Stoutian abstract particulars exist in the spatiotemporal world as parts of objects and concrete wholes. Despite the historical importance of this distinction, Stout's characterization of abstract as dependent is quite distant from the definition preferred by contemporary trope theorists when they describe tropes as abstract entities. They in fact prefer to define tropes without making reference to a whole that contains them: whereas Stoutian abstract particulars were, as fragments, essentially

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[55] (Stout, 1921), (Stout, 1923) and (Stout, 1936).

[56] There is agreement among scholars that this definition originated in Stout's early speculation, when he was concerned with psychological and phenomenological observations. Stout observed that attributes of things can be objects of intentional acts that consider them separately from objects or wholes that possess them, even if they, in reality, do not exist as ontologically independent entities. I refer to (van der Schaar, 2013) for more information.

dependent, Williams and Campbell's tropes are fully independent entities. Therefore, when Williams (1953) recurs to the term "abstract" in his definition of what tropes are, he is using a slightly different meaning of the term form that of Stout.

Williams specifies at first that, when he defines tropes as abstract, he does not mean something existing outside the temporal domain – as in the main part of analytic contemporary tradition – or a denizen of a Fregean Third Realm. Some of the meanings of the term abstract determined by philosophical tradition are not useful to define tropes:

> The abstract is equated with the abstruse, the ethereal, the mental, the rational, the incorporeal, the ideally perfect, the non-temporal, the primordial or ultimate, the purely theoretical, the precariously speculative and visionary; or again with the empty the deficient, the non-actual or merely potential, the downright imaginary, and the unreal (Williams, 1953, p. 121).

Williams is clear in defining what he does not mean with the term abstract when applied to tropes, however he does not provide a positive definition of what characters the attribution of abstractedness adds to tropes. His definition of abstract in reference to tropes as "partial, incomplete or fragmentary" is suspect of elusiveness. In fact, everything that is less that the total whole is in some respect partial of fragmentary, so in what manner this can offer a useful definition of tropes?[57] It is clear

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[57] Maurin raises a similar criticism to Williams's definition of abstractness: «the trouble with this specification is that it now seems that we have gained nothing by adding that the trope is abstract. All we can say about what it means for a trope to be abstract is that it is to be "like the colour of the lollipop". But it was to characterise such things as the colour of the lollipop that the term was originally introduced. It was the "thisness" of the trope (in contrast with the "grossness" of the concrete stick-part of the lollipop) that our use of the term "abstract"

that to define tropes as abstract is not sufficient in order to identify and to distinguish them from other parts or components of objects.

Campbell offers instead a psychological characterization of "abstract" when referred to tropes:

> The colour of this pea, the temperature of that wire, the solidity of this bell, are abstract in this sense only: that they (ordinarily) occur in conjunction with many other instances of qualities (all the other features of the pea, the piece of wire or the bell), and that, therefore, they can be brought before the mind only by a process of selection, of systematic setting aside, of these other qualities of which we are aware. Such an act of selective ignoring is an act of abstraction. Its result is that we have before the mind an item which (as a matter of fact, in general) occurs in company with many others. (Campbell 1990, p. 2)

Such concept had been already characterized in similar terms by Wolterstorff, who focused on cases of abstractive attention in which we attend to particular properties, not to universal properties (Wolterstorff, 1970a, p. 140). He argued that in perception, we usually take note of particular aspects of thing, as when one says for example that one has take note of the colour of a certain sculpture. That such selected, or abstract, aspects of things are what we call tropes. This psychological characterization is susceptible of a simple objection: we should not infer from the psychological fact that we know tropes by means of processes of selection and abstraction that tropes are fragmentary and partial entities, from

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was originally meant to explicate. Given the way Williams chooses to spell out the notion, the characterization of the trope as abstract is more or less empty and uninformative"» (Maurin (2002, p. 22).

an ontological viewpoint. Maurin (2002) raises a similar criticism, pointing out that to state that a trope is the object of an act of selective attention means nothing but to say that the trope is a qualitative aspect of something. She therefore prefers another definition of "abstract", referring to the "inherent qualitativeness" of tropes (Maurin, 2002, p. 21). Maurin's definition specifies furthermore that a trope is a maximally specific qualitative aspect of an object, excluding therefore that tropes could be complex entities with a plurality of qualitative aspects. This is a insightful addition to Williams's previous definition of trope: in fact Williams, simply referring to a progressive refinement of qualitative aspects which concludes with the reaching of simple tropes, it did not exclude the existence of complex tropes, i.e. tropes that present many qualitative aspects. In fact, Maurin's specification is important: contemporary trope theorists insist on the requirement that trope have only a qualitative aspect, namely that they are qualitatively simple.

2.4.2 PARTICULARITY

The second essential feature of tropes is particularity. Tropes, in fact, are particular by means of their own nature, and not because there are made particular by substrata or objects that bear them. This represents the main dissimilarity with instances of universals. Tropes are, by stipulation, particular entities distinct from all other tokens of the same type. In this sense, realist objections trying to demonstrate that tokens are in reality instances of universals simply beg the question. I think that this is a question that hardly can be settled, given the patent clash of intuitions. Here a

true ontological disagreement exists, where contenders take themselves to be expressing the same notion (that of property) in irreducible frameworks. I think that this is not a fruitful way to make sense of this ontological disagreement. Therefore, my suggestion is that a fruitful route to exploring this issue is to let to each contender his own interpretation of the notion of property. Instead, ontological debate can be productive in the confrontation of the explanatory resources of the rival theory and with a balance of their respective disadvantages and benefits. Then, let be assumed that tropes are particular properties.

A characterization of tropes' primitive particularity is given by Williams (1986) speaking about Principle of the Identity of Indiscernible. In fact, tropes are entities that do not conform to the Principle of the Identity of Indiscernible: tropes are entities which may be exactly similar and yet not only distinct but separate. Trope ontology allows that two distinct things can exactly resemble each other[58].

Another definition of particularity is in terms of spatiotemporal position. This is the view of (Campbell, 1981) who thinks that particularity is determined by position in space-time. How can two exactly similar items be two and not one? By being – he says – at different places at the same time or by the one ceasing to exist, at a time before the other comes to exist. The difference between universals and tropes lies in the fact that universals can exist in many places at the same time, whereas tropes have

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[58] As model of bundle ontology, trope theory does not fall in this point under the criticism directed toward bundle of universal ontology that seems to require the necessity of the Identity of Indiscernibles. For a discussion of the necessary commitment of bundle theory with universals to the Principle of Identity of Indiscernibles see (Allaire, 1967), (O'Leary-Hawthorne, 1995) and (Rodriguez-Pereyra, 2004). See also Armstrong (1989).

a unique defined spatiotemporal position. It has to be noted that the multiple presence of universals in space-time has been a strong point of traditional nominalist criticisms to realism. However, there is a problem with this spatiotemporal criterion for particularity. If we read Campbell's formulation, we note that this criterion is introduced in order to distinguish tropes of the same kind: «tropes are nevertheless distinguished from all others of the same kind in the same way, with each trope of a give kind occupying a unique set of intervals on the dimensions». Campbell means that exact similar tropes (in other words, tropes of the same kind) are distinguished one from the other because they occupy a different spatiotemporal position. On the contrary, they would be undistinguishable. This criterion of individuation is specified only for tropes of the same kind, whereas tropes of different kinds are primitively individuated by being cases of different qualities. Tropes of different qualities can occupy the same spatiotemporal position: for example, in the same point of a wooden surface, a colour trope, a durability trope and an texture trope can coexist. The suspect is that spatiotemporal criterion for particularity is introduced ad hoc in order to solve two problems with exactly similar tropes: to distinguish them and to avoid the redundant presence of many tropes of the same kind at the same place that, as it was first pointed out by Armstrong (1978)[59], seems to be causally inefficacious.

While I postpone the discussion of the difficulty pointed out by Armstrong to a specific section of chapter 4, I observe for the moment that

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[59] See also Simons (1994) and Schaffer (2001).

Campbell identifies criteria for particularity with criteria for identification. Exactly similar tropes can be individual particular entities even if we cannot empirically distinguish them. So far, Campbell himself recognizes such unwelcome consequences of spatiotemporal criterion for particularity and eventually rejected this supposition to hold that being a particular is a basic and non further analyzable fact about every trope, that does not depend on unique dimensional location. Since I will devote a section in Chapter Four specifically to this issue, I would therefore not dwell too much to comment on this problem here.

Against Campbell's change of mind, Schaffer (2011) defends particularity as spatiotemporal location because of its closeness to naturalistic principles, by excluding a priori non spatiotemporal entities from ontology. Yet Campbell himself considered this strong naturalistic principle untenable (Campbell, 1990). He argued that, until non-spatiotemporal entities like minds, ideas, and spirits are dismissed from ontology for independent reasons, an ontological theory as such cannot exclude them. We should not determine metaphysical possibility on the basis of a conceptual definition of trope (Campbell 1990, p. 54). However, it seems to me that this concession to spiritual being is quite in contradiction with the basic tenets of Campbell's metaphysics. On the other hand, I admit some inclination to agree with him that the exclusion from an ontological theory of non-spatiotemporal entities have to be pursued only in specific disciplines and not derived from the definition of trope. Maurin (2002) also prefers to take particularity as a primitive: tropes have their proper individuality independently from spatiotemporal location.

In order to fix the problem that I pointed out above for the particularity of exactly similar tropes, Maurin discusses an argument from Stout (1923 and 1952). To defend primitive particularity, Stout (1923, p. 122) invited to imagine two faces that are «precisely similar and similarly situated». Suppose that the two faces are superimposed one onto another, so they occupy the same spatiotemporal location (you can imagine to put the faces in a symmetrical universe similar to the one of Black's famous example, or to juxtapose them with a graphics editor). Nonetheless, you can still apprehend the two layered faces as two distinct objects. This would prove that particularity is prior and independent to spatiotemporal differentiation.

2.4.3   SIMPLICITY

To a first approximation, tropes are like parts of macroscopic objects. Tropes are more subtle, fine-grained than the concrete gross parts. Pursuing the process of abstraction suggested by Williams in order to identify tropes, we will arrive to identify aspects of things ever finer-grained. But not every finer aspect identified in this way is a trope. By stipulation, tropes are the minimal abstract parts in which objects can be divided, the more subtle aspects that can be individuated. It is useful at this extent to introduce a further specification in trope definition. What distinguishes tropes from concrete parts is their simplicity: tropes are the *simplest* parts of a thing. According to this specification, a trope has only an aspect of quality. For instance, a full orange is as concrete as the peel of the same orange, since it has more than one quality: it has colour, thickness, tex-

ture, bitterness and many other properties. But thickness, texture and colour, considered as they are, are no longer concrete parts, but tropes. I have to point out that my example is not exact: in trope theory, the colour is not actually a trope, but a determinable property, while that label of trope can apply, for example, to *orange peel* (i.e. the actual colour of the outer skin of an orange). If we consider a property susceptible of the transitive relation of a determinable-determinate, the basic tropes will be only the properties that do not allow for further determinations.

So tropes are the parts of things that are most defined and that show only a qualitative aspect. Concrete individuals have many aspects and, accordingly, many relations of similarity to other objects. A blue trope, instead, has no more aspects than its Blueness. To insist on simplicity, we should say more correctly that a blue trope does not possess Blueness, it is just a blue-aspect. Tropes are simple not because each trope possesses only one property: in fact, tropes do not possess properties; they are singular properties. This specification permits to me to introduce the other sense according to which tropes are simple. This sense, which does not overlap with the meanings previously given to abstractness, is the more interesting notion of Simplicity for a clear-cut definition of the standard notion of trope. Some trope supporters underrate this characterization[60], but I agree with Maurin (2002) who vindicates the importance of the hypothesis of simplicity for an interesting definition of trope. She thinks that, only if tropes are defined as simple entities, we will be able to distinguish

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[60] See for an interesting objection to simple tropes, Gozzano's contribution in (Gozzano & Orilia, 2008). Gozzano argues that if tropes are simple they cannot serve as a token identity version of non-reductive physicalism.

them without ambiguity from other entities as Armstrongian states of affairs or instances of universals. According to the definition proposed by Maurin, the sense according to which the trope is not complex or simple is that it does not contain (or it is not constituted of) more than one kind of entity (Maurin, 2002, p. 15). Maurin argues against Daly (1994) who expresses the idea that tropes are superfluous because universals plus particulars can play the same explanatory role. The criticism is based on the idea that two rival interpretation of tropes are available: tropes as particularized properties, basic entities and tropes as complex entities which can be understood in terms of other ontological categories, for instance a substance having a universal. Daly points out that a realist could contend that these cases of properties are nothing but instantiations of universals. Daly goes on in stating that Williams and Campbell fail to show that only tropes conceived as basic entities are the only entities accountable for explaining phenomena as objective resemblance. The realist can obtain the same explanatory results with complex tropes conceived as instances of universals plus substrata or Armstrongian state of affairs (that are, according to Armstrong, particular entities). It seems that we have no reason for preferring primitive tropes on other view of tropes, or even to postulate the existence of entities as tropes (universals plus substrata or states of affairs in fact can have the same explanatory function, so tropes are redundant). Why add to ontology a new category which seems not to play any new role?

In response to this criticism Maurin argues that tropes are metaphysically interesting only if defined as simple, unstructured entities. In this way, tropes do not overlap with states of affairs. Her point is that, by requiring

simplicity, we can describe a new and interesting theory, with some advantage on theories of states of affairs and traditional moderate nominalism. Tropes are supposed not to have an intrinsic ontological structure. and it is just this lack of more basic inner components that makes them different from other particular entities already present in ontology, for instance states of affairs or substrata instantiating universals. Even if eventually a philosopher can demonstrate that tropes and states of affairs are equivalent in explanatory power, they are two irreducibly different categories of entities.

STOUT AND THE ORIGINS OF TROPE ONTOLOGY

3.1 SYNOPSIS OF THE CHAPTER

As written by David Armstrong[61], «Stout is in no way a forgotten man among philosophers»[62]. Armstrong himself has had a great role for the acknowledgement of Stout's influence for the success of trope category in Australian metaphysics. Armstrong (1978), in his book, which more than any other has contributed to revive the debate on universals in the last decades, calls tropes "Stoutian particulars", recognizing the important role of Stout in defining this category. Campbell (1981, p. 477) wrote that: «In modern time, it was G.F. Stout who first explicitly made the

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[61] See the Foreword to (Seargent, 1985).

[62] In 1939 G. F. Stout (1860-1944) moved to Australia where his son Alan taught moral philosophy at Sydney University. Here he became acquainted with John Anderson, who deeply discussed Stout's abstract particulars in his lectures. See the biographical note in (Passmore, 1944) and (Smart, 2010) for the historical reconstruction of the academic relationship between the Stouts and Anderson.

proposal that properties and relations are as particular as the substance that they qualify». The title of Campbell's seminal book on tropes is *Abstract Particulars*, as this was Stout's name for tropes.

The twentieth century debate about tropes – or abstract particulars, as Stout calls them – began in the Twenties, when Stout published a couple of articles that led to a great debate among scholars [63]. The topic of Stout's article "The nature of universals and propositions" (1921) is whether «a character characterizing a concrete thing or individual is as particular as the thing or individual which it characterizes». George E. Moore rejoined to Stout in 1922. The record of the Moore-Stout quarrel is included in the Third Supplementary volume of the *Proceedings of the Aristotelian Society* and it is particularly interesting for our purposes [64]. Since Stout's contribution to philosophy was fairly relevant, various monographs were dedicated to him, alongside other studies more specifically dedicated to the analysis of his work in analytic psychology [65]. My interest in this chapter will be instead focused on the influence of Stout on subsequent trope theories.

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[63] The first article on abstract particulars is Stout (1921). "The Nature of Universals and Propositions." It appeared in the Proceedings of the British Academy, Vol. 10. In 1921. It is reprinted in Stout 1930, pp. 384-403, to which I refer for quotations. The second is "Are the Characteristics of Particular Things Universal or Particular?", published in the *Proceedings of the Aristotelian Society*, Suppl. Vol. 3, pp. 114-122, and it is the report of a seminar on abstract particulars in which also G. E. Moore and Dawes Hicks participated. A restatement of his thesis is in "Universals Again" (Stout, 1936).

[64] G. E. Moore, "Are the characteristics of particular things universal or particular?", *Proceedings of the Aristotelian Society*. Supplementary Volume, 3:95-113, 1923.

[65] See among others Seargent (1985), Panaccio (1986), Van der Schaar (2004) and (2013), Valentine (2001), (Nasim, 2009), Macbride (2011).

The historical importance of Stout for trope theory is twofold. The first one is that Williams explicitly recognized the great influence that Stout's theory of abstract particulars had on him[66]. The second reason is that knowledge of tropes in Australian metaphysics is directly dependent on the debate led by Anderson – the professor with whom the young Armstrong studied – about Stout's theory.

In particular, I will show in the next chapter that knowledge of Stout's theory determined among Australian philosophers' interest in tropes in the second half of the 20th century. My aim in this chapter is to delineate the specific traits of Stout's particularist ontology and highlight the major issues that are relevant to the further debate. I will consider the elements that were relevant for Williams and other philosophers, its peculiarities and the differences with respect to contemporary trope theories. In particular, this chapter sets up next chapters by presenting a theory that will be considered by comparison in all next discussion. Reference to Stout will be made in next chapters, when I will deal with Williams and Australian Metaphysics, in order to evaluate his decisive influence on the contemporary debate on realism and nominalism.

After dealing with a presentation of the broad category of abstract particular, the chapter will be divided into other three parts. In the second part, I will be concerned with few reasons Stout gave in support of tropes, along with some helpful objections and criticisms made by

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[66] See (Williams, 1931, p. 589) and (Williams, 1986, p. 4). In "The Elements of Being", Williams admits that «Stout's theory, in its fundamentals, is almost identical with the one I am defending» (Williams, 1953a, p. 12). (Williams, 1953b) comments at length the discussion between Stout and Moore on abstract particulars.

Moore. Some reference will be made to the philosophical debate that took place in Great Britain in the first Decade of the XX Century, and mainly to Bradley and Russell. The third part of this chapter will deal with more specific arguments for tropes based on epistemological considerations. I share in fact Passemore's idea that Stout ever thought that attention to epistemological problems was essential to progresses both in philosophy and in psychology (Passmore, 1944, p. 2). I will devote the fourth part to a discussion of Stout's legacy in contemporary metaphysics. This is due in part to a recent revival in critical interpretations of Stout's ontology of abstract particulars, but even to a consideration of the influence – that is massive – of his theory on contemporary trope discussions as Williams and Armstrong ones.

3.2 THE CATEGORY OF ABSTRACT PARTICULAR[67]

Before explaining the relevance of Stout's theory of abstract particulars, I will remind two features of his ontological enquiry. It has as its main critical targets both realism of universals and substrata-attribute theory of substance. Two ontological issues deserve to be distinguished here: on one side the refutation of traditional universals and their substitution with classes of particular properties[68]; on the other side, the refutation of substances traditionally intended. Stout introduced *abstract particulars* as

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[67] An important source for this chapter has been Van der Schaar (1991), "G. F. Stout's theory of judgement and proposition, 1991. University of Leiden", Ph.D. thesis. I am grateful to prof. van der Schaar for kindly having send me a copy of her dissertation.
[68] I have said "classes of particular properties", but this is a simplification, as Stout has a more sophisticated theory of whole and parts.

the ontological category by means of which he aimed at overcoming these two difficulties. With these two features in mind, I will deal in the following pages with abstract particulars, of which tropes – as we know them now –are a subset. Abstract particular, in fact, is a major category that comprises various subcategories: tropes and particular relations, processes, events, transient states and acts are all grouped as abstract particulars by Stout. Another label he uses for the broad category of abstract particulars is "characters". This second label points out that nothing can be an abstract particular unless it is predicable of something else. These are examples of abstract particulars made by Stout: the particular roundness of a billiard ball (Stout 1921); the particular happiness of Jones (Stout 1921); the shape of the table which I am now writing at (Stout 1921); the relation of contact between the ball and the pool table (Stout 1921); a sneeze, the flight of a bird, the explosion of a mine (Stout 1921); extensions, surfaces, boundaries (Stout 1923). All these entities have in common two facts: (1) they exist as unique occurrences and (2) they are not substances. The first fact distinguishes abstract particulars from universals. Whereas universals are conceived as entities that, as exist in their instances, are multiply located, i.e. they can occupy more than one location at the same time, abstract particulars are confined to and defined by their presence in just *one* location in space and time. Therefore, they cannot occupy more than one place at the same time. This can be quite uncontroversial for entities like events[69]: my sneeze this afternoon while I

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[69] At least, it was uncontroversial at the time Stout wrote. Today Chisholm takes events to be universals, namely repeatable entities. See (Chisholm, 1971) and (Chisholm, 1970). For a critical survey of the main philosophical theories about events see (Casati & Varzi, 2014).

was writing this page has happened in that precise moment, and it is identified by its occurrence in that precise moment. Every other sneeze that will occur during the day will be another, distinct event. This is not so obvious for properties; that is the controversial point in this discussion. Therefore, Stout tries to stress the similarity between properties and events, in order to make his point. It is argued that particular properties, like events, are located in space-time: a characteristic that makes particular properties apt to be objects of perception and able to be involved in causal connections. He assumes that there are no differences in the way events and properties are said to relate to space and time. So, if events can be spatially discontinuous or extended across time and space, properties can be locally separate only in this similar sense. This is aimed at excluding that properties can exist locally separated according to other meanings of this expression, for example as universals exist, according some theories, separated from themselves in two completely different locations at the same time, being entirely present in each of their instances.

That properties are particulars implies some consequences that Stout's colleagues showed to have not fully understood. Moore (1923, p. 95), for example, admits that the idea itself of a property not being universal, i.e. not general and not repeatable, makes no sense to him. He observes that the expression "is a particular" as referred to properties, namely to entities thought to be predicated of some other entities, is difficult to understand. Moore (1923, p. 97) takes "particular" as a descriptive term for concrete, material things or substances, which are not predicable of something. He is certainly begging the question against particularism here; however his disappointment is interesting because it expresses a dif-

ficulty in the acknowledgement of particular properties that has been rather frequent in the history of ontology. Moore's main criticism was that it makes no sense that a particular could be predicable of something else. But his criticism seems to neglect a distinction between the couple of concepts particular\universal and concrete\abstract that was already set by British Idealists[70]. This neglecting was surely intentional, due to Moore's suspicion towards Idealism and his usual quickly dismissing of their doctrines[71]. According to this distinction, the pairs of concepts particular\universal and concrete\abstract are not supposed to be synonyms: the concept of particular does not coincide with the concept of concrete and the concept of universal does not coincide with that of abstract. The pair abstract\concrete points to the exhaustiveness of the description related to an individual. Each concept of this pair is supposed to be combinable with each one of the pair universal\particular.

Once the distinction between these notions is on the table, it is open to us to conceive particulars entities that are not concrete. British Idealists, for example, allow for the possibility of concrete universals, like individuals: individuals are concrete but, as universals are unities over their instances, they are unities over the multiplicity of their attributes. As "universal" is not synonym for abstract, so "particular" is not synonym for concrete. Abstract particulars are determinations of an individual (for

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[70] The concepts of concrete universal and abstract particular was already known in English philosophical lexicon due to the mediation of British Idealism. See for example Acton, H. B. "The Theory of Concrete Universals, 1", in Mind Vol.XLV. Oct. 1936. pp. 28-42 and Mind Vol.XLVI. Jan. 1937. pp. 1-13; Bosanquet, B. "The Concrete Universal" in The Principle of Individuality and Value. Macmillan. London. 1927, pp. 3-81.

[71] See (Baldwin, 1984) for an historical informed discussion of this issue.

example, its properties) as considered out of the whole of experience, as selected aspects considered in separation. So Stout uses the concept of abstract in a similar way to that ascribed to the term by the Idealists and many others of his contemporaries: abstract particulars are fragments of experience that cannot really exist as separated entities. When Stout call these entities "abstract" he does not mean, therefore, that such entities exist out of the spatiotemporal domain, like Platonic ideas, numbers and other mathematical objects, Fregean concepts and propositions.

Another issue of Moore's interpretation is that he mistakenly retains that Stout's theory takes adjectives to refer to maximally specific instances of properties. For instance, if we consider the case when someone says "The rose I gave to Lucy was a beautiful red", the name "red" supposedly refers only to a particular shade of red of this rose. Moore agrees that sense-data are unrepeatable: the red I perceive now watching the sunshine is just that particular red which I am immediately acquainted with. However, he points out that, when one describes his own experience saying «I have just seen the red light of sunshine» and you compare it to a similar experience you had some days ago, you use the adjective "red" to mean the same red in all your statements. Language uses names of properties as general names. The point on which trope theory is here singled out is that we have not names for tropes, and languages only possess names for adjectives that are intended to be general. We have names that mean red in general, but no names for each individual occurrence of red. Stout does not provide any information as far as the relation between tropes and general terms is concerned. He argues that we are acquainted in perception with specific cases of red, but he does not explain precisely

how we are able, on this basis, to use meaningfully general terms. What Moore is pointing out is that Stout lacks to specify a semantics for general terms in support of his metaphysical intuitions. The absence of a specific semantic theory of general terms for trope theory was made up by Williams (1953) who provided an adequate treatment of general terms.

This point apart, Moore's interpretation is, however, especially misleading, taking Stout to state that «an absolutely specific character, which characterizes a concrete thing, must characterize one thing only»: particular properties are thought to be maximally specific instances of properties, i.e. the specific shade of deep green that the white oak in Moore's garden in Cambridge has. Moore moreover takes this perfectly specific shade of green to be potentially predicable of a plurality of particular things: even if in fact this perfectly specific shade of green is truly predicable only of the white oak Moore is watching in the corner of his Cambridge Garden, nothing prevents it to be repeatable, for example in another example of this species of oak (the idea is that this would be an instance of a maximally specific determinate universal).

Accordingly, Moore considers particular properties in the same way Owen would do in his 1965 article (Owen, 1965), where the standard Aristotelian interpretation of individual accidents as tropes was challenged[72]. Owen argues that, from the fact that individual accidents cannot exist separately from "what they are in" (as stated in *Categories*, 1a24-5b), does not follow that the individual accidents can exist only within a unique in-

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[72] For the traditional interpretation of Aristotle's individual accidents, see (Ross, 1923), (Ackrill, 1963), (Anscombe & Geach, 1961), (Matthews & Cohen, 1968), (Allen, 1969).

dividual. For example, the fact that Smith's paleness exist in Smith's face does not imply that this paleness must be a different individual from paleness in John's face. Owen explicitly disputed Stout's interpretation[73] and pointed out that, at best, Aristotle meant that exist maximally specific shade of properties, but not tropes. A consequence of this interpretation (that tropes are maximally specific cases of properties) is that Stout's theory cannot allow that exactly similar objects exist: the green shade specific to this tree would, in fact, be individual because in some even minimal respect it differs from any other shade of green. However, this is not what Stout means. Stoutian particular properties are not repeatable, but nevertheless they can be exactly similar. Qualitative sameness and numerical difference are to be distinguished.

The second fact common to all abstract particulars – that they are not substances – is intended instead to stress that abstract particulars are "essentially predicable" of other things. In fact, what traditionally defines a substance – among other marks – is the fact that, whereas a substance supports predication of qualities, it cannot be predicated of something else[74]. In being abstract particulars, entities like my sneeze caused by pepper, the flight of the blackbird in the night, the particular way she moves, the loneliness of Eleanor are all predicable. In this regard, Moore points out that we can predicate of someone "getting a sneeze" or, I suppose,

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[73] Owen's critical target is Stout (1936), in which it is argued for a tropist interpretation of Aristotle.

[74] Still in 1921, for example, McTaggart defined a substance as «that which has qualities without being itself a quality». (McTaggart, 1921, p. 66). For a review of the various roles attributes to substances, see (Simons, 1998, pp. 235-239).

expressions such as "being sneezing"[75], but not "sneeze". In fact, when Stout says that entities as sneezes, the flight of a bird, the explosion of a mine can be predicable of an individual, he has in his mind a construction as "the man is *having a sneeze*", "the bird is *getting a flight*", "the mine has *undergone an explosion*"[76]:

> by a sneeze I mean a sneezing, and if the word has any other sense I am not concerned with it. […] To say that someone is sneezing is to state that someone "has gone or is going through a change of a certain sort" and I predicate of him a change of this sort. (Stout 1923, p. 120)

Even if entities like sneezes and explosions are better described as events, Stout has a point in assimilating them to the larger category of characters. All these entities (events, processes, states) are dependent on an individual having them, of whom they are predicates. The point here is that a sneeze cannot occur that as the sneeze of someone, being essentially dependent (not only contingently) on a man or an animal able to sneeze. This is true even for qualities, that are dependent on individual objects possessing them. However, particular properties are not defined as properties that do not belong to more than one object because this definition would presuppose the very notion of object. At the same time, abstract particulars are dependent on concrete objects, but, on the other way

[75] Already Scholasticism considered that sentences with inflected verbs (Socrates currit) to be equivalent, in his theory of predication, to (Socrates est currens), where the inflected verb is modified as an equivalent adjectival participle coupled to the verb to be as copula. See (Mugnai, 2012, p. 173).

[76] See (van der Schaar, 2004, pp. 201-204) for more on Stout's theory of predication and Stout's distinction between what can function as subject and what can function as predicate.

round, concrete objects are wholes composed by a specific kind of abstract particulars, namely individual properties. In fact, in Stoutian ontology concrete objects are not independent entities, but wholes that are dependent on the characters that constitute them. Objects are nothing more than sums of their particular properties, therefore they are on turn dependent on their parts[77]. This does not implies, however, a form of mereological composition (at least not mereological sums as defined in classical extensional mereology). In fact, Stout thinks that concrete things have to be defined in terms of wholes that posses specific forms of unity. "Form of unity" is a Stoutian term of art, but it is not offered a clear definition of it[78]. It is said however that the "form of unity" is what that guarantees the cohesion of wholes. The form of unity allows that changes in the parts that constitute the whole do not affect the persistence of the same whole. For example, the form of unity allows to a musical phrase – that is a whole composed by tones in a certain arrangement – to remain the same even when it is transposed to another key (all of its tones are substituted with notes of a higher or lower pitch). There are relations of dependence among tropes that determine which wholes a trope can constitute and prevent that tropes form arbitrary bundles, as instead allowed by Williams's ontology.

Stoutian tropes are not free-floating entities, i.e. tropes that can exist detached from other tropes or things. For example, a property colour is de-

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[77] See (Stout, 1914), p. 350): «There is no need to consider the subject as being something distinct from the total complex of its characters. What we call the characters or attributes of the same subject are united with each other by a form of unity as peculiar and ultimate as that which I have ascribed to a class or kind».

[78] See (van der Schaar, 2013, pp. 54-60) for a more extensive treatment of this point.

pendent not only on the individual having it, but is dependent even on the property of being extended in space, and so on. Abstract particulars therefore are interdependent. Dependence relations between abstract particulars and between abstract particulars and concrete individuals are essential to characters[79].

That Stoutian abstract particulars are inserted in complex systems of part-whole relations marks an important difference with trope ontologies stemmed from Williams's model. Dependence relations avoid difficulties that trope theories have in explaining cohesion of objects: if an object is nothing more than a sum of its comprement tropes, how can this individual object survive to any change in its constituent tropes?[80] In fact, for many opponents of trope bundles theories, the mere sum of co-localised properties does not possess the requested cohesion and structure to result as an individual substance[81]. I will not deal here with the reasons that led Stout to elaborate this theory. I limit myself to remark that Stout began to think to theory of part and whole in his studies on psychology,

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[79] So for instance Stout states that «a sneeze […] has its being only in its concrescence with the other qualities and relations of the concrete individual while he is sneezing. The sneeze cannot continue to exist in however altered a form apart from the sneezer, as a hand or eye may when severed from the body» (Stout, 1921).

[80] For example, will an individual whole survive to change of his parts? Williams thinks wholes as perdurant: an individual, a spatio-temporal continuants recognized by common sense, does not survive to change of its parts because it is an instantaneous temporal stage. An object does not have a history, because it is not longer than an instant. A replay to this criticism from a tropist point of view is (Simons, 1994) and (Keinänen, 2005), who admit various kinds of relations of dependence.

[81] See Mertz (1996) for a critical discussion of the difficulties of trope theorists to explain the unity of concrete individuals. An interesting answer from a tropist view can be found in Simons (1994) and (Simons, 1998). In the latter, Simons is arguing that whereas traditional concept of substance is well suited for everyday cognitive experience, it is not apt to support the metaphysical postulates of scientific model of world.

from analysis of mental acts and shows the affinity with the research of psychologists and philosophers in the Brentanian tradition[82][83]. I will not give more details on this point, however. What mostly interests to me here is that this point distinguishes Stout's account of abstract particulars from trope theories like Williams's one. In fact, the most part of contemporary tropes theories avoids relations of dependence.

This discussion of dependence relations allows me to introduce Stoutian view of universal properties. Stout's position is idiosyncratic and it is not of easy understanding. First and foremost, it should be observed that he is akin to distinguish his theory from an apparently similar one: nominalism. In fact, he distinguishes his theory from nominalism saying: «Agreeing with the nominalist that characters are as particular as the things or substances they characterize, the inference I draw from this thesis is not that there really are no universals, but that the universal is a distributive unity» (Stout 1921, p. 7). The idea however is not so easy to understand. He says that universals are "distributive unities", but the ontological import of these unities is not well specified. The expression "distributive"

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[82] For an exhaustive synthesis of these influences and for an analysis of Stout opposition to bundle theories in favour of wholes as peculiar form of unity of abstract particulars I refer to the excellent van der Schaar (2013).

[83] Stout's major work in psychology was the book *Analytic Psychology* (1886). Stout had been long interested in psychology, and taught as Anderson Lecturer in Comparative Psychology at Aberdeen and as the first Wilde Reader in Mental Philosophy at Oxford before turning to metaphysics. Another important contribution by Stout to psychology studies was his *Manual of Psychology* (1899). It gained reputation as a mainstay for English-speaking scholars in this field in the first decades of 20th century, since it made available many hitherto-unknown German texts of experimental physiology. Van der Schaar (2013) p.198 explains the importance of Stout's work *Analytic Psychology* (1896) where he presents a theory of whole and parts which has strong resemblance with theories of Brentano School. See also (Valentine, 2001) and (Albertazzi, 2001).

indicates that universals share out their parts, the abstract particulars, among individuals that instantiate them, but what is not clear is whether or not universals enjoy a substantive kind of existence. Van der Schaar (1991) thinks that they have one: universals exist as special kind of individual: wholes[84]. MacBride (2014) recently has proposed another view according to which there is not an individual corresponding to the expression denoting a universal: names for universals are descriptive names for a plurality of individual considered under a same aspect. O'Connor (1949, p. 48) already argued for this interpretation, taking Stout to consider abstract names not as proper names of individuals, but as general terms standing for classes. If MacBride and O'Connor are right, Stout's metaphysics results to be more similar than Van der Schaar supposed to Williams's trope theory.

However, there is an important difference between Stout's theory of universals and Williams's one. This difference is indeed the form of unity. Even if we agree that forms of unity are not ontologically substantial (i.e., they do not add new creatures to the ontological zoo), they however involve new configurations among particular items, the only entities that exist. Forms of unity are dependent on their constituents, that are the particular items; particular items, in turn, receive new characteristics from the relation with the whole that comprehends them, as the possibility for

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[84] Similar considerations are expressed by Seargent: «the universal as a class is still something existing "out there" in the world. Moreover, it is a concrete part of the unity of the universe. The nominalist and conceptualist attempts to totally remove the universal from the objective world and dissolve it into a mere common name or concept within the human mind is just foreign to Stout's thought as was Platonic Realism. Stout, so to speak, "grounded" the universal – he did not destroy it» (Seargent, 1985, p. 27).

particular items of being considered as similar: «Elements which enter into a new whole, receive new qualifications from their relations within this whole» (Stout, 1896, p. 48). So forms of unity seem to have consequences on his conception of resemblance. Here Stout's point seems to be that, by contrary with nominalist resemblance theories, resemblance is not primitive. As O'Connor explains, Stout tries to argue that «the notion of resemblance between colours, for example, presupposes the generic universal "coloured". Unless we know what it means to be coloured, we could never make the judgment that $colour_1$ resemble $colour_2$» (O'Connor, 1949, p. 61). However, I will not examine here what he has to say in detail, as this theory of the form of unity is so idiosyncratic that it has not have any success or influence on contemporary metaphysics[85].

3.2.1 REASONS FOR ADMITTING ABSTRACT PARTICULARS

For what reasons Stout introduces the category of abstract particular and makes it the fundamental category of his ontology?[86] In his 1921 article, Stout presents four arguments in favor of the category of abstract particulars. As an exhaustive analysis of these arguments has been made in various excellent articles[87], I will focus my attention on the underlying

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[85] For a general analysis of this point and a more detailed discussion of the issues raised by the notion of form of unity, see (Seargent, 1985, pp. 26-36). Seargent discusses also the criticisms Armstrong raised against Stoutian forms of unity in (Armstrong, 1978.I).

[86] I mean the only fundamental, basic, but not the unique category in his ontology, because Stouts admits individuals and universals built ad wholes which have a special form of unity.

[87] See (Knight, 1936), (Panaccio, 1986), (O'Connor, 1949), (Seargent, 1985). See also (Armstrong, 1978.I) chap. 8.

philosophical reasons under these specific arguments. According to (Aaron, 1939) and (O'Connor, 1949), one of Stout's principal aim was to describe a kind of ontology able to heal the split between universal and particular. Stout's polemical targets were philosophers like Russell, Bradley and McTaggart which, assuming the traditional distinction between particulars and universals are unquestionable arrived to outcomes for Stout metaphysically unacceptable[88]. Take for instance Bradley, who was the most famous British philosopher of the time and the main polemical target of the philosophical debates that took place in Britain in the first decade of XX Century led by new realist philosophers[89]. Bradley wrote diffusely about the difficulty arising from the separation between the two categories of universal and particular. It was criticized the separation, traditionally involved in theories of judgment, between the subject (that is usually a particular item) and the attribute (considered as a universal).

Despite of the old-flavour of the term "judgment", this theory was important for modern logic, as Russell took seriously this problem, in his treatment of the unity of proposition (Hylton, 1992, p. 9). The problem would be how to reconstruct the unity of the proposition since particulars and universals were considered as independent – therefore unrelated – terms. According to these interpretations, therefore, Stout's theory of abstract particulars tries to offer a solution to this problem of the unity between universals and particulars. Abstract particulars – that were origi-

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[88] This remark is due to a conversation in Geneva in spring 2011 with prof. Frazer MacBride of Cambridge University.

[89] See (Nasim, 2009), (Hylton, 1992), (Griffin, 1991). But for a critical reconsideration of this historical commonplace, see (MacBride, 2012).

nated by evidences on perception – were therefore introduced in ontology as an ontological category having a double role: the qualitative role of universals and the individuating role of particulars. This double role played by a single entity prevents the need for substances and universals as independent and unrelated items.

First of all, if properties – being abstract particulars – are particular on their own, they do not require the introduction of particularizing items underlying properties. So particularizing items are refused as unintelligible entities, both in form of Lockean substrata[90] and of Aristotelian substances. Substances, instead, are considered by Stout as logical constructions from abstract particulars, unified under special forms of unity. But universals too are logical constructions out of resembling abstract particulars, as I have explained before. In this way, abstract particulars, as parts both of abstract universal and of concrete particulars (for instance ordinary material objects), are the link among particularity and universality. Stout states a principle close to the one called by Armstrong (1978, p.113) "principle of instantiation": universals are nothing without particulars. They are metaphysically and epistemologically dependent on particulars[91]. The split between particularity and universality is therefore restored by means of an ontological category that is called to explain both.

In summary, Stout gives to tropes a double role: the theoretical role of explaining qualitative differences and a particularizing role, namely the

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[90] For a discussion of Locke's controversial theory of substrata, see the classical paper by (Bennett, 1987). See (Martin, 1980) for a discussion from a trope-friendly approach and (Lowe, 2000) for a critical evaluation of Martin's interpretative contribution.
[91] Stout refused a thesis defended by (Russell, 1912), according to which we have knowledge by acquaintance of universals.

task of explaining numerical differences between objects. Whereas the first one is a traditional role for properties, the particularizing role is not usually ascribed to properties, that have been more often regarded as universals. Rethinking properties as particulars is therefore an operation largely discussed and criticized by non-nominalist philosophers[92].

Moving away of this problem of substance, that was largely discussed when Stout wrote, the second fundamental reason for admitting abstract particulars is phenomenological and epistemological, and it is bound to Stout's studies of psychology. In his psychological analysis he defined various part-whole relations, at first for objects as correlate of intentional acts, and then for objects in general[93]. His analysis of abstract particulars is part of these researches, but I leave out the psychological genesis of the theory of abstract particulars, referring to Van der Schaar (2013) and (Valentine, 2001) for further information. On this point, a recent contribution by Mac Bride (MacBride, 2014) casts a new light on the interpretation of Stout's arguments. He interprets Stout as modeling a metaphysics aimed to fit what was given by judgments of perception. He openly contrasts Armstrong's interpretation of Stout's main argument in defense of tropes ("my general argument", (Stout, 1921) says), citing evidence for deny that Stout had need to rely upon strong metaphysical assumptions to set his case. It can be said that, in the articles devoted to metaphysical

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[92] A further criticism that has been pointed out is that it is problematic to demand of something that can be at the same time a *quid* of particularity and a quality, but remaining a simple entity. See (Moreland 1985, 2001).

[93] See Van der Schaar (2013), pp. 52-60

topics[94], Stout draws ontological conclusions from epistemological premises, and it can be observed that this is typical of his manner of philosophizing. Unlike the most part of today's philosophers of tropes, Stout gives more importance to psychological and epistemological observations than to metaphysical reasons. If this is true, there is a deep difference between Stout's approach to trope theory and today contemporary trope ontologies. Mulligan considers this approach to tropes the more worthwhile: he observes that «Traditionally those properties that have been taken to be visible or perceptible have more often than not been taken to be non-repeatable items […] It is thus perhaps no accident that philosophers in this century who have defended dependent particulars (Stout against Moore) have been psychologists of perception» (Mulligan, 1999). I will deal at length with this point in the final chapter, where the significance of epistemological arguments for trope theory will be evaluated in confrontation with metaphysical arguments.

3.2.2   THE EPISTEMIC PRIORITY OF ABSTRACT PARTICULARS

In this section I will examine Stout's epistemological arguments for admitting tropes. I think that such epistemological reasons are especially interesting, for many reasons, therefore I have decided to devote them a whole section. At first, the interest is due to the intrinsic value of these arguments in order to understand problems specifically tied to epistemol-

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[94] Stout's most representative contributions to the discussion of metaphysical themes can be found in (Stout, 1921); (Stout, 1923), (Stout, 1936) and (Stout, 1940).

ogy of perception. But the interest is even historically. In fact, with few exceptions[95], most of contemporary trope theorists neglect the contribution of tropes to epistemological problems. Today trope theorists are more focused on other problems as for example fundamentality, i.e. if tropes can be identified as the most basic properties of physical world. I think that, however, epistemological arguments have been powerful reasons for the admissibility of tropes. In this section I will expose some of them, as referred to specific passages of Stout's works, and I refer to the last chapter for a critical evaluation and a confrontation with other sorts of arguments for tropes. My focus will be on the metaphysical works of Stout's, making some reference to salient passages of his psychological works, but only to clarify metaphysical points. This is not intended to neglect the importance of Stout's work in psychology, but is due to considerations as that Stout himself turned discoveries from psychology in metaphysics[96].

Abstract particulars emerge as phenomenological evidences in Stout's researches on psychology[97]. Here, however, my focus will be on a later period of Stout's reflection, the Twenties of XX century, when he turned his interest in metaphysical issues. In this context, the epistemic priority of tropes emerges as a reply to Russell's theory of knowledge (MacBride, 2014, p. 156). Stout doubts whether there can be knowledge of a sub-

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[95] An exception is represented by Mulligan (Mulligan, 1999) and (Mulligan, et al., 1984). See also (Gozzano & Orilia, 2008).

[96] I refer to (van der Schaar, 1996, p. 310) for a detailed justification of this methodological approach.

[97] Stout's major work in psychology was *Analytic Psychology* (1896). This book lies into the tradition of British followers of Brentano's descriptive psychology. See (van der Schaar, 1996) for further details.

stance or a concrete thing which is not knowledge of its qualities. He is criticizing here a distinction drawn by Russell (Russell, 1910–11) and (Russell, 1912), who famously distinguished between knowledge by acquaintance and knowledge by description (Stout, 1921, p. 391)[98]. The first was intended to be a form of immediate knowledge of something, a sort of non-conceptual awareness that does not involve any inference. Acquaintance implies no concepts and no judgments, for example judgments about how this thing is, that this thing exist. A judgment about how a thing is presupposes instead a description of it, of its qualities or spatiotemporal coordinates. Russell thinks that facts we known by acquaintance are foundational: knowledge of all other things is in some way derived from them. What interest to Stout regard to acquaintance, is that acquaintance implies that we can become aware of something without know nothing about its characteristics. For example, we may have knowledge of a spot of color as it presents immediately itself, simply "given" to the knowing subject without any ascription of qualities:

> What is known in this way cannot be expressed in words. I am acquainted with colour presentation while it is being presented, and with a toothache while I am feeling it. If, however, I am aware of a toothache as being painful or intense, or as felt, or as existing, or as mine, or as beginning, persisting, or ceasing, or as in any way distinct from or connected with anything else; or even as being "something or other", such awareness is knowledge about the toothache and not merely acquaintance with it. Acquaintance with the toothache consists in the fact that it is felt, not in knowledge of this or any other fact. Acquaintance with colour presentation con-

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[98] For an examination of this theory in its historical context, see (Nasim, 2009, pp. 23-32).

sists in the fact that it is presented, not in knowledge of this fact or of any other. (Stout, 1921, p. 391)

I think that Stout's interpretation of Russell acquaintance is not right to the extent to which he considers acquaintance deprived of any kind of knowledge, whereas knowledge by acquaintance is a form of knowledge, even if unmediated and non-inferential.

However, what interest to me here are the consequences that Stout tries from this conception of acquaintance. What Stout wants to deny is that by acquaintance we can be aware of a thing apart from any knowledge of its properties. He argues instead that we cannot even identify a thing as a distinct individual without any previous knowledge of its properties, that are tropes. Stout had already discussed on this idea with Moore in 1914[99]. In the discussion about how sense-data are related to physical objects, and what our concept of physical objects are, Moore thinks that sense-data we apprehend are somehow related to physical objects that give rise to them, and that they originated by the relation between physical objects and our senses. A similar position is known in the literature as Indirect Realism[100]: we have knowledge of the physical objects (that are thought as the source of sense-data) by the mediation of sense-data. Stout criticizes Moore because he interprets his position as an assertion of the possibility to think physical objects (that are the source of sense data) deprived of their sensible appearances. I am not interested in ascertaining whether

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[99] The discussion between is reported in Symposium: "The Status of Sense-Data", *Proceedings of the Aristotelian Society*, 14, pp. 355-406.
[100] Moore in 1914 seems to have dropped the precedent naive realism according to which sense data were parts of physical objects. See (Baldwin, 1990), p.150 ff.

Stout's interpretation is correct; what is important here for our purposes is what Stout says about the impossibility to perceive the physical object deprived of all its sensible appearances (that are particular sense-data). This is because the concept itself of a physical object comprehends, according to Stout, all the possible phenomenal appearances it could assume. Therefore, the physical object result to be a construction out of its sensible appearances (its sense-data) (Moore & Stout, 1914, p. 383). The physical object, however, is not *inferred* by knowledge of sense-data: the perception of sense data, in fact, carries an immediate relation with its physical (and if you want call it so, noumenal) source. So the physical source is immediately apprehended with the apprehension of its sense data: in other words, sense data are immediately related to their source. Sense data are perceived as the sense data *of* some physical object.

Two characteristics of sense-data therefore emerge from this analysis: (1) they are the particular appearances by means of which an object is given to our knowledge; (2) they carry an intrinsic reference to their source. Objects are given to us by means of their particular properties; particular properties are essentially dependent on objects of which they are properties. It is interesting to note that these two characteristic of sense-data are transferred in Stout's trope ontology. Stoutian tropes are sense-data considered by a metaphysical, rather than epistemological, point of view. In this manner, tropes are not only foundational with respects to knowledge of truths about objects, but even responsible for the intuition of the particularity and individuality of our perceptual experiences: because properties are spatiotemporal located (this is one of the meaning of their being

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particulars), they work as the primary ground of distinction between any other entity.

In earlier times, Stout already had defended particular properties, but he thought that their particularity was derivative from the particularity of concrete things (Stout, 1902 - 1903). In 1902, Stout argued that there is a difference between concreteness and particularity: concrete things are subjects of predication, and they are particular; but there are also particular entities that are predicated of concrete things, without being in turn concrete. By means of this distinction, Stout affirmed that all concrete entities are particular, but that not all the particular entities are concrete. The roundness of this orange, for example, is particular, but it is not concrete (Stout, 1902 - 1903, p. 1). That it is not concrete means that its particularity is derivative from the particularity of the orange to which it belongs. Stout has here two points to make against Bradley. First, there is a plurality of concrete things, against Bradley's priority monism, i.e. the view according to which only one fundamental concrete thing exists (the universal whole), and all other concrete things exist derivatively; second, and most importantly for our discussion here, particularity is primitive, and it is not derived by the being predicate of the Absolute (the only concrete thing in Bradley's system).

Apart from the specific point made against Bradley, it is interesting what he says about the primitiveness of particularity. Stout (Stout, 1902 - 1903) thinks that particularity is primitive only for concrete things. Instead, properties are particular because belongs to particular things. In the Twenties, Stout would change his mind: properties are particular in their own right. However, a point is secured form his previous view on this

subject: particularity is not derivative from spatiotemporal relations. Relations are not required to ground trope spatiotemporal location. In fact, Stout thinks that the occurrence of spatiotemporal relations presupposes the existence of their terms as particularly located and distinct individuals. Trope locations are primitive and ungrounded. Spatiotemporal relations are not needed even in order to distinguish exactly similar things. Consider two sheets of white paper. They look pretty indistinguishable by their qualitative appearance. But we can distinguish the two sheets even so (Stout, 1921, p. 391). The point Stout wants to stress here is that if we experience exactly similar objects as distinct objects, this is due to the primitive, underived particularity of their properties. So, if we can explain the numerical difference among different things, it is because of the numerical difference of their properties[101]. It is because the properties that compose exactly similar objects are distinct entities that we can individuate objects. It is argued that, if properties were universals, we would have no possibility to distinguish exactly similar entities. Given a conception of complex entities as bundles of properties, Stout thinks, in fact, that the unique solution here available to the Realist would be to suppose that there are bare particulars as individuator, i.e. an underlying substance devoid of all qualities. But Stout argues against this solution. Bare particulars are contradictory entities: not only they are unknowable, in every sense according to which experience is possible to us (by acquaintance or

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[101] This presupposes a distinction between qualitative difference (or difference in content) and numeric difference, a distinction presented in the same years by (McTaggart, 1921), (Moore, 1900) and (Russell, 1911).

by propositional knowledge)[102]; but, if bare particulars were components of things, a complexity would be introduced in things, making impossible to give unity to the thing.

What emerges from this analysis is that tropes are *foundational* with respect to our knowledge. There are two reasons for this: at first, knowledge of objects is mediated by knowledge of tropes; moreover, the fact that our experience is an experience of distinct individual is due to the perception of tropes that are primitively particular individuals. The idea that tropes are the immediate object of experience was shared by the early Russell too: in his seminal paper "Knowledge by acquaintance and Knowledge by description" (1911), he supposed that we are primarily acquainted with particular properties (and with universal too) and only indirectly with concrete objects: we have acquaintance of this particular yellow as a particular sense-datum and this acquaintance is the basis of judgment as "This is yellow". Russell however admitted too acquaintance of universals. If you consider the judgment "This is yellow" – Russell says – the sense-datum looking yellow, of which it is predicated "is Yellow", is a particular, where the predicate "Yellow" is a universal (Russell, 1910–11, p. 111). Even for the early Russell therefore, particular qualities seem to be foundational for more complex knowledge, even if he recognizes in predication a non-substitutable role for universals too.

Returning to Stout, I introduce a issue that is related to his discussion of acquaintance, according to which we have immediate experience of prop-

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[102] For an attempt to defend the possibility of knowing substrata, see (Bergmann 1954) and (Allaire, 1963). See Loux (1972) for a criticism. But today this option is largely refused by ontologists.

erties, whereas the knowledge of complex things is always mediated by this primitive experience of properties. In his writings on psychology[103], Stout stressed the difference between sensation and perception (that I prefer to call "cognitive perception", following (Dretske, 1990): sensation is the simple *presentation* of sense-data to a mind; cognitive perception, on the other hand, involves the judgment that the experienced sense-data exist or not, and therefore it involves the knowledge of a fact[104]. According to such a theory, sensation would be preliminary to thought and judgment. Judgment is about facts, whereas sensation not. In a recent paper Mulligan has stressed Stout's intuition that tropes are what we primarily perceive. He thinks that Stout's intuition – that the fundamental elements of all experience are tropes – can confirm the thesis of a distinction between perceiving and judging (Mulligan, 1999, p. 164)[105].

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[103] The relevant passage is from *Analytic Psychology* I, p. 46-7, quoted in (Valentine, 2001): «In the process by which we take cognisance of an object two constituents are distinguishable: (1) a thought-reference to something which, as the thinker means or intend it, is not a present modification of his individual consciousness. (2) A more or less specific modification of his individual consciousness, which defines and determines the direction of thought to this or that special object; this special mode of subjective experience we may call a *presentation*».

[104] Whereas knowledge is always propositional in structure, Stout allows for sensation as an epistemic experience that is not propositional and different form thought and judgment. See (Valentine, 2001) and (van der Schaar, 2013, p. 132).

[105] Van der Schaar explains that « perception of tropes is not knowledge, because the latter has to involve judgment, whose objects has a propositional structure. This argument has its origin in Stout's psychological theory of perception. Like Husserl, who also defends the thesis that moments are the objects of perception, for Stout no predicative structure need be involved in simple perception, such as the perception of a trope. We can perceive the trope without knowing to which individual it belongs. Perceiving a trope need not involve perceptual judgment» (van der Schaar, 2013, p. 138). See also (van der Schaar, 1991) and (van der Schaar, 1996).

3.3   CONCLUSION. STOUT'S LEGACY

Stout's main argument for the existence of abstract particulars was made
once more famous by Armstrong (1978). In the chapter devoted to Par-
ticularist theories, Armstrong gives a reconstruction of this argument that
is became standard in the literature on tropes. Armstrong's analysis of the
argument is based on the first assumption that (1) "substance is nothing
apart from its qualities" (Armstrong, 1978.I, p. 81). That is paraphrased
by Armstrong as the statement that a substance is nothing over and
above the bundle of his constituent properties. The second premise of
the Stout-Armstrong argument is: (2) Two particulars can resemble ex-
actly. On this specific point, Stout has as his critical target McTaggart,
that had defended the truth of the Identity of Indiscernible (henceforth
"PII")[106] on the effect that there is nothing which is indiscernible from
anything else[107] . McTaggart used (PII)[108] to argue that if realism of uni-
versals is true, substances cannot be distinct individuals without being in
some respect dissimilar (that is for McTaggart to have different complete
description). The idea is that if two description associated to substances
are identical, being the properties that form the description universals,
the two substances are composed by the same universals. Therefore,
given the inadmissibility of substrata (McTaggart thinks, as Stout does,

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[106] McTaggart calls this principle "Dissimilarity of the Diverse": he suggests that it is better
to understand Leibniz's Principle as stating two things cannot have the same nature: «The
name 'The Identity of Indiscernibles' […] is not a good one. For the principle does not as-
sert that there are indiscernible which are identical, but that there is nothing which is indis-
cernible from anything else» (McTaggart, 1921, p. 101).

[107] No substance can have exactly the same nature as any other (McTaggart, 1921:106).

[108] In realist bundle ontology, we have two different bundles only if the two bundles are
composed from different universals.

that substances deprived of all their qualities are no conceivable. There is not an individuality item distinct from all qualities and supporting them) it has to be concluded that the description must be different in order to pick out different individuals. Contra this intuition, Stout observes that our perceptual experience gives us the case of objects exactly similar, indiscernible for qualitative differences but notwithstanding perceived as distinct entities (Stout 1921, p. 391). Stout-Armstrong argument therefore conclude, from the inconsistency of the assumptions (1) (bundle theory) and (2) (possibility of distinct indiscernibles) and (3) (realism of universals), that (3) has to be dismissed. Properties therefore have to be primarily known as separate particulars. Is this argument decisive against realist theories? We can observe two things. At first, Stout-Armstrong strategy makes individuation of concrete objects (what makes two qualitatively indiscernible individuals even numerically distinct) dependent on being individual of theirs properties, that is problematic because Stoutian tropes are in turn dependent on objects. The second objection regards the assumption that objects are nothing over and above bundles of properties. As Panaccio (1986, p. 243) observes, the agreement on this idea is nowadays less broad due to the recent discussions on essentialism – to the problem of distinguish between essential and non essential properties – and on new theories on identity conditions of material objects. I think that this discussion is important for the reason that it is in this form that the major argument in support of trope theory is often presented.

Recently, however, MacBride has challenged such interpretation of Stout's main argument. He argues that the version of the argument I have just presented is the reconstruction Armstrong gave to Stout's argument.

Therefore, I have called this argument the Stout-Armstrong argument for tropes. MacBride stresses, instead, the epistemological weight of Stout's argument: he argues that Stout never used the premise (1)(bundle theory). Instead, Stout appeals to the fact that "we cannot form an intelligible conception of a particular in abstraction from its qualities". (MacBride 2014, p. 14). MacBride's interpretation therefore see Stout as emphasizing the importance of considerations about our epistemic habits. I argue that this debate is extremely important, because it stresses the importance of particular properties as primary objects of perception (Stout's point is that things cannot be known if not trough the knowledge of their properties) and because it offers a better understanding of the original motivations that led to trope theory. They were not just ontological, but even epistemological and phenomenological. I finally claim that a critical reconsideration of Stout's particularism can provide a better understanding both of trope theory itself and of the renaissance of ontological discussion after the decline of logical empiricism.

WILLIAMS: TROPES AS THE ELEMENTS OF BEING

4.1 SYNOPSIS OF THE CHAPTER

The main contribution to trope theory offered by Donald C. Williams is the article "The elements of Being" (1953)[109], where he presents the basic principles of an ontological theory which admittedly makes use of one single category[110], namely, that of individuals accidents or, as he named them in his article, with a new term, "tropes"[111]. In a previous article, he

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[109] "On the Elements of Being: I", *The Review of Metaphysics* , Vol. 7, No. 1 (Sep., 1953) , pp. 3-18

[110] Campbell remarks that «what was novel and bold in Williams was the proposal that abstract particulars were not just *a* category, but a fundamental and irreducible one; and they formed not just a fundamental category, but the *only* one» (Campbell, 1990, p. 4).

[111] Williams refers to George Santayana, as the source for his use of the term: «Santayana…used "trope" to stand for the *essence* of an *occurrence*…; and I shall divert the word, which is almost useless in either his or its dictionary sense, to stand for the abstract particular which is, so to speak, the *occurrence* of an *essence*». (Williams, 1953, p. 7) and (Williams, 1966, p. 78). According to Bacon (2011) and Schaffer (2001), Williams, with a joke, takes on Santayana's term "trope", but uses it to express the opposite meaning.

named tropes "abstract particulars", making a clear reference to G. F. Stout (Williams, 1931, p. 589). Other sources for an analysis of Williams's ideas about tropes are in a couple of articles: "Necessary Facts" (1966) and "Universals and Existents" (1986, posthumous). Williams's theory is very often considered as a point of absolute reference in the contemporary debate about properties. However, in spite of the importance of these articles, such a general consensus is not accompanied by a comprehensive analysis of their peculiarities; for this reason I hope to give in this chapter a contribution to a more detailed examination.

I have just stated that the proposed ontology makes use of a unique category. This might seem incorrect, because, in a certain way, Williams uses expressions to talk about universals and material objects, as if he was referring to independent entities in the world. The fact that it is sure is that only tropes enjoy the status of *fundamental* category, from which all other possible categories – if we have the need to admit them – receive their conditions of existence and identity. I will stress that the importance of these articles, in fact, is not due to the individuation of the category of tropes (or particular properties) as a category on its own right: there are ontologies before Williams that have admitted particular properties[112].

Indeed, the originality of Williams's theory lies in the fact that tropes are the basic, independent constituents of any possible world. In fact, most of the ontologies that have admitted, under various different labels, abstract particulars or particular properties assume them to be dependent entities. According to a long tradition going back to Aristotle's *Categories*,

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[112] For an historical overview of the predecessors of trope ontology see (Mertz, 1996).

individual properties are thought to belong to an object, in the jargon "to inhere in a subject". Properties are thought as the properties *of* a subject: a subject can be another property too but, in the end, there is a substance as ultimate subject. Non-substances, i.e. properties, exist "in something, not as a part, and cannot exist separately from what it is in"[113].

In such a model, a specific relation of inherence is supposed in order to bind properties to their subjects. Trope theory gets rid of those relations of inherence, thus overcoming traditional accounts of properties[114]. Williams – who maintains that individuals are reducible to wholes of co-existent tropes while universals are sets of exactly resembling tropes – does not deny tout court the existence of universals – as extreme nominalists do – nor of macroscopic individuals, but he claims that the category of particular property is the only fundamental.

However, I think that Williams is clear in binding tropes ontological fundamentality to their epistemic priority for us: his idea is that universals are not what we primarily experience about the world, being universals generalizations on a more fundamental basis given by our perceptual experience of it. But primary experience of the world seems to be an experience of particular items, bits of complexes, specific qualities and colours and shapes. In the same way, objects appear to be derivative on that original experience of perceptual qualities, and believing in unified ob-

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[113] Aristotle, *Categories,* 1a25.
[114] This point is emphasized by (Campbell, 1990, pp. 4-15), who deals at length with problems related t the notion of inherence involved by substance-attribute theories. See p. 49 above for more discussion.

jects seems to be motivated more by pragmatic exigencies than by their real ontological robustness.

4.2   GETTING IN TOUCH WITH TROPES

Williams (1953) begins intentionally his argument in support of tropes with a frivolous but intuitive example in order to prevent any reminiscence of traditional accounts of properties. Let us – he says – imagine three lollipops, made of a stick with a candy head on it. Lollipop No. 1 has a red, round, peppermint head, Lollipop No. 2 a brown, round, chocolate head, Lollipop No. 3 a red, square, peppermint head. The lollipop example shows a number of similarities. We can note that these lollipops are at the same time partially similar and partially different to each other. This raises the basic ontological question: how can we account for this *similarity in difference*? At this point, the argument takes a quite slight turn: Williams begins by asking what it could mean for two physical objects to be *partially* similar. According to him, to say that *a* is *partially similar* to *b* is to say that a part of *a* is wholly, or completely, similar to a part of *b*. He stresses that his use of the word partially should be understood in a literal sense: if we consider physical objects as composed of physical parts, it makes sense to say that a difference between two objects lies in a different arrangement of their parts or in the presence/absence of different parts. We say that the three lollipops of the example shown above are *similar* since all of them possess a head and a stick as parts and these parts are arranged in the identical way.

Until this point Williams has made appeal to *parts* in order to look at objects at a finer level, thus reducing similarity between concrete objects to similarity between their parts. This leads to a need to clarify why similarity between parts can be considered as an effective way to define similarity between objects. To clarify this point, the part of Williams's argumentation quoted here is interesting because of the relevance of some of his lexical choices:

> Since we cannot find more parts of the usual gross sort, like the stick, to be wholly similar from lollipop to lollipop, let us discriminate subtler and thinner or more diffuse parts till we find some of these which are wholly similar. This odd-sounding assignment, of course, is no more than we are accustomed to do, easily and without noticing. Just as we can distinguish in the lollipops, Heraplem and Boanerp, the gross parts called "sticks," namely Paraplete and Merrinel, so we can distinguish in each lollipop a finer part which we are used to call its "colour" and another called its "shape" – not its kind of colour or shape, mind you, but these particular cases, this reddening, this occurrence or occasion of roundness, each as uniquely itself as a man, an earthquake, or a yell. With only a little more hardihood than christened the lollipops and sticks, we can christen our finer components, let us say, and "Hamis" and "Borcas" for the respective shape components (Campbell, 1981) (Williams, 1953a, p. 5).

Williams uses a lexicon belonging to two different conceptual areas to designate generally these more subtle similarities: the terms "case", "occurrence", "occasion", which refer to the concept of instantiation, and the terms "part" and "component" that refer to the lexicon of whole-part relations. I suggest that his strategy is to substitute the language of instantiation with the language of part-whole ontology. Instantiation of the same property by different objects is the way in which Aristotelian

ontology has explained similarity. Williams's point is that the language of instantiation is misleading since it suggests that the presence of a particular property in an object should be considered as a token of a universal property. To say that *a* instantiates *F* means that *a* must be *linked to F* by a dyadic relation of instantiation or exemplification. This implies a reference to a property F and to a relation of instantiation. To talk of parts, instead, involves only the idea of being a component of an object, and not the idea of having a relation to something outside the object, a relation such as the one that occurs between *types* and their tokens. Parts, moreover, can be thought as detached from the object that has them, as I argue below. The use of the jargon of part-whole is intended to stress the point Williams aims at proving: that the similarity between objects must not be explained with the presence of universal properties in them[115]. The next step is to explain all the qualitative similarities between objects in terms of similarities between their parts. Williams's point is that to say that *a* is partially similar to *b* is to say that a part of *a* is wholly or completely similar to a part of *b* is true not only with respect to ordinary concrete parts – for example the sticks of the lollypops – but also with respect to other more subtle parts such as colour, flavour and shape.

The analogy between concrete parts and more subtle parts is intended to prove that what is true about concrete parts (that similarity between lollipops with respect i.e. to their stick is due to a concrete part in each ob-

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[115] It can be said that Williams defended a model of "constituent ontology", as opposed to a "relational ontology", according a contraposition that is familiar today. This contraposition was originally set by (Wolterstorff, 1970b), and is discussed today, for example, by (Smith, 1997), (Loux, 2006), (Van Inwagen, 2011), (Moreland, 2013) and (Garcia, 2013).

ject which is perfectly similar to another in some other lollipop, even though each stick remains a particular and distinct individual) is true also for more subtler parts such as properties. He observes that we are more willing to speak of parts in regard to physical parts because we have concrete names in language for them – "stick" is the name of the terminal part of a lollipop, "leg" is the name of the parts that support the table, and so on – but we may apply the same strategy to name subtle parts, if this can help to make them more familiar. Qualitative parts of an object are, generally, referred to with periphrases or with abstract names, the last ones suggesting a reference to universal entities (e.g. the part that gives to the table the quality to be robust is named "robustness"). This is the reason for the curious Williams's choice of naming the various parts of the lollipops with bizarre names (Williams, 1953a, p. 5).

Williams seems to take the difference between gross or physical parts and subtler parts only as a difference in degree: he says that a gross part, like the stick, is "concrete," as the whole lollipop is, while a fine or diffuse part, like colour or shape, is "abstract". So a single property is more abstract than a complex of several properties: «The colour-plus-shape is less abstract or more nearly concrete than the colour alone, but it is more abstract or less concrete than colour-plus-shape-plus-flavour, and so on up till we get to the total complex which is wholly concrete» (Williams 1953a:6). Anything which, in a certain sense, is less than a total complex is considered to be abstract[116]. This seems to suggest that the notions of

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[116] A concrete particular is explicitly said in Williams (1931), p. 589 to be the total content of a spatiotemporal volume. An abstract entity is said to be less than any volume of which it is an element.

abstract and concrete form a continuum. At one extreme there are the wholly concrete entities with all their numerous properties, in the middle there are physical parts. If a physical part has constituents, the latter would be more abstract and so on. It is less evident what can be expected at the other extremity of the continuum. Williams's idea is that physical parts in their own turn have parts which are ever smaller, and these finer parts are tropes. But it is not clear whether Williams individuates mereological atoms, namely entities which have no proper parts or if instead, as it seems more likely from his description of the process by through these parts are individuated, tropes are infinitely divisible into parts which are increasingly more fine-grained and presenting minimal levels of complexity:

> The world whole […] is not merely infinitely divisible, or virtually infinitely, but infinitely divided in the sense that it is the sum of countless actual parts, countlessly including, overlapping, and excluding one another, each part and each whole as genuinely real and individual, in the cardinal logical and ontological respects, as any whole which includes it, right up to the World All, and as any part which is included in it, right down to the ultimate indivisibles which have no proper parts, if such there be (Williams, 1986, p. 2).

It is not even patently clear whether this process of infinite individuation of parts is epistemologically dependent on our skills of abstraction or if it reflects an objective infinite complexity of objects. However, I think that there is some hint that Williams considers this division of properties in parts ever more minimal to correspond to an objective complexity in things.

4.2.1 TROPES AS ABSTRACT ENTITIES

To describe tropes as abstract entities is a reminiscence of Stout. Stout, in fact, called particular properties "abstract particulars" and this denomination has had a certain success in the literature: the title of one of the most influential exposition of trope theory is "Abstract Particular" (Campbell 1990). Williams's discussion of abstractness, in which he takes into account the Idealist thought and at the same time attempts to diverge from it, is central for understanding his tropes. I think that this is one of the most interesting issues in the 1953 article, pivotal to the understanding of the nature of tropes, which, however, has received little attention in literature so far.

Williams calls "abstract" the subtler, basic and apparently inseparable parts. Here he does not use "abstract" as a synonymous of mental, fictional, not causally efficient – as is in the main part of contemporary analytic tradition[117] – but as «partial, incomplete, or fragmentary, [having] the traits of what is less than its including whole» (Williams, 1953a, p. 15), that is to say artificially separated from the whole to which it belongs. Abstract parts, in fact, are minimal fragments of experience, selected aspects of an object that individuate a specific character of it. With respect

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[117] See for a relevant example of this use Quine (1953) who uses "abstract entity" as synonymous of immaterial. Sources for the meaning of "abstract" preferred by Williams are probably Locke (in the *Essay* an abstract idea is one that is derived from concrete ideas by neglecting of details) and British Idealists: for an example see Bosanquet, "The Concrete Universal", in *The Principle of Individuality and Value*. Macmillan, London 1927, pp. 3-81, for whom "abstract" is something incomplete, imperfect and not self-sufficient because fragmentary. The reference to Bosanquet comes from (Williams, 1966, p. 153) where he addresses the problem of knowledge in idealist philosophies. See also Williams (1953b), where he discusses at length the idealist conception of abstraction.

to that, abstract parts are different from concrete parts which present various levels of complexity. "Concrete" is, instead, used as synonymous of complete, fully determinate[118]. There is an apparent difficulty here: this sense of "abstract" as "fragmentary part of a more comprehensive whole" seems to be inconsistent with a principle affirmed in Williams (1953b), that there are no tropes which depend on any whole of which they are a part or on any other part of the whole[119]. With reference to the passage I have commented above, it should be noted, however, that the continuity between gross and fine parts is intended to blur the difference between physical, separable parts and abstract, non-separable, parts, in order to allow for the independence of the latter ones[120]. Contra the intuition that, while a "gross part" like a stick is a detachable part, a more fine part such as the colour of the candy is *not separable* from the object, this analogy suggests that parts such as colour, flavour, shape, are on the same level of *independence* as the macroscopic detachable parts of objects.

I take the cue from these observations to introduce another topic important in order to characterize Williams's tropes, the notion of trope ontological independence. This is a crucial point because much of the originality of Williams's theory, with respect to past theories admitting par-

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[118] This is a linguistic use very common in British idealism, for example. Williams analyses this concept of concrete in (Williams, 1931, pp. 585-7).

[119] See Williams (1953b, p. 189): «Part does not depend on part, nor whole on whole, nor part on whole, and that whole does depend on part is for the trivial reason that the whole is at least the sum of its parts».

[120] Williams read Husserl and it is probably that he knew the difference between parts (independent) and moments (necessarily dependent) from *Logical Investigations*.

ticular properties, relies on this[121]. To the plausible objection that an abstract (in the sense of a partial component, a part of something else more comprehensive) like a colour or a shape cannot exist by itself, separate by its possessor, Williams suggests that parts must be in principle independent from any concrete whole. He means that even if happens, as a matter of natural necessity, that e.g. a smile occurs only in a face and a colour only as property of an extension, it must be conceivable that they can exist independently from any whole.

4.2.2   ONTOLOGICAL INDEPENDENCE AND FUNDAMENTALITY

Campbell suggests that the priority of tropes is of metaphysical kind. He defines as "metaphysically basic" those entities that are *possibly* capable of independent existence (Campbell, 1981, p. 479). The matter, in fact, is not if these entities exist *actually* as independent, but if they present the conditions for an independent existence. Williams's tropes are properties that *possibly* can exist apart from objects. Even if, normally, tropes occur in compresence with other tropes in bundles, to be part of an object is not a necessary condition for trope existence[122] If there is a true possibility for a trope to exist as detached from the object of which it is a proper

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[121] There is a large agreement on the thesis that tropes were already recognized by Aristotle and by medieval philosophers. But in these earliest account, tropes, or individual accidents, were properties of substances or substrata, therefore they were not independent entities. In fact, a tenet of Scholasticism was that substances, and not properties, enjoyed the status of independent entities. Excellent surveys of the medieval problem of universals are provided in (Spade, 1985) and (de Libera, 1996). See also (de Libera, 1996) and (de Libera, 2002).

[122] See Campbell (1990), p. 21 and 69-70 for such interpretation.

part, then the trope enjoys existential independence. Wholes and universals, instead, cannot exist without tropes. Take for example material objects. If we think, as Williams does, that material objects are nothing over and above the sums of their properties, we can imagine in what sense a trope is prior to its bearer (a similar example is made by Williams himself). Suppose that John is the sum of the trope *t being 1, 80 cm tall*, of the trope *b being blond* and of the trope *h being a human being*. When John becomes old, his hair changes from blond to white. So the trope *b* disappears and the new trope *w having white hair* becomes a part of the sum that is called John. But, strictly speaking, John too is disappeared, because John was the sum of trope *t*, trope *b* and trope *h*. There is a new sum, that we call John2. Now, trope *h* and trope *t* continue to exist even if John is disappeared. So the identity of John depends on the existence of all his tropes whereas the existence of its constituent tropes does not depend upon the existence of the sum John.

Campbell (1981; 1990) defends trope independence offering examples of free-floating tropes as the blue of the sky or the colours of the rainbow. This thesis, however, has found a strong opposition in the literature[123]. I think that Campbell's examples of free-floating tropes are hardly plausible (for instance, colours – admitting that they are really example of fundamental properties – are however dependent on electromagnetic radiations) but it seems to me that we have no reason to ban a priori the possibility of absolutely independent tropes.

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[123] For a defence this instead Schaffer (2003) which has discussed the plausibility of property primitivism and its difficulties, proposing its own alternative argument for property independence in the theoretical setting of a bundle theory.

A problem that has been pointed out by critics of trope independence is how can we tackle the fact that tropes are independent entities with the semantic fact that our referring devices seem to denote them as fragments of more complex wholes? Typically, trope-referring terms are expressions like "Socrates's wisdom" or "the red of this apple". So it seems that tropes can be referred to only as properties of some bearer. It must be said, first, that whereas Williams recognizes to trope existential independence, he thinks that tropes can be identified by means of their being parts of bundles. So there seems to be a reason to think that the aforementioned difficulty is only apparent.

A defender of this version of trope theory might be willing to admit that tropes considered apart from their bearer do not have clearly identification conditions. But according to such a defender, tropes nevertheless are distinct entities on their own. Williams would have denied that there is a genuine ontological difficulty here. To distinguish and to count tropes in a selected location at a given time and to re-identify them at some later time are questions which must be answered on an empirical basis making reference to bundles that have such tropes. However, tropes have existence and identity-conditions on their own: that trope b is a different entity from trope c does not depend on their belonging to different bundles. It is a primitive fact that they are distinct entities[124].

Campbell (1981) stresses that according to Williams's theory tropes should be considered as independent properties, able to exist without a

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[124] This issue is still largely debated nowadays. I think however that there is not a real difficulty for trope theory here. Therefore, I will not go more deeply into this difficulty here.

bearer[125]. This point – that I call property primitivism following (Schaffer, 2003) – characterizes strongly Williams's particular version of trope theory. A related aspect to trope independence is that tropes are more fundamental (or more real) than all other entities because the existence of all other types of entities is derivative upon them. Williams claims that tropes «are the primary constituents of this or any possible world, the very alphabet of being. They not only are actual but are the only actualities, in just this sense, that whereas entities of all other categories are literally composed of them, they are not in general composed of any other sort of entity» (Williams, 1953a, p. 7).

In this model, tropes are the only entities to enjoy the status of fundamental entities, thus representing the metaphysical ground of everything else. The question concerning whether one ontological category is more fundamental than another has recently become an important point in contemporary debate in ontology[126]. To describe a certain ontological category as fundamental means, in Lowe's definition, to claim «that the existence and identity conditions of entities belonging to that category cannot be exhaustively specified in terms of ontological dependency relations between those entities and entities belonging to other categories» (Lowe, 2006, p. 8). This seems to be very similar to Williams's conception

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[125] Campbell takes Williams's idea of trope independence to the extreme, denying that relational tropes are primary entities. Relations in fact need elementary trope as their bearer, because a relation is in need of having terms, so they are in some sense dependent entities. For a critical discussion of tropist reductionism of relations, see (Mertz, 1996). Campbell's account of relations is analyzed in the pages 160 to 162.

[126] Think for example to all the essays and collections on grounding and fundamentality appeared in the very last years, as for example (Chalmers, et al., 2009), (Correia & Schnieder, 2012).

of this issue. In Williams the notions of ontological independence and fundamentality are strictly connected to each other. But this definition of fundamentality in terms of ontological independence should not be taken for granted. Fine for example argues that we cannot read off what is real (or fundamental) from what is basic (ungrounded or ontological independent) (Fine, 2001, p. 41). For example, I can suppose an ontology that admits living bodies as ontological independent entities: they are so because – according to some readings of ontological independence as Lowe (2009) – their conditions of identity are not rigidly dependent on the identity of their component parts. Living bodies can change some of their parts while remaining the same bodies, thus maintaining their identity. Such ontology can however consider living bodies as not ontologically fundamental, insofar as "fundamental" things are those in virtue of which all else exist. Instead, according to Williams, only fundamental, basic things are really ontologically independent.

Nevertheless, neither Williams nor Campbell offer a more detailed account of this concept of *metaphysical priority*, which is in itself quite an obscure notion. We can say that metaphysical priority is a sort of non-causal or temporal priority. The view that tropes are the fundamental ground level of reality seems to lay on a hierarchical conception of reality. It must be also said that such an old conception was not very popular at the times Williams wrote. Even if the idea of a hierarchical structured reality is an ancient one, analytic ontology has not focused carefully on it until the first years of the XXI century[127].

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[127] Pioneering works on this theme are (Fine, 2001) and (Schaffer, 2003).

Schaffer defines "priority pluralism" a theory according to which there is a plurality of fundamental entities that are standardly conceived as proper parts of the cosmos (Schaffer, 2010). In opposition to monism, priority pluralism asserts the priority of the parts on the whole. Basic entities ground the existence of all other entities. What it is not clear is whether the grounded entities are ontologically additional to the ground level: Williams's texts in fact do not go deeper into this issue. However, I think that we can reasonably conclude that Williams's reductionism considers universals, material objects, process and events as nothing more than the mere sum of their parts. This can be better understood in terms of the Armstrongian notion of the "ontological free lunch" (Armstrong 1997, p. 12): if sums are no addition of being upon the parts, we can allow for every sum we want to admit without paying any ontological cost. This could set the problem of the ontological status of universals, that supervening over sets of tropes are no addition to Williams's ontological inventory.

For what regards material objects, he is clear in assigning to tropes a priority with respect to them. Williams accords to tropes a sort of *epistemological priority*. He observes that which is primarily present to our senses are tropes, that are abstract in the sense of partial aspects of a more comprehensive whole. Consider for example this passage from "The Elements of Being":

> What we primarily see of the moon, for example, is its shape and colour and not at all its whole concrete bulk. If now we impute to it solidity and aridity, we do it item by item quite as we impute wheels to a clock or a stomach to a worm. Evaluation is similarly focussed on the abstract. What most men have valued the moon for

is its brightness; what a child wants of a lollipop is a certain flavour and endurance. He would much rather have these abstract qualities without the rest of the bulk than the bulk without the qualities (Williams, 1953a, p. 16).

Williams points out that to consider the moon as a solid planet is the result of a judgment, based on acquired scientific knowledge: the knowledge of facts (for instance, that the moon is a solid planet, that the clock has wheels) seems to be a matter of judgment, not of phenomenological or epistemological evidence. Instead, he thinks that our primary epistemic experiences are obtained by means of perceptive acts that select partial aspects on which our attention is focused at that moment. These perceived aspects as not only phenomenal but correspond to the real parts from which reality is composed, that Williams considers to be tropes[128].

It is possible that here Williams is remembering a similar point made by Stout. Contra Russell, who defended the possibility of an independent and primitive acquaintance of brute things, Stout argued that the primary data of our knowledge are particular properties. In fact, if a thing is nothing apart from its properties, we cannot have knowledge of it if not by the knowledge of its properties[129].

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[128] Williams, in a series of articles, argued against any kind of phenomenalism or idealism: see (Williams, 1933a), (Williams, 1934a), (Williams, 1934b).
[129] See above section 3.2.2.

4.3 Do universals exist? Trope solution to the problem of universals

Williams's trope theory is not a nominalist one – as he observes – if we label as "nominalist" a theory that avoids any commitment to properties (Williams 1986, p. 10). However, in order to avoid terminological confusion, I apply the label of "nominalism" to his theory, while the name "austere nominalism" is reserved for theories that ban any reference to properties, according to the terminology established in the first chapter.

The recognition of properties in an ontological inventory of the world involves a reflection upon the role played by properties in ontological explanation and, second, a consideration on how they would look like in order to play the explanatory roles for which they are invoked[130]. The problem indeed is not only to find pieces of evidence against austere nominalism in favour of the admission of property, but to decide if properties should be conceived of as universal or particular entities, in order to understand how they can fulfil their explanatory role (for example explaining objective similarity among things). As these themes are only sketched in his famous "The Elements of Being", we have to recur to a paper that Williams wrote in the same years, "Universals and Existents", but that remained unpublished[131], in which he explains accurately his view about realism of universals.

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[130] In approaching the issue in these terms, I follow the metaphysical methodology set by (Oliver, 1996, pp. 11-14).

[131] This paper was probably written about 1959. Williams presented it as a talk but left it unpublished. It was published after his death, and prepared for publication by David and Stephanie Lewis. See the note of the editor in (Williams, 1986) Lewis was a former student

In the Forties Quine[132] discussed what categories of entities were acceptable from a nominalist point of view and set out a method of paraphrases in order to eliminate the apparent reference to "queer entities"[133] as classes, numbers, kinds. Properties, too, were comprised among the entities that were eliminated from a nominalist ontological inventory of the world. Explicitly referring to this quarrel[134], Williams (1986) presents his trope theory as a suitable alternative to Quine's austere nominalism. He agrees with Goodman and Quine that universals have to be eliminated and defined in terms of entities acceptable from a nominalist point of view, but observes that their accounts suffer from difficulties, as I will explain in more details below.

In this paper, Williams declares his intention to explain the fact that things show exact similarities without recurring to a common nature (universals). He presents the problem as the one concerning the distinction between two aspects of a thing: the "such", i.e. the kind to which the thing appear to belong, the characters that a thing shows, and the "this", namely its being a concrete particular, a case of existence, a particular existent. In the following pages, Williams states that one of the basic tasks

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of Williams at Harvard: on the relationships between Williams and Lewis, see (Fisher, 2015).

[132] See (Quine, 1954). For an evaluative account of Quinean method of paraphrases you can see (van Inwagen, 2008).

[133] This expression comes from (Williams 1986, p. 6).

[134] See Williams (1986, p. 6-9). Williams and Quine have been colleagues at Harvard University, and references to Quine's theories are disseminated through Williams's works. I think that researching about these relationships would offer a deeper understanding of Williams's theories, especially for what regards his understanding of Carnapian philosophy, that I suggest is related to the origin of the very notion of trope.

of an ontological enquiry on properties is to determine if the case of particular existence that a thing is (its "this"), and the characters that the thing has (its "such"), are two distinct ontological categories. This distinction between the *thisness* of a property and its *suchness* is then contrasted with another distinction: the one with the "that" of something, the fact that a thing is existent. The sense of the distinction is that we can recognize the *suchness* of something, namely is being ascribable to a kind, only by means of the acknowledgment of the thisness (the particularity) of a thing that is existing. In other words, kinds exist only in things: they are, to borrow an expression from old ontology, *universalia in rebus*.

However, even if kinds are, in some sense, acknowledged, they are not among the entities admitted in Williams's ontology. General entities, as kinds and universals, are dependent on other more fundamental entities. In order to understand this statement, I need to introduce another distinction: the one between abstract and general entities. Abstract entities have different conditions of existence with respect to general entities. Williams refers to Stout's thesis that abstract is neither synonymous of general, nor particular of concrete. He reminds that, in his criticism of Stout, Moore was misguided by the prejudice that a character, say an abstract entity, should be a universal, therefore he cannot make sense of the idea that an absolutely specific *character* is particular (Williams 1953b, p. 175). Contra Moore, Williams argues that the notions of abstract and universal (or general) have to be distinguished and supports his statement with the psychological observation that abstraction is a different act from

generalization (Williams, 1953b, p. 176). Consequently, the products of these acts should presumably be different.

The primary data of our knowledge are particular qualities and particular relations that are isolated from the context through acts of abstraction and offered to our attention. All other elements of our knowledge occur as results of operations (for instance, generalization) on these basic data that are tropes. Universals and kinds are the results of operations of generalization on particulars properties. Each particular property, together with all other particular properties expressing the same quality, constitutes a kind. These kinds, under which exactly similar particular properties are grouped, play the role of universals in Williams's ontology. It is possible to recognize a universal on the basis of just a property because each property exhibits a qualitative character that is similar to characters that other particular properties have. So, it is possible to have a notion of a universal by considering only a particular, by identifying in such trope the aspects that can possibly characterize another particular, other than its particularity. A trope could manifest an *essential* character that makes it look like other tropes, and this similarity of kind is the universal. This is how Williams rethinks the classical distinction essence\existence: a trope is a particular existent, irreducible to something other, which numerically distinguishes itself from any other particular (strong non-identity); beside this fact, a trope manifests too, in his particularity, a character, an essence, that makes it similar to other particulars (weak identity, not numerically, identity in an aspect).

However, Williams is not an eliminativist with respect to universal discourse. Our ordinary, common-sense understanding of statements with

universals is not meaningless, even if universals actually exist only as classes of particular properties. He admits the meaningfulness of statements with universals, but at the level of truth-makers such statements are made true by particular entities. Campbell (1990, p. 44) calls this solution a "painless realism", a kind of moderate realism. Talk about universals is not banned or eliminated, but only tropes provide truthmakers for general propositions.

In this section I examine in details Williams's reductionist strategy about universals. In Universals and Existents the admission of universals is explained as a bad consequence stemming from a misleading figurative use of language of attributes: from the semantic fact that the same adjectival term is predicated by many subjects we are induced to draw the inference to the ontological fact that one singular entity, named by the adjective, may exist. This is a typical nominalist remark. The alleged reference to universals is explained by appeal to linguistic considerations. So the ontological difference between universals and particulars is reduced to the linguistic difference between names and predicates. Williams's analysis starts form the acknowledgment that in the world there are facts such as (1) the redness of trope t and (2) the redness of trope h. Sentences that describe such facts are like (3) "this trope t is *a red*", where "is a red" should be intended as "is one of the red properties". This sentence is similar in logical form to (4) "Socrates is *a man*" where "man" is a *common name* that denotes a member of the class of men. The confusion arises when we read (3) as (5) "this t is Red", where "a red" is substituted by "Red". So we have "this t is Red", "this b is Red", and we are misled to recognize an identity: the predicate red in sentence (3) is intended to refer to the same

property which is referred to by the predicate in the sentence (6) "this trope h is a red". We are misled to intend "red" as a name proper of the universal red, the same entity identical in the two occurrences. This argument points to the application conditions of proper and common nouns. In (6) we are tempted to take the strong notion of identity, "*a* is identical to *b* if and only if every part of *a* is a part of *b* and conversely", to interpret this identity as involving the reference to a unique entity recurrent in the two cases, namely a universal. The illusion of a reference to universals is due to a scarce accuracy in language about identity conditions[135], similarly to the one that occurs when we speak of the same object to denote different temporal parts[136]. Williams in fact seems to think that we pragmatically relax identity conditions according to what we are interested in talking about. So the alleged reference to universals arises by an erroneous reading of "*t* is red and *h* is red, so *t* and *h* have the same colour" as expressing identity instead of exact resemblance[137]. Williams's

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[135] Williams here refers to the distinction between the meaning "loose and popular" and "strict" of the predicate "same".

[136] For physical object too, the notion of identity required by them is the loose one. According to Williams, objects results from many different qualitative temporal slices. Similar wholes composed by different tropes in a spatial pattern and in a temporal succession give us the idea of a unitary object: «that universals are not made nor discovered but are, as it were, 'acknowledged' by a relaxation of identity conditions of thought and language, will become attractive as we notice, for example, that similar relaxations occur in our treatment of ordinary proper names of concrete particulars, especially in the common idiom which, innocent of the notion of temporal parts of a thing, finds the whole enduring object, a man or a stone, in each momentary stage of its history. For here and now, we say, is the person called 'John', not just part but all of him, and now again here is the same 'John', all present at another instant, though in strict ontology the 'John' of today is a batch of being as discrete from the 'John' of yesterday as he is from the moon» (Williams, 1986, pp. 8-9). See (Williams, 1951, p. 458) for his explicit endorsement of four-dimensionalism.

[137] See also Williams (1963, p. 615): «It is easy and customary, however, in dealing with abstracta, to slacken this pitch of discrimination, ignore the primitive distinctness of case, and adopt the rule of speech and thought that abstract indiscernibles are to be treated as

suggestion is that «universals are neither made nor discovered but are "acknowledged" by a relaxation of the identity conditions of thought and language» (Williams, 1986, p. 8). As the concrete individual is, in Williams's theory, the whole comprehending all his temporal parts, a universal is a set of distinct but exactly similar tropes, and only a loose use of identity conditions leads us to speak of the same entity[138]. Languages of general and singular terms are different ways to refer to the same reality, like two different ways of counting the same phenomena. But both of them are good ways of counting. Universals are ways in which tropes are recognized to be qualitatively similar, and form kinds on the base of the similar characters that they manifest.

Williams specifies his alternative proposal in terms of «to provide a so-called logical construction, out of resembling particulars, which by certain systematic changes of locution will perform the essential functions of the notion of universal» (Williams, 1986, p. 6). Here "logical construction" refers to the tropist treatment of universals as sets. Williams partakes of nominalist programs but he observes that contemporary proposals like Goodman and Quine's ones fail significantly to give a satisfactory nominalist account of the explanatory roles of properties. Williams criticizes mainly the super-extensional model of Goodman, while he is more indulgent with Quine because of his admission of classes. Part of his

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identically the same entity, the universal, mysteriously immanent in each of the situations where the sharper discrimination observed the cases».

[138] However, rigorously this example is only an analogy because the relations involved in the case of universal and in that of a perduring concrete individual are different: the first is class membership, the second one mereological composition.

criticism consists in pointing out that the strategy of the extreme extensionalist nominalist cannot give a plausible account of intensional phenomena[139]. Williams does not share Quinean bias against intensionality and modality. For what regards Quine's account of properties as sets of concreta, he remarks that this purely extensional theory cannot give account of facts as for example, that we can tell whether two characters are distinct without knowing whether they determine distinct classes[140]. Extensionality is not considered a good criterion in order to identify characters: in fact, we can admit in our ontology either character whose extension is not completely known by us at the moment, either characters effectively coextensive but that pick up different qualitative aspects of things. These two difficulties disappear when we take abstract particulars or tropes to form class of resemblance, because tropes are more fine grained than concrete particular and do not exhibit multiple points of resemblance. Moreover, coextensive properties are expressed by different tropes: to quote the famous Quinean example, the properties *renate* and *cordate* are supposed to apply to the same concrete things in our world, so they have the same extension, but they can be distinguished being two distinct tropes. Williams in fact reflected expressly about the difficulty, in Quinean ontology, to preserve such distinction (Williams, 1986, p. 7).

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[139] For further discussion on the difficulties of Quine's nominalism, see (Armstrong, 1989).

[140] See (Williams 1986, p. 6) «This obviates all such purely *extensional* anomalies as those just mentioned, but fails for the *intensional* purposes which, though Mr. Quine denounces them, have traditionally, and I think with reason, been the most valuable occasions for the theory of universals-to explain the fact, for example, that we can tell whether two characters are distinct without knowing whether they determine distinct classes and the historically and scientifically important difference between analytic and synthetic truths».

Since I have introduced resemblance in this preceding paragraph, I will describe briefly how Williams explains this concept. Williams assumes the existence of primitive relations of resemblance (reflexive, symmetrical and not transitive, except for the case of exact resemblance). However, this notion of primitive resemblance is seen by many enemies of trope nominalism as problematic[141]. There are many different stances among trope philosophers about resemblance, and this is one of the most debated aspects of trope theory. Even if we specify resemblance as a formal relation, Armstrong points out that the formal properties of resemblance are part of the cost of the theory, because these features have to be taken as primitive, unexplained, axioms of resemblance, whereas a realist can explain the formal properties of resemblance by the formal properties of identity[142]. However, since Williams does not address explicitly this problem, I do not deal here with it, referring to (Maurin, 2002) for a survey of these criticisms and a reply from a tropist point of view.

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[141] See for example (Daly, 1994, pp. 254-258) and (Hochberg, 1998).

[142] See (Armstrong, 1992, p. 25): trope theory requires axioms in order to set out the formal properties of the relation of resemblance (symmetry, reflexivity, non-transitivity). Transitivity is restored in the special case of exact resemblance. See also Armstrong (1989, p. 57). Apart from the problems about the relation of resemblance, how does Williams explain the fact of the existence of objective classes of exact resemblance? What are the criteria of membership in classes? Moderate nominalist accounts have the problem to determine the conditions of membership in the class of resemblance. And, as Hochberg remarks, the tropist cannot resolve the problem specifying the class only by extension, because he has to justify the non-arbitrariness of the membership in the class. «The point - this is the remarks of Hochberg- is that he cannot do so without introducing a prototype instance to play the role of the realist's universal» (Hochberg, 2001, p. 89).

To conclude this section, I would observe that what emerges from this analysis of universals is the interest that Williams shows for epistemic data to support ontological arguments. Williams's account is very careful to how tropes are brought to perceptual attention. In fact, tropes are primarily individuated as the objects of acts of abstraction. In addition, Williams makes appeal to the plain fact that universals are not brought by pure perception. We perceive colours, shades, sounds and tastes, and all these experiences are of particular cases. Universals arise only in a second moment, from an act of classification and generalization upon primary data. Only because such tropes manifest objective similarities, universals can be recognized as the way to group and classify such similarities. In the previous chapter I have shown that this approach to the problem of properties characterized Stout's analysis. As a conclusion of this section, I would to stress how Williams was familiar to this approach. I think in fact that the numerous references to Stout in his papers show a careful reading and understanding of Stout.

4.4 WHAT MATERIAL OBJECTS ARE?

I have already said that Williams assumes tropes as the building block by which all reality is composed. Accordingly, material objects are composed by tropes. The underlying idea is that properties are *parts* of objects. Of course, this is not the ordinary sense of part we usually employ in our everyday language. We can say, for example, that since a house has a door, the door is a part of the house; however to say that since a house has the property to be painted in yellow, that particular shade of yellow is a part

of the house surely sounds odd. But is exactly a sense like this that Williams wants to comprehend in his concept of part. In fact, with the word "part" he points to a more generalized concept as compared to the one intended by the term in everyday language. This is an extended concept of part which Aristotle expressly denied to be appropriate to properties, when he said that non-substantial particulars, viz. individual properties, are comprised into something but not as a part (Cat. 1 a24-25). According to Aristotle, parts of substances are, in fact, substances as well. In Williams, instead, the concept of part covers all that can be said to belong to something. It is perhaps not too hazardous to posit that Williams – who surely knew Husserl's works[143] – could be aware of Husserl's similar extensive characterization of the concept of part[144].

Williams assumes bundle theory as an ontological model that can support the intuition that properties are the parts out of which all reality is composed. In fact, according to bundle theory, material objects are clusters made up of properties as their solely parts. There are various models of bundle theories, but all of them share these two basic assumptions: (1) properties are components of things; (2) properties are the only components of things, there is no underlying substance, substrate or nucleus

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[143] In the biographical note written to honour Williams's death Quine emphasizes that: «[Williams] studied at Berlin, Gottingen, and Paris, immersing himself in Husserl's Phenomenology to the point of immunization» (Firth, et al., 1983, p. 246). Various references to Husserl are present in Williams's papers, see for example (Williams, 1933b, p. 624) and (Williams, 1963, p. 623). This is another neglected aspect of Williams's philosophy, and I hope to handle it in further research.

[144] Husserl's definition of "part" is as follows: a "part" is what is present "in" an object; everything is a real constituent of an object. The reference is *Logical Investigations*, vol. III, par. 2. See (Simons, 1987) for a survey of various conceptions of part, the first essay in (Smith, 1982) and (Mulligan & Smith, 1983).

that can exist independently of the various properties while supporting them. A large part of ontological paradigms considers properties as being dependent on substances, or substrata, as their bearers: for instance, in traditional substance-attribute ontology, substances are the bearers of properties and the subjects of change and are ontologically (if not caus-ally) independent for their existence[145]. Lowe (1998) proposes to define ontological independence of substances in terms of identity-independence. Substances are identity-independent since, for a substance being the kind of thing it is (namely a substance) is not dependent on any y which is different from the substance considered itself. For this reason a substance, even if existentially dependent on its having some parts, is not identiy-dependent on these parts because it remains the same sub-stance even if it changes its parts.

The bundle theory is an alternative model for substratum theories. Ac-cording to this theory, properties are not dependent on substances, or substrata, as their bearers but, on the contrary, things are explained as bundles of co-existent properties. As for the notion of the substratum, it is discarded, inasmuch as it is regarded as an unknowable "this" distinct from properties and underlying them. Armstrong (1989, p. 115) claims that it is utterly weird to think of properties as existing without being the properties *of* something, in that this would contradict the very notion of property. However, this reasoning hardly sounds as a confutation of the bundle theory. Armstrong seems to beg the question because, on his sub-stratum attribute view, properties cannot exist if not instantiated in sub-

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[145] The strong intuition that lies behind substance-attribute ontology is that properties cannot be free-floating entities but should rather be considered as the properties of something.

strata, or thin particulars, as he calls them. But this conception of instantiation is exactly what bundle theory refuses as mysterious.

There are models of bundle theories with universals in which concrete particular objects are considered as bundles of compresent universals[146]. However, this model of bundle theory with universal properties as their components has been exposed to a set of objections that have made it few palatable in its non-revised, standard version[147]. In this context, I avoid providing a detailed examination of the objections that can be raised against standard bundle theory. I refer to (Van Cleve, 1985) for an exhaustive discussion of these difficulties and I limit myself to expose only one of the most famous objections, formulated by (Black, 1952).

One of the merits attributed to the bundle theory proposed by Williams is to avoid such difficulty. For this reason, I introduce here this problem. Black imagines a symmetrical universe with only two denizens, two spheres having all the same properties. Properties are assumed to be universals and the spheres to be bundles of properties and nothing more. The two spheres are exactly indistinguishable by means of their properties, but they are numerically two, not one. Hence, the Principle of Identity of Indiscernibles fails in this universe. Because the existence of two objects perfectly similar but distinct is a true possibility, if you insist that universal properties are the building block of the world, you are compelled to introduce in your ontology an item responsible for the individuation of each bundle, something like a substratum or a bare particu-

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[146] See for example (Russell, 1940).
[147] (O'Leary-Hawthorne & Cover, 1998) is an attempt to replay to these criticisms.

lar[148]. If individuals are bundles of universal properties, it follows that two bundles with the same properties result to be the same individual, because sets are determined uniquely by their members. On the contrary, bundle theory with tropes is customarily accounted to be free from these difficulties[149]: two bundles of tropes can be exactly similar (showing the same characters) and remain different individuals because their tropes are different entities.

In several texts, Williams specifies his intuitions about the composition of bundles making explicit reference to the calculi of individuals of Leonard-Goodman[150]. However, in "The Elements of Being" we can found are only a sketchy illustration of the principles of mereological composition adopted. It seems that, among the motivations that lead Williams to prefer mereology to set-theory there is the idea that mereological composition origins bundles that result to be concrete wholes instead than abstract sets. What is the difference between part-whole composition and set-theoretic membership? Part-whole composition relies on relations that are similar, under certain aspects, to set-theoretic relations, for ex-

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[148] For a reply to the charge that realist must recognize substrata see (Hochberg, 1984) and (O'Leary-Hawthorne, 1995).

[149] Simons (1994), who rises several objections against standard bundle of tropes theory, deserves to be mentioned here. I postpone the discussion of these difficulties to a later paragraph: see below 5.4.5

[150] In Williams there are explicit references to the calculus of individuals, as it is developed in Leonard & Goodman (1940): see for instance (Williams, 1953a, p. 9), (Williams, 1959, p. 204), (Williams, 1986, p. 4): «That the category of abstract particulars thus indicated conforms to the logic of whole and part, or the so-called calculus of individuals, that they have logical sums and products, and so forth, and that being by definition finer or lesser parts than the concreta in which they occur they are in an important sense the 'elements of being', I once argued in print in the *Review of Metaphysics*». See also (Williams, 1959, pp. 219-220) for a defense of unrestricted mereological composition against supporters of other forms of compositions as wholes or substantial individuals.

ample in having wholes extensional identity-conditions. But sets are abstract entities: the set of all the blue books is not itself a concrete object, whereas sums are concrete as the individuals that compose them. This way, the problem of how to obtain concrete individuals from abstract entities appears to be fixed.

At first glance, this might seem a somewhat contradictory point in Williams's theory. Tropes had been said to be abstract entities. The bundles they form are considered to be concrete, but it is also said that tropes are not entities of a different kind than the bundles they form. My interpretation of this apparent difficulty is that here the meaning of "abstract" has to be understood in a peculiar way. Once this meaning of "abstract" has been better outlined, the assumption that tropes are abstract entities is not more in contradiction with the statement that tropes are as concrete as their sums. I think that when he says that tropes are abstract he is not saying that they are of the same ontological category of entities such as sets, meanings, propositions or numbers. For tropes, to be abstract is to being in a deeper degree of refinement (abstraction, in this sense) respect to concreta. Abstract entities and concrete entities do not belong to different ontological kinds. At the level of fundamental entities, there are only abstract entities, or tropes. Concrete entities do not form a self-standing category: they are only complex of abstract entities. The fact that we use linguistic devices to refer to complex of abstract entities as if they were unitary and fundamental entities is due only to the fact that they are epistemologically relevant and pragmatically important for our life.

It can be inferred what is meant by concrete sums in this ontology from certain passages, see, for instance, (Williams, 1959, p. 203) and (Williams, 1986, pp. 2-4). In Williams's view, the world is a disaggregated totality of a multiplicity of particular, individual, actual tropes[151]. Williams overtly says that sums that we identify and recognize as unitary objects are *conventional* unities, because our language has names to refer to such unities, and not to other. To identify the borders of objects is only a function of human interests, there are not natural constraints. The objects of our folk ontology are conventional objects. Our language has names only to designate cognitive relevant unities as well as unities that are useful to practical purposes and no names to refer to sums as "the top half of the automobile" or "the sum of a thread on a bolt in it with the Queen of Sheba". That we do not consider these sums as unitary objects is a matter of pragmatic, and not of ontology.

Williams seems to presuppose here an axiom to the effect that for any non-empty set of things (no matter how disparate or scattered), those things have a sum. A principle like this is known in the literature as unrestricted composition. The assumption of a model of unrestricted composition allows for the existence of scattered sums and of any sort of arbitrary collections. An explicit endorsement of this principle can be found instead in (Williams, 1959, p. 219), where he charges critics of mereological unrestricted composition with vagueness: his point can be explained in these terms: if it is true that in our everyday life we are inclined to

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[151] See (Fisher, 2015) on Williams's actualism.

consider certain units as privileged, we are not provided with criteria for defining which of these sums are more unitary than other ones.

However, a relation of compresence is introduced in order to explains the fact that some tropes, and not some other, coexist together to form sums that manifest a certain form of coherence and unity. The suggestion is that relational elements are important for the constitution of a thing. He is not clear on the ontological status of these relations, but he seems to countenance that compresence is a relational trope, whereas Campbell – which adopts and integrates Williams's trope theory – denies it. Williams (1953, p. 8) mentions other bundle theorists that have recognized similar unifying relations, under different labels: Russell's compresence, Mill's coinherence, Stout's concrescence and Goodman's togetherness. Compresence is a simultaneous presence in a space-time sector. Only little information is given about compresence. We can say that compresence is an equivalence relation, namely a binary relation on a set A characterized by three properties: R is reflexive, symmetric and transitive. Let A the set of all tropes and define

R = {<x,y> | trope x and trope y are compresent}

i.e., both x and y are in the same place at the same time. For any trope x $\in$ A, x is compresent with itself, so <x,x> $\in$ R; if tropes <x,y> $\in$ R, x and y are compresent, so <y,x> $\in$ R; if tropes <x,y> $\in$ R, and tropes <y,z> $\in$ R, then x and z are compresent too with y[152].

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[152] To be exact, Williams does not offer a formal definition of this relation. See instead (Bacon, 1995) for a formal account of compresence relations.

Tropes related by compresence relation are grouped in equivalence classes. Complex individuals are mereological sums of many equivalence classes of compresent tropes, one for each spatial point in a certain moment (Williams 1953, p. 81).

Williams suggests that no regress of relations arises. In fact, assuming mereological composition plus compresence relations suffices in order to explain the cohesion of sums. The relevant passage is: «what one normally means by "the whole of parts a and b," I think, is the object which thus combines a and b and their relations, bonded, as it were, by the fact that the relations are theirs; and such wholes, and not mere sums at all, are what pass as "sums" in the calculus of individuals, whose laws are in fact not true of mere sums» (Williams, 1963, p. 604). As I read this passage, Williams is asserting that mereological composition plus relations of compresence suffices to stick parts together. The underlying idea seems to be that the addition of relations do not arise regresses like the one made famous by Bradley. Compresence relations actually relate, and this is their job[153]. Neither problem of regress nor of unity arises. However, the alleged regress involved by compresence is a point that has elicited the most glowing debate between supporters and detractors of tropes, and that has consequently received many attempts of improvement[154]. This problem was famously discussed by Russell (1903)[155] and in

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[153] See on the concept of actually relating relations (Betti & Wieland, 2008), (Korhonen, 2013, pp. 117-123) and (Peacock, 2013).

[154] The problem is discussed, among others, by (Trettin, 2004), (Vallicella, 2002), (Cameron, 2006), (Betti & Wieland, 2008) and (MacBride, 2011). An attempt to fix this problem for trope bundle theory has been offered by (Maurin, 2010b).

the sixties by Bergmann in his book "Realism". Relations must actually relate and not being simply added to the collection of non-relational tropes. The charge is that to pose relations unable to fulfil the task of unifying relata can lead to an infinite vicious regress, an argument that was famously articulated by Bradley.

The argument of regress is well-known. Suppose that trope *a* is compresent with trope b. Therefore, there is a Relation R of compresence holding between *a* and *b*, symbolized as R(ab). But then, tropes (ab) are compresent in the same bundle with R, so it seems that a relation of compresence, call it R1, holds between the pair (ab) and R. This starts a regress to infinity. It seems, actually, that if a second relation is added to relate the tropes with the first relation of compresence, then this second relation – that it is supposed to be of the same ontological kind of the first – requires a third relation to join it to the bundle R(ab), ad infinitum. It is argued that the regress involved is vicious because, at each stage, the relation is in need of another relation to fulfil the role for which it has been introduced, so it result to be ineffective. The problem is not just

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[155] In section 54 of the *Principles of Mathematics* (Russell, 1903) says, discussing about the unity of the proposition: «Consider, for example, the proposition 'A differs from B'. The constituents of this proposition, if we analyze it, appear to be only A, difference, B. Yet these constituents, thus placed side by side, do not reconstitute the proposition. The difference which occurs in the proposition actually relates A and B, whereas the difference after analysis is a notion which has no connection with A and B. It may be said that we ought, in the analysis, to mention the relations which difference has to A and B, relations expressed by *is* and *from* when we say 'A is different from B'. These relations consist in the fact that A is referent and B relatum with respect to difference. But 'A, referent, difference, relatum, B' is still merely a list of terms, not a proposition. A proposition, in fact, is essentially a unity, and when analysis has destroyed the unity, no enumeration of constituents will restore the proposition».

that there are infinite compresence relations: the difficulty, rather, is that compresence is a fact obtaining *in virtue of* the presence of a compresence relation, but the regress shows that, actually, this relation is unable at each stage to explain the obtaining of this fact, that is dependent on to the obtaining of a fact in a further stage, and so on infinitely.

Williams was aware of these difficulties regarding the notion of relation. In (Williams, 1963c), he makes a reference to the problem whether the addition of relations is sufficient for stick tropes together. It seems that he conceives relations as actually relating their terms. This reading seems to be confirmed by another passage of the paper I have quoted above, where it is said that no regress arises because tropes are glued "by the fact that the relations are theirs" (Williams, 1963, p. 605). Differently from other tropes, relational tropes are somewhat dependent on their relata.

4.5 CONCLUSION

Williams has been the first strenuous defender of tropes in contemporary philosophy. He vindicates, in many points of his writings, the importance of tropes and complains that particular properties have been – with few exceptions[156]– so neglected by contemporary philosophers, or explicitly

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[156] Williams is fair in recognizing the importance of the forerunners of the trope theory, among which Stout, Sellars and a range of contemporary scholars working on Aristotle that have defended the particularist reading of accidents (see Williams 1986, p. 4). Sellars defended a tropist reading of Aristotle in (Sellars, 1957). See also (Sellars, 1952). See (Morganti, 2012) for a critical assessment and a re-proposal of Sellarsian moderate nominalism.

refuted as "unintelligibly paradoxical" (Williams 1986, p. 4)[157]. He recognized that, concerning tropes, there are strong differences in intuitions among philosophers. One can for example think to what, today, van Inwagen says about the simple impossibility to make sense of the very notion of trope[158].

Apart from the different intuitions on the metaphysics of properties, Williams tries to show that we have good reasons to introduce tropes in ontology. Take entities like events, sensations, processes and so forth, he says. Most philosophers recognize their existence, and categorize them in different ways. But Williams thinks that accepting tropes can give a simple and coherent account of all these entities: events, sensations and processes all can be explained as cases of tropes. So trope theory can offer a simple and economic account of the ontological domain on which we quantify.

So, even if defenders of tropes have existed in the past, and principally Stout – of which Williams admits the great influence had on him – Williams is the first to present particular properties as "the building blocks of reality" or "the elements of being". Such expressions suggest that tropes are fundamental in some sense. In what sense tropes are fundamental is the key to understand the originality of Williams's proposal, not only with respect to forerunners, but even respect to today's defenders of tropes. Tropes are fundamental in two senses: on one hand because enti-

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[157] See also (Williams, 1953b, p. 175), where the latter attempts to justify the declarations of a number of philosophers that considered the very notion of trope "plain nonsense".
[158] See (van Inwagen, 2014, p. 211): «I don't understand what people can be talking about when they talk about those alleged items.».

ties of all other categories are composed out of them, on the other hand because they are epistemic prior to universals and concrete objects. As the first sense according to which tropes are fundamental is also emphasized by contemporary trope supporters as Campbell, Bacon and Maurin among others, I would to stress instead the second sense of trope fundamentality.

Williams explicitly recognized the great influence that Stout's theory of abstract particulars had on him. Following Stout's approach to particular properties, Williams argues that we have primary acquaintance with tropes, and only in a second moment, derivatively form this prior knowledge, of objects and kinds and universals. We cannot have knowledge of universals if not by means of knowledge of particular properties. It is the same for concrete objects. What primary hits our cognitive system are particular colours, shades, textures, any kind of particular perceptual input. Objects are construed on this basis of particular perceptual data for pragmatic consideration of everyday life. The way according to which objects are construed in Williams's ontology is fair to this intuition: objects are complex mereological sums to which we accord a special status in the common-sense ontology, but they are nothing more than sums of tropes.

Contemporary advocates of tropes like Campbell (1990), Bacon (1995), Maurin (2002) assume tropes as basic building blocks of all reality. They do not address many doubts about the way in which tropes are introduced in ontology, just limiting themselves to assume them and to analyze their advantage with respect to theories with universals. Instead, Williams is more interested in investigating the independent reasons because tropes have to be introduced in ontology. Moreover, one of his most in-

teresting answers is that tropes are what is, in the first place, brought to perceptive attention: tropes are perceived as qualitative aspects of things, even if they are metaphysically independent from them. Whatever can be our reasons to introduce an entity in our ontology, I think that Williams's work can give genuine reasons to consider tropes as entities deserving to be taken into consideration.

Chapter Five

TROPES AND METAPHYSICS IN AUSTRALIA

5.1 SYNOPSIS OF THE CHAPTER

In the previous chapters I have sketched a brief history of trope theory in the XX century, analyzing the theories of the British philosopher George F. Stout (1860-1944) and of Donald C. Williams (1899-1983). I will conclude this historical survey by introducing the trope ontology proposed by Keith Campbell as a contribution to the important discussion on realism and properties that was carried out among philosophers who work in Australian universities.

Trope theory has had a great appeal between Australian philosophers: among others, David M. Armstrong who, after having criticized it, eventually recognized the great explicative power of this theory, and to Charles B. Martin, John Bacon[159], John Heil and Keith Campbell. Such

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[159] John Bacon, an American-born philosopher, became acquainted with tropes after he moved to Sydney University in the Seventies.

metaphysicians followed the theory set out by Williams (1953). The main worth of Australian philosophers is to have given a systematization of the theory: a deep analysis of the shortcomings present in the original version, as a basis for building compelling arguments for the thesis, and to answer challenges to it. It is in this systematized form that trope theory has become a main issue in contemporary analytic debate.

A point that I would to insist on is the influence exerted by Stout for the success of trope category in the Australian school of metaphysics. In fact, the acknowledgement of the ontological problem of particular properties by John Anderson, David M. Armstrong and Keith Campbell is due to the knowledge of Stout's writings[160]. Armstrong in *Universals and Scientific Realism,* the book that opened in the in the late Seventies the recent debate on universals, calls tropes "Stoutian particulars" since he recognizes the important role of Stout in defining this category. Stout was not obviously the first philosopher to introduce particular properties in ontology but, as Armstrong stresses, he was the first to put emphasis on particularism (or moderate nominalism) as a good option for metaphysicians, and to explain it in a forthright way. So his exposition is, according to Armstrong, the "classical" exposition for particularism[161].

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[160] See Campbell (1981, p. 477): «In modern time, it was G.F. Stout who first explicitly made the proposal that properties and relations are as particular as the substance that they qualify». A further acknowledgment of the relevance of Stout is that Campbell uses Stout's name for tropes, namely "abstract particulars", as the title for his seminal 1900 book on tropes.

[161] See (Armstrong, 1978.I, p. 78): «It is important to realize that this "Particularist" view of properties and relations […] is not just an eccentricity of Stout's. Stout's emphasis upon the point, and the forthright way he stated the doctrine, makes his a "classical" exposition».

5.2 ANDERSON'S DISCUSSION OF STOUT'S PARTICULARISM

5.2.1 STOUT'S INFLUENCE ON ANDERSON'S TEACHING

In the Forties, George. F. Stout moved to Australia where his son, Alan K. Stout, taught at Sydney University[162]. In 1938, Alan had known John Anderson, by then a leading figure in the Australian academic world[163]. Anderson suggested that Alan apply for the Chair of Moral and Political Philosophy in Sydney. He applied successfully and arrived in Sydney in June 1939 with his father G.F. Stout, who spent his last years in Sydney. In the years 1950-1967, Alan K. Stout was the editor in chief of the *Australasian Journal of Philosophy*. Due to his direction, this journal became widely known for hosting many discussions that led it to play a leading role in the metaphysical debate[164].

Anderson was a traditional philosopher: he was conducting seminars on Aristotelian logic in the Fifties, ignoring the most recent developments in this discipline and refusing the philosophy of language taught (in typical Wittgensteinian fashion) in Melbourne[165]. He seemed expressly hostile to the latest contributions to analytic philosophy. In fact, Anderson's main critical target was Idealism and among his primary influences were the

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[162] See the biographical note in (Passmore, 1944).

[163] For an analysis of Anderson's life and work, see (Grave, 1984), chap. 2. See also the entry "John Anderson" in *The Stanford Encyclopedia of Philosophy* (McLean Cole, 2012) for a more available reference.

[164] See the entry "Australasian Journal of Philosophy" in *A Companion to Philosophy in Australia and New Zealand* (Young, 2010).

[165] See (Armstrong, 2001, p. 14). This contribution by Armstrong is an interesting reconstruction of the great turns in Australian philosophy and on the major formative influences.

modern realists, Moore and Russell, the American new realists, and fore-most Samuel Alexander to which he devoted a series of lectures. Most important for our discussion are these lectures on Samuel Alexander – an Australian-born philosopher – that Alexander delivered at the university of Sydney in the 1949-50[166]. The main reason of interest for these Anderson's lectures is that, in the Lectures devoted to the analysis of the category of universality, a leading discussion of Stout's particularism is introduced.

A relatively isolated philosopher, it was probably this isolation and his preference for an old-fashioned philosophy that kept the themes of traditional metaphysics alive in Anderson's teaching[167]. Such themes in the same years were largely neglected by analytic philosophers that were following the legacy of logical positivism, and of ordinary-language philosophy. Therefore Anderson can be regarded as a key figure for the renewed interest in metaphysical questions, experienced among Australian philosophers educated in the Forties and Fifties.

5.2.2 ANDERSON'S LECTURES AND THE DISCUSSION OF STOUT'S PARTICULARISM

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[166] These lectures are today collected and printed in *Space-Time and the Proposition: the 1944 Lectures on Samuel Alexander's Space Time and Deity* (Anderson, 2005) and *Space, Time and the Categories: Lectures on Metaphysics 1949–50* (Anderson, 2007). This latter present an interesting Introduction by Armstrong. Anderson's writing and unpublished lectures are available online at The John Anderson Archive http://adc.library.usyd.edu.au/index.jsp?database =anderson&page=home. Citations of Anderson's lectures are to this electronic edition, the John Anderson Archive, edited by Dr Creagh McLean Cole and the University of Sydney and published by the University of Sydney.

[167] See (Baker, 1986) for an extended discussion of Anderson's metaphysical views.

Anderson's discussion of Stout's theory follows his analysis of the platonic theory of universal forms[168]. The question is how are we able to say that two things have the same characters, or they are alike and universals are introduced to explain attribution of objective similarity among things. Things are particular items; on the contrary, properties, in order to account for similarities, are traditionally thought as universals. So, Anderson argues, a distinction between particular and universal entities is introduced and traditionally accepted. Anderson instead shows a Ramsey-like skepticism about the generally held universal-particular distinction. He thinks that, after having distinguished between universals and particulars, the problem of their relation arises. Anderson's point is that to introduce a clear-cut distinction between these two kinds of entities is to leave one open to the criticisms – moved by idealists – of the impossibility to reconstruct the unity of judgment. Such a problem was largely discussed in British idealism: Bradley's famous argument of regress is set in the context of a criticism of the distinction between universals and particulars. From Bradley's point of view, distinguishing between particular and universal items leads to the impossibility to account for the relatedness among characters and things, because of the impossibility of external relations to account for unity. In the context of this discussion, the discussion of Stout's particular properties is introduced.

The main interest of Anderson for Stout's particularism is to be found in his treatment of universals. According to Anderson, universals do not ex-

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[168] I refer to the lectures collected in (Anderson, 2007), especially to the Lecture 27 (11th October 1949) and Lecture 28 (12th October 1949).

ist apart from particulars, and particulars conversely do not exist as separate from universals[169]; because of this, he criticizes Stout for not having successfully eliminated the difference between these entities and for having given to universals the status of a special kind of unity. It is quite unexpected that Anderson criticizes Stout for allegedly having introduced a straightforward distinction between particulars and universals. As Van der Schaar stresses, in fact Stout's point in arguing for particular properties was to mitigate or eliminate the strong contraposition between particulars and universals (van der Schaar, 2004, p. 200). So it seems to me that Anderson missed Stout's point for particular properties. However, although I think Anderson misses Stout's point here, I will highlight the influence that his view had on Armstrong who, just as his teacher, maintains that a strong contraposition between universals and particulars should be mitigated.

I go through this specific point of Anderson's interpretation in order to focus on other criticisms he moved against Particularism. The first objection is that the particularist account of similarity cannot really get rid of

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[169] Armstrong develops this insight into his theory of states of affairs in (Armstrong, 1978.I, pp. 124-) and (Armstrong, 1997), where he explains the fact that the world appears to be a world of particulars with the idea that universals cannot exist if not instantiated in particulars. Here two principles are introduced, the Principle of Instantiation for universals and the Principle of the Rejection of bare particulars. States of affairs result from these principles as particular entities composed by an universal and a bare particular. The fact that states of affairs are particular entities is dubbed as the victory of particularity. As (Mumford, 2007, p. 28) synthesizes it, the sense of this theory is that we are not obliged to accept a trope ontology in order to explain the apparent particularity of a property's instance.

kinds of properties[170]. Similarity between a red apple and a red rose is accounted by Stout as a primitive fact: similarity among tropes having the same "nature" has not to be further explained. But, as Anderson observes, the explanation is only pushed back a step: in fact, the red property of the rose and the red property of the apple present a similar nature (red) in virtue of their being two instances of the same universal property, Red. So the appeal to a unique property would be not evaded, but only put forward. Particularism aims to eliminate universal properties, but it can only postpone the problem of accounting for exactly similar natures, to the level of natures of particular properties. But is the question about what makes particular red properties all red an authentic problem for particularism? One possible answer available to the particularist is that of Lewis (1986, p. 66): «If you will not countenance primitive similarity in any form, then trope theory is not for you. But if you will, then duplication of tropes is an especially satisfactory form for primitive similarity to take». Of course red particular properties resemble each other: resemblance is an ultimate fact, which is not required to be explained further. Anderson's reply to this defense is that this notion of resemblance remains vague and that, when it is specified the respect of resemblance, the recourse to the notion of kinds of properties is unavoidable. That position is perfectly correct, but it should not be considered an objection to trope theory. In fact, trope theory assumes primitive resemblance whereas realism explains resemblance in terms of partial identity. How-

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[170] See the Lecture XXXI, in *Lectures on Alexander* (1944) and the Lecture 28 (12th October 1949) in *Lectures on Samuel Alexander 1949-50*. An edited version of these manuscript is reproduced in The John Anderson Archive, at http://setis.library.usyd.edu.au/anderson.

ever, each of the theories has to acknowledge that the other has a different view on resemblance. As Maurin (2002, p. 80) puts it, «no intrinsic value attaches primitive or non-primitive notions of resemblance. What matters is whether, and how, resemblance helps us to achieve our theoretical aims».

The second objection is that neither Nominalism nor Stout's Particularism can explain what makes a red trope red. Andersons suggests that unless we have recognized before a property common to all the exactly similar tropes we should never have been able to form the relevant class of resemblance (or the distributive unity, in the case of Stout's theory). I think that this objection is misconceived. A red trope is red not because it is a member of the class of red tropes, or because it is somehow connected to all other red tropes: the particular quality of each trope – we can also say its nature – is a primitive fact that does not call for any further explanation. Campbell (1990, p. 30) calls this reply "safe but stupid", but he argues that – although the primitivist account of trope resemblance can seem uninformative – explanation must stop somewhere. Armstrong (1978) bears in mind such objections by Anderson in his criticism of Stout's Particularism. Some of his criticisms of Stout's theory, in fact, reflect Andersonian interpretations, as I will show in next section.

5.3 ARMSTRONG: A SCIENTIFIC REALIST VERSUS TROPES

5.3.1 REVIVAL OF METAPHYSICS IN ARMSTRONG'S WORKS

Armstrong was one of the most important among the contemporary metaphysicians: the current successful revival of metaphysics has occurred, in part, even because Armstrong proposed again a great number of metaphysical issues. Although not unfamiliar to the more recent trends in philosophy (when he came to Oxford, he attended J. L. Austin's lectures[171]), Armstrong never accepted that analysis of language was the only job of philosophy. In this way, Anderson's influence was decisive in order to keep alive his interest for metaphysical issues. Armstrong attended to Anderson's lectures in 1949-50 and took notes. The current edition of these lectures is based on student notes by Dowling and Armstrong, who declared in the Introduction that «they inspired me with a passionate interest in the great questions of metaphysics» (Armstrong 2007, *Introduction* to Anderson, *Space, Time and the Categories: Lectures on Metaphysics 1949–50*). In these lectures, Anderson exposed a system of categories straightforwardly opposing Kant's system. Anderson conceives categories as ontological forms of reality, and not as forms of intuition[172]. In his first student years, Armstrong was very interested in this subject:

> The categories of being dive so deep that though quantum physics and other physics may have interesting things to say to philosophy – in particular whether causation is in fact deterministic – the issues are not susceptible of being resolved at the level of experimental science, yet seem to be real issues. Science may be able to cast light on whether causation is irreducibly statistical or not, but how can it decide what causation is in itself? […] What of the

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[171] See (Mumford, 2007, p. 16).

[172] In his realist conception of categories, all reality must fall under categories, which are independent from our transcendental intuition See (McLean Cole, 2012) for a discussion of this point.

properties and quantities in which science inevitably traffics? Are they just concepts in our minds, or something in the objects that our concepts merely reflect? (Armstrong, 2007)

I quoted a so long passage from Armstrong because I think it is interesting in order to understand what were the reasons that led Armstrong and other philosophers of his generation (included Campbell) toward metaphysical inquiry. Armstrong was seeking in a system of categories a way to achieve a general understanding of reality, including the scientific domain, in the same way Williams (1953) did with his proposal of an "analytic ontology"[173]. Science, in Armstrong's opinion, tells us what laws of nature exist; ontology systematizes and offers a general account of what these laws of nature could be, for example if they are Humean supervening relations on regularities, or necessary universal connections[174]. Metaphysics for Armstrong was always a serious and worthy enterprise, so he was never interested in debates of meta-metaphysics aimed to justify metaphysical discussions and to defend them from attacks by logical empiricists and heirs of Wittgensteinian scepticism (Campbell, 2012, p. 421). Devitt accused Armstrong of reviving an old-styled metaphysics: his discussion on the reality of properties would be conducted in terms that recall Medieval and early modern debates about the reality of universals (Devitt 1980). I think that there is something unfair in these accuses moved by Devitt. It has to be credited to Armstrong to have settled the problem of the reality of properties in a background very different from ancient debates on this theme. Armstrong's originality consists in the fact

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[173] This issue will form the content of the section 5.4.1 of the present chapter.
[174] See (Campbell, 2012, pp. 422-427) for an analysis of this two-stage strategy.

that, according to his views, is that a credible theory of properties has to be fully naturalistic: philosophy provides, at the first stage, a conceptual analysis in order to spell out the criteria of being a property, its ontological role and what sorts of properties exist (simplex, disjunctive, structural, negative, high-order properties). The task to establish what properties exist is instead left to empirical sciences. In fact, what universals are has to be determined by *a posteriori* enquiry. Universals admitted by Armstrong's theory are determinate on the basis of consideration from science. Armstrong appeals, in fact, to universals in order to distinguish law of nature from non-laws. Laws of nature are relations of contingent necessity between universals properties[175]. So, to discover laws of nature is a good way to identify universals. Semantic arguments for universals from the meaning of general terms are rejected as these arguments are accused of inverting the order of explanation[176]. Armstrong's approach to the problem of universals permanently altered the terms of debate (Campbell, 2012), and today this approach is largely shared by metaphysicians.

5.3.2   AGAINST TROPE NOMINALISM

Universals and Scientific Realism, Armstrong's main work on realism about universals, dates 1978. The first part of the book, *Nominalism and Realism*, is devoted to the analysis of various nominalist theories. The conclusion

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[175] This universals approach to laws of nature is defended in (Armstrong, 1978.II) and (Armstrong, 1983).

[176] Armstrong objects to arguments from meaning in (Armstrong, 1978.I, pp. 1-9) and (Armstrong, 1989, pp. 77-79).

of the first chapters of this book is that Nominalism, in all its forms (Predicate Nominalism, Concept Nominalism, Class Nominalism, Resemblance Nominalism) is unable to account for objective identities in nature. After having dismissed all these positions, Armstrong passes onward the analysis of Trope Nominalism or – as he calls it – Particularism[177]. According to Armstrong, the idea that properties exist but are particular as the item that possess them had exercised "a continuous distorting effect" even among the philosophers that do not agree with it, not only among the philosophers who expressly supported particularism (Armstrong, 1978.I, p. 78). He does not explicit his thought on this point, but I think the underlying idea is that the particularist account of properties seems to offer an explanation of phenomena as attribute agreement but, on the whole, its explanation is not an explanation at all. The fact is that particularism, by contrast with nominalism, recognizes the reality of properties. Such theory in some way offers an account of properties: universals are explained as classes of resemblance among particular properties. Thus it appears that we have got rid of the problem of universals and lost no explanatory power in abandoning all talk of properties. So, being misled by the conviction of having gained a safe explanation of the problem, particularist philosophers dismisses the problem of universals. But Armstrong is not persuaded at all that particularist explanation is a good account of the problem: his point is that phenomena as attribute agreement have to be accounted for and should not to be dismissed as a brute fact about primitive resemblances. Particularism accounts for re-

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[177] Chapter 8 of (Armstrong 1978) is devoted to the analysis of trope ontologies. See also (Armstrong, 1989), chap. 6.

semblance among things, by admitting particular properties that are exactly similar. A rose is red in virtue of possessing a particular property Red1, which is exactly similar to the property Red2 in the apple. But Armstrong thinks that, at this point, resemblance has not been even explained. His question is: is there any reason present in the nature of Red1 that makes Red1 similar to Red2 and different from, e.g. Blue1? Particular Red properties have a nature, and this nature is what accounts for their exact similarity. But, argues Armstrong, this nature is a shared character by Red1 and Red2, so it has to be accounted as a universal. If Red1 lacked a nature, it would be a mere bare particular, but in this case it would be unable to account for the redness of the rose which possesses it (Armstrong 1978.I, p. 86). Without posing universal kinds of properties we were unable to account for the individual "qualitativeness" of a particular property[178]. Suppose that the red of this rose is a particular individual property, namely a trope. Such a particular individual property has some properties, for example it has a colour (being a certain shade of red or Redness). Call this particular individual red *Red First*. If *Red First* is Red, we have to account for the ontological status of its Redness, call it *Red Second*. Suppose *Red Second* is itself an individual particular property. So it results to be a different entity from *Red First*. But, at this point, *Red First* result to be a mere *bare particular*: its redness is in fact a particular individual, *Red Second*, distinct from *Red First*. If we consider all the occurrences of *Red* First, namely the particular red properties present in each red object, it seems that they are nothing more than indistinguishable na-

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[178] This argument echoes what Anderson pointed out against Stout's account of resemblance. See the section 5.2.2. of the present chapter.

ked particulars: what is distinguishing the Red First of the apple from the Red First of the rose is, in fact, another red property, that we have called Red Second, distinct from them. The conclusion Armstrong draws from this argument is that properties at the first level, namely the various Red First, are to be considered as instances of the same universal: if properties are universals, in fact, what makes Red First of the apple and Red First of the rose both red is the same entity, a universal property, that can be shared by many objects (Armstrong, 1978.I, p. 87). Therefore, Particularism seems to be redundant respect to (immanent) Realism: in order to reach a serious account of attribute agreement, Particularism has to invoke, at the last level, universal properties in addition to particular properties. I think that Armstrong is begging the question here. A fundamental assumption of Particularism is that properties belonging to resemblance classes is not due to second order properties. Membership in determinate resemblance classes is a primitive fact. That is what Armstrong has to concede to Particularism, for not begging the question against his opponent. Tropes are simple entities, and there is no difference between the individuality of a trope (what Armstrong, instead, identifies with the naked particular) and its qualitative nature. On this point, metaphysical disagreement is more based on different intuitions about the suitability of primitive explanation in metaphysics than on the matter of the explanation provided by trope theory (Maurin 2002, p. 75-76).

5.3.3 TWO OTHER (MORE SPECIFIC) ARMSTRONG'S OBJECTIONS

Two other objections by Armstrong have become classic points in the debate about trope nominalism. Armstrong advances an objection against Stout, that he admittedly recognized as not decisive but that has raised a great discussion (Armstrong, 1978.I, p. 86). It is now know as the "piling objection" [179]. The core of the objection is: what prevents many exactly similar properties to be piled on the first one in the same spatiotemporal cluster of compresent tropes (such cluster of compresent tropes is intended to constitute an individual object)? How to stop the possibility for this coloured surface of having this red trope and that red trope and that red trope, and so on? If properties are tropes, so the argument goes, nothing. Realism can manage easily this possibility, appealing to identity among properties: this red instance and that red instance are the same universal property.

A number of trope theorists agree that piling must be excluded (piling is an empty possibility: the existence of indefinitely many exactly similar tropes in the same spatiotemporal cluster makes no detectable difference to the world), and there have been various replays to Armstrong's objection[180]. I think that such an objection, independently from the strength of the contra-arguments proposed, is interesting since it shows an ambiguity in some main reasons given in support of trope theory. Suppose, for the sake of argument, that piling is not a empty possibility. I use an example from Husserl to illustrate a possibility that seems allow for piling. In the

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[179] See for example (Simons, 1994), (Schaffer, 2001), (Ehring, 2011), (Keinänen & Hakkarainen, 2014).

[180] See (Schaffer, 2001) for an excellent discussion of this issue.

Second of his *Logical Investigations*[181], Husserl poses the following case as an argument in support of tropes, the spread of a colour over an extended surface. When a coloured surface is divided in parts, it will not be the universal colour to be divided in order to characterize each part of the surface. The universal, in fact, is not divisible in such a way. What characterize each part of the surface after the splicing is, for Husserl, a new colour trope, not a universal. Now, suppose a red surface is divided in two parts. Then each part of the surface has its own red trope. A new red trope has arisen from nothing or did the unique extended on the whole surface red trope split into two parts? Campbell (1990, p. 142-145) argues that the idea of a trope being split into parts strikes against the fact that a trope is, by assumption, a simple entity[182]. If tropes are, by assumption, basic and simple entities, they cannot be arbitrarily divisible in such way. If division of basic and simple entities has to be excluded, we can instead suppose that many red tropes were present, piled, in the same surface and that, when the surface was divided in parts, each red trope went to occupy a part of the original surface. Piling results in this case (before the division) to be a non-empty possibility.

In front of the possibility that piling is real, a defender of tropes has two strategies. A tropist with naturalist preferences will not be happy with accepting piling. The reason is that multiple instances of the same trope

[181] (Husserl, 1900/1901 (2001), p. 269).

[182] Campbell dedicates a long section to the discussion of the boundary problem in (Campbell, 1990, pp. 142-145). The boundary problem affects only "manifest tropes", namely sensible qualities as colour, warmth, solidity, roughness. But, as Campbell stresses, such examples of tropes are hardly good examples of fundamental properties. They belong, rather, to our manifest image of the world.

cannot have any considerable effect on our world. A situation as that envisaged by this possibility, i.e. the presence of multiple tokens of the same property, seems to be explanatorily vacuous[183]. Therefore, tropists who work in the background of a strict sparse theory of properties (a model of theory that assumes, for example, fundamental physical properties as the only basic tropes) will try to get rid of the piling possibility (von Wachter, 2000), (Morganti, 2009), introducing constraint on the tropes we can admit in ontology. Their answer is that we have to consider as real, genuine tropes only tropes that escape this difficulty, as – they argue – physical fields or properties of basic particles in standard quantum mechanics. But what strategy is available to the tropist who works with tropes derived from phenomenal experience?

I think that the most convincing arguments for trope theory have been arguments from characteristics of our perceptual experience, and not from our best physics. But such phenomenal accounts of tropes seem to have not a solution to the piling objection. Arguments such as piling offer therefore a opportunity to evaluate the *pro et contra* of a phenomenological account of tropes over a more scientific bent one. On the other hand, the strategy of the scientific tropist of admitting only natural and fundamental tropes seems somehow to be motivated ad hoc by the necessity of avoiding objections as piling. I will devote the next chapter to a close discussion of these alternatives available to trope theory.

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[183] From a naturalistic point of view on properties, as Armstrong's one, property are admitted only if they are causally efficacious: to pose a property is reasonable only if this property offers a contribution to the explanation of some character of our world.

The other objection moved by Armstrong and famous in the debate is the so-called "swapping argument", known also as the problem of trope transferability: «If the redness of this rose is exactly similar to but numerically distinct from the redness of that rose, then the redness of this rose could have been the redness of that rose and vice versa. But this is not really a possibility and, thus, properties are not tropes» (Armstrong, 1989, p. 131–132). The objection in articulated in terms of object swapping: two objects swap their tropes (the red of this rose moves to that rose and vice versa). More recently the objection has been formulated in terms of position swapping (Ehring 2011, p. 79): if properties are tropes, so the argument goes, two distinct yet exactly similar tropes might exchange their places. The resulted situation would then be a situation which is ontologically different from that precedent to swapping: red trope1 is now at place2 and red trope2 at place1. But, since the swap makes no perceptible difference in the world in terms of empirical and causal effects, the pre-swapping and post-swapping situations would nevertheless indiscernible. Armstrong objects to that a good theory has to accept a principle, according to which only changes that have empirically or causally relevant effects count as authentic, and trope-swapping is not the case. Therefore, trope theory should be discarded.

The argument has raised an interesting debate among trope supporters. The swapping argument can be defused if we assume that tropes are non-transferable, namely that they belong to some specific object, to the effect that the trope one object has cannot be transferred to another ob-

ject[184]. Accordingly, tropes belong necessarily to objects of which they are tropes: trope identity depends on the objects they belong to. The red of this rose is distinct from the red of that rose because this rose (the support of the trope) is distinct from that rose. But this solution (assuming that tropes are non-transferable, i.e. they are dependent on objects having them) is not available to the trope supporter that aims to resist trope non-independence. The swapping argument has therefore become an important field of comparison between supporters of trope independence and philosophers that prefer an account of tropes in terms of *ways* particular objects are[185]. Swapping remains a problem if one does not give up trope independence.

The proponents of trope independence divide into two groups: one adopts a primitive principle of individuation (i.e. trope individuation is a not analyzable primitive), the other adopts spatiotemporal individuation. Swapping is the strongest criticism advanced against proponents of a primitive principle of individuation (Moreland 1985, p. 65), (Campbell 1990, p. 69). On the contrary, it seems *prima facie* that adopting spatio-temporal individuation can fix the problem of swapping: if tropes are individuated by their location, they cannot change their position without become different tropes. This concept was introduced by Campbell in his 1981 article, "The Metaphysics of Abstract Particulars": exactly similar

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[184] This is a view that can be found in Martin (1980), Molnar (2003) and Heil (2003). For an examination of the issue of trope-transferability, see (Cameron, 2006).

[185] This conception of tropes is preferred by Martin, Heil and, with some distinctions, Lowe and Armstrong. Armstrong defends this conception of tropes in (Armstrong, 1997, p. 30). See for discussion section 2.2.6 above.

tropes are identified and distinguished from one another by location[186]. However, apart from the natural idiosyncrasies of spatiotemporal individuation[187], accepting spatiotemporal individuation does not really settle the swapping controversy, as pointed out by Schaffer (2001, p. 250). In fact, spatiotemporal individuation is a principle about trope individuation that holds within any given world: it determines that, in a given world, two exactly similar tropes cannot have the same spatiotemporal coordinates. In contrast, swapping is about exactly similar tropes considered *in transworld situations*. Spatiotemporal individuation is neutral about swapping, also because, if it were effective in such a sense, it would have the unwanted effect to make impossible that this red-trope *here* could move *there* (Schaffer 2001, p. 251). As a consequence of these criticisms, Campbell (1990) returned to defend primitive individuation.

A second strategy adopted by supporters of trope independence for answering Armstrong's objection is to discard the assumption that trope swapping would make no difference to the world (Campbell 1990, p. 72), (Labossiere, 1993, p. 262). According to them, although the result of a trope swapping would be imperceptible, there will be a difference between the pre and post-swapping situation because the two situations have different causes (world A: the being red of rose A caused by red

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[186] For a further discussion of this point, see below section 5.4.5.

[187] See Moreland (1985) for important criticisms to Campbell's spatiotemporal individuation. Among the reasons cited against spatiotemporal individuation: (1) it precludes the possibility that reality (or parts of reality) could be non-spatiotemporal (Campbell 1990, p. 55); (2) it makes tropes unable to change location without losing their identity; (3) it contradicts the simplicity hypothesis, because location becomes an inner component of the trope (Moreland 1985: 39ff); (4) it requires the concept of absolute space and time (Schaffer 2001, p. 251).

trope1 and the being red of rose B caused by red trope 2; the post-swapping situation, call it world B: the being red of rose A is caused by red trope2 and the being red of rose B caused by red trope 1). What we can learn from this debate about piling and swapping? Armstrong's objections reveal themselves to be, on a definitive analysis, not so harmful for trope theory: piling and swapping can be managed by the theory. Moreover, the attempts to fix the difficulties raised by these arguments do not seem to offer some decisive indication to prefer spatiotemporal over primitive individuation. What kind of trope individuation is better remains an open problem for the theory.

5.3.4 ARMSTRONG'S DEFENCE OF PARTICULARISM

Although Armstrong was one of most strenuous opponent of trope theory, he has always taken in account that theory as the best alternative among the nominalist options, unlike other opponents as Levinson and Moreland who call into question the whole notion of trope (Moreland, 1985), (Levinson, 2006). Armstrong changed his early negative evaluation of trope theory over time. In his 1978 book, he recognized trope theory as a serious adversary and tried to give arguments in order to defuse its menace; in more recent works, instead, he claims that, if realism would appear finally untenable, trope theory would be his second preferred choice (Armstrong, 1989, p. 120). So in his paper "Properties" he declares:

> I was brought up by me teacher, John Anderson, to reject the Particularist position. (He used to criticize G. F. Stout's view) I still fa-

vour the Universalist view, but recently I come to think that tropes have more to be said for them than I have allowed previously. In particular, I now see more clearly how tropes can serve as substitutes for universals in many respects. (Armstrong, 1992, p. 22)

Armstrong analyses a battery of arguments on behalf of Particularism, especially in his 1978 book, Chapter 8. I will first list such arguments, and then evaluate and discuss those I consider the most compelling:

(1) odd conditions of existence of universals;

(2) reference to particulars in perceptual statements;

(3) the realist is forced to assume the Principle of Identity of Indiscernibles.

Armstrong discusses these three arguments for particularism, eventually dismissing all of them. I will offer a comment of such arguments, with particular focus on the second one, for some reasons I will explain further down.

I agree with Armstrong in dismissing quickly the first argument, i.e. universals have odd and mysterious conditions of existence: it is in fact begging the question. To consider the multiple location of a property as meaningless is a move that typically is made by philosophers which have an empiricist position: they ask how the same entity can wholly be present in a multitude of different places and times. Universals would have too odd conditions of existence to be accepted in our conception of natural world. But universals enjoy – as an essential prerequisite – a relation very different with space from that apparently enjoyed by ordinary objects of experience like material objects or persons. These odd conditions of existence for entities like universals are exactly what the realist asks us to accept. Arguments such as these cannot really give a great con-

tribution to advances in metaphysics. They involve in an inextricable conundrum where intuitions clash. I think instead that a stricter examination of the second one is important for two main reasons. The first reason is historical. From this point of view, the fact that we refer to particular properties in our perceptive reports, has been one of the most compelling reasons adopted in support of the idea that the world is a world where at least some tropes exist[188]. The second reason is that the discussion of such arguments (i.e. arguments from the reference to trope in perceptual statements) gives me the opportunity to introduce some considerations that I will develop in the next chapter, on the difference between trope theories settled in a broadly phenomenological account and in a scientific bent one. The starting point of these arguments is that there are epistemic situations where we seem to refer to or be acquainted with or have experience of tropes. Consider the following examples from Stout, Husserl and Williams:

experiences of feelings, bodily sensations, pain

> consider [...] properly subjective feelings – for example, feelings of
> pleasure and pain. I using the adjectives pleasant or painful, we
> characterize feelings, and feelings are certainly particular, but the
> pleasures or the pains are themselves felt, an only exist in being
> felt. [...] The feeling being particulars I infer that its pleasureable-
> ness or painfulness is also particular. Indeed, I do not see how a
> universal could be immediately felt. (Stout, 1936, p. 13)

vision

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[188] See (Mulligan, et al., 1984) and Schnieder (2006, p. 144) for an analysis, historically founded, of these arguments. See Mulligan's claim that «it is perhaps no accident that philosophers in this century who have defended dependent particulars (Stout against Moore) have been psychologists of perception» (Mulligan, 1999).

> What we primarily see of the moon, for example, is its shape and
> color and not at all its whole concrete bulk – generations lived and
> died without suspecting it had a concrete bulk [...]. (Williams,
> 1953a, p. 16)

desires, evaluations and preferences

> What most men value the moon for is its brightness; what a child
> wants of a lollipop is a certain flavour and endurance. He would
> much rather have these abstracta without the rest of the bulk than
> the bulk without the qualities. (Williams, 1953a, p. 16)

reference to individual, specific aspects of things

> But how do things stand, we may ask, in cases where we expressly
> refer to the individual moment? […] If we are struck by an individ-
> ual trait of an object, by its peculiar colouring, e.g., or by its noble
> form etc., we pay special attention to this trait, and yet have no
> general presentation. (Husserl, LI, II, 21. p. 271 en. transl.)

As Schnieder (2006) arguments for, in many perceptual reports we as-
sume that particular properties can be perceived. If I see the red of this
rose, I am just seeing this particular occurrence of red, the red of this
rose, and not any other occurrence of red[189]. Armstrong himself considers

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[189] For an articulated discussion of arguments from perception as well as other similar ones,
see (Mulligan, 1999). Mulligan's point is that the difference between (I) Mary notices Patty's
blondness, where the reference to a trope (Patty's blondness) is explicit, and the statement,
expressed by the that-clause (II) Mary notices that Patty is blonde, cannot be eliminated.
Therefore, since (I) cannot be paraphrased as (II), the reference to the trope Patty's blond-
ness cannot be eliminated. An opponent of tropes could try to paraphrase (I) as (II) Mary no-
tices that Patty is blonde, and argue that (II) is made true by a concrete individual Patty and a
universal property, Blondness. However, Mary may have seen Patty's blondness without rec-
ognizing that the blond girl was her friend Patty, imagine, for instance, that Mary saw her
back while Patty was walking in the street. The point of this argument is that the reference to
particular properties in such a kind of statements cannot be neither eliminated nor success-

reasons like these, and in general contexts we cannot get rid of the reference to tropes, to be strong points in behalf of particularism[190]. Armstrong's theory of states of affairs is, even the other things, an attempt to offer a realist alternative to successful particularist account of reference to particular properties.

The third argument does not deserve great attention and Armstrong efficiently dismisses it. Armstrong attributes to Stout the argument settled in this way. Recently MacBride contested this reconstruction, that, it must be said, it became a classic in the scholarly interpretation of Stout's theory (MacBride, 2014). The argument is presented by Armstrong in this form: given the three premises

(1) Assumption of a form of bundle theory

(2) Two individual can resemble exactly, therefore the Identity of Indiscernibles is false.

(3) Realism of universals is true

The argument concludes that the statements (1),(2),(3) form an inconsistent triad.

Armstrong answers to this argument accepting (2) and (3) and rejecting (1), the bundle theory account of objects constitution. However, Armstrong proves only that Realism cannot be defeated so easily, leaving untouched the question of the evaluation of trope theory. Against Arm-

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fully paraphrased in alternative accounts such as – for instance – those in terms of states of affairs.

[190] Armstrong brings the following example of a statement where the reference to tropes seem not eliminable: his poor physical condition led to his collapse. That is because it is the poor condition he was in, and not any other poor condition, which led to the specific event of his collapse.

strong, MacBride (2011) is stressing instead the epistemic character of Stout's case for tropes, pointing out that Stout does not heavily rely on such metaphysical premises.[191]

To conclude this section, I would remark how, even in the evaluation of arguments for particularism, Armstrong's understanding of trope theory is strongly marked characterized by its reception of Stout. Throughout the chapter onto particularism (Armstrong, 1978.I, chap. 8), the reference to Stout and the discussion of specific points of his theory is pervasive. I think it can be said that Armstrong considers Stout, rather than Williams, the most important exponent of particularism.

5.4 CAMPBELL: A SPARSE THEORY OF TROPES

Keith Campbell succeeded Armstrong as Challis Professor of Philosophy at the University of Sydney in 1991. He has often affirmed[192] that he profited by discussing the problem of realism with Armstrong[193]. Campbell is the author of the book that set the agenda for contemporary debate on tropes: his monograph "Abstract Particulars" (1990) is important not only for having reintroduced tropes in the ontological debate with great fervour, after Williams's work – a work that remained scarcely known be-

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[191] This point has been discussed in section 3.3.

[192] See for example the Preface to his *Metaphysics. An Introduction* (Campbell, 1976) and the Preface to *Abstract Particulars* (Campbell, 1990).

[193] For a general overview of the debate between realists and nominalists in which Campbell became involved see (Keller, 2010).

fore Campbell's rediscovery of it – and Küng's not popular book (Küng, 1967), but also because this book discusses a number of problems for trope theory that have become a classical source for all the subsequent debate. Campbell already exposed his ideas about tropes in his *Metaphysics, an Introduction* (1976), a handbook for students taking their first courses in metaphysics. Campbell wrote the book mainly to introduce students to ontology. Here, tropes are presented in the discussion of Quine's treatment of the problem of universals. Campbell argues that the problem of universals is not solved if we appeal – as Quine does – just to a primitive, not further analyzable notion of resemblance. Thus, tropes aims to be an answer more convincing than Quine's austere nominalism to the traditional problem of "One over many".

5.4.1 A NEW PROPOSAL OF METAPHYSICS

Campbell (1976) begins with an introduction offering a concise history of the notion of metaphysics, as it has been intended in the last century. The aim of this introduction is to analyze the reasons that lead to a restoration of a robust metaphysical thought after the age of logical empiricism. The analysis here proposed is clearly brief, due to the introductory character of the book, but anyway it is still pretty interesting and it reveals a strict affinity with Armstrong's view of the topic. Like Armstrong, Campbell defends a conception of metaphysical inquiry where philosophical investigation proceeds strictly connected to the result of scientific investigation. The main cause of the crisis of metaphysics has been, he

says, the attempt to set metaphysics apart from other inquiries, as scientific investigations.

Logical empiricism rejected metaphysics on the ground that its assertions were meaningless, since there was no possible way of verifying them on the basis of experience. Campbell accepts the criticism moved by logical empiricism to traditional metaphysics but, whereas logical empiricism concluded that metaphysical inquiry is nonsensical, he adds that a new way of doing metaphysics is possible. New metaphysics is not a purely a priori enquiry that cannot be verified by experience. The relationship metaphysics entertains with empirical discoveries is much stricter that that usually supposed. Similarly, science is not exempt from metaphysical elements. A strong application of the verification principle (Campbell is thinking about the very famous version of it given by (Ayer, 1936) is inapplicable even for empirical sciences. So any easy contraposition between scientific knowledge (a knowledge founded on empirical data) and metaphysics (viewed as a product of mere abstract speculation) is dismissed. Metaphysics does not provide a necessary analytic knowledge: on the contrary, it can provide only provisional theories, fallible and revisable as scientific theories are.

As related to this new conception of metaphysical inquiry, Campbell (1976) proposes a distinction between analytic ontology and speculative cosmology. Campbell owes this partition to Williams (1963, p. 74) and (Williams, 1953a, p. 3), who conceived his trope theory as a work in ontology – i.e. as a study of the basic categories which organize our world in its generality. *If* a world is possible, it must be structured in this way. The work of analytic ontology is preliminary to any inquiry in speculative

cosmology – i.e. the fragment of metaphysics devoted to provide hypotheses about the basic elements making up the world we live in, what kinds of things are there and how are them actually related. The test for the validity of ontological theories is considered to be experience, like for scientific theories, but at a more general level of abstraction[194]. Analytic ontology is a priori enquiry about which categories are there and which are fundamental: it analyzes what objects, properties, dispositions, relations, kinds, events, numbers are; what time is, what substances are and other very abstract questions like these. It tries to provide a reasonable inventory of what is supposed to exist. It is supposed that reality in general, without any specific reference to our actual world, has to comprehend such categories.

Instead, speculative cosmology, as a successive level of metaphysical enquiry, has the task to provide the best general description of the world we live in. Cosmology tries to identify which of the categories listed by analytic ontology are exemplified in our actual world, what entities correspond to each of the fundamental categories identified by analytic ontology and how these categories relate to each other in the actual world. If analytic ontology lists and describes which categories are reasonable to be schedule in a model of ontology, speculative cosmology has the task to individuate what entities exist that correspond to the categories individuated a priori. In particular, speculative cosmology has to be open to ad-

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[194] Campbell parallels Williams's critical remark according to which «every item of experience must be evidence for or against any hypothesis of speculative cosmology, and every experienced object must be an exemplar and test case for the categories of analytic ontology» (Williams 1953a, p. 3).

vances in sciences. It needs, consequently, to be seen as a provisional and a posteriori enquiry.

5.4.2   A PATH FROM TROPES TO SCIENCE

Campbell's work on tropes can be adequately understood against the background we just exposed. In his project, trope theory would be able to be implemented on some results of our best physical discoveries. Because several recent contributions to trope theory aim at implementing tropes on physical backgrounds, it is worthwhile to discuss this topic in more detail. A first example of this tendency can be found in the last chapters of Campbell's seminal 1990 book, where he arguments for an application of trope theory to the physics of fields [195]. Assumed the framework of fields, basic tropes are identified with the fields expressing the four fundamental forces of physics (gravitational, electromagnetic, strong nuclear, and weak nuclear – each understood as the dynamics of a field – plus a space-time field.

Other trope theorists as Von Watcher (2000) and Wayne (2008) take Campbell's suggestion as a starting point for inquiring how to make trope theory better suit physical fields. Simons (1994) instead suggests that properties of fundamental physical particles (mass, charge, and quantum

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[195] In physics, fields are quantities defined with a value for each point of space-time. For example, an electromagnetic field, produced by electrically charged objects, extends indefinitely throughout space and describes the electromagnetic interaction; other examples are gravitational fields that define the influence (a force) that a mass of a physical body, extended into the space around itself, produces onto another physical body.

of spin) are to be preferred as candidates for being basic tropes. Morganti (2009) follows Simons's steps, looking at quantum theory and to the Standard Model of elementary particles[196]: fundamental tropes are identified with characteristic properties of these particles as they are represented in the Standard Model[197]. However, instead of explaining how the details of these models are specified and what their specific differences consist in, I will stick to the core idea of such models of trope ontology, inasmuch as a deeper examination of the reasons for trope theorists with regard to fundamental physics is of greater interest for the present study.

Campbell's reason to implement trope theory on physics of fields is two-fold. On one hand, he is interested in showing that trope theory is in harmony with physics, but, on the other hand, such scientific implementation makes possible to deal with certain problems that affect trope theory. It has to be said that Campbell has ever declared that a metaphysical theory has to find empirical application and confirmation, for example this is programmatically declared in his introductory book on metaphysics (Campbell 1976). However, his reasons to find empirical application and confirmation for trope theory show a certain ambiguity. In Abstract Particulars, field tropes are introduced in order to fix some problems that arose about setting of primitive criteria of individuation for tropes: in

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[196] The Standard Model of particle physics, developed since the last years of the sixties, has two fundamental classes of elementary particles: bosons (photons, w bosons, z bosons, gluons and gravitons. Higgs boson is also postulated in this model), and fermions (quarks and leptons). These elementary particles are identified by characteristic properties: Mass, Electric Charge, Colour and Spin.

[197] We have therefore colour tropes (the charge of quarks and gluons that is responsible for the strong interaction), mass tropes and electric charge tropes, and dispositional spin properties tropes.

particular, chapter six addresses the so-called "boundary problem": is trope theory able to specify where and when one trope ends and another begins? This is a serious problem that demands a solution: an ontological theory is properly developed if it is able to provide clear conditions of identity for its basic entities. Trope theory developed until that point was unable to provide such criteria for manifest tropes – manifest properties being ways in which objects happen to be, such as colour properties, temperature, texture, malleability, solidity, and all other cases of observable qualities. In fact, such qualities present in our world as extended in space. We do not perceive instantaneous spots of red, but red surfaces, red volumes, red masses, namely red qualities extended in space and time. The difficult point is that the criteria we have to individuate boundaries between such extended trope qualities are vague. Williams (1966), and with him philosophers who proposed tropes on the background of phenomenological enquiries like Stout and Husserl, accepts such manifest tropes as genuine tropes.

It is not clear at all whether Williams therefore supports an abundant view of properties, whereas Campbell undoubtedly defends a sparse conception of properties. As does Armstrong (1978; 1978a; 1984; 1997), Campbell thinks that the task to individuate what properties exist at the fundamental level is demanded to our best scientific theories. What properties there are is an empirical question. There is no a priori manner to determine which properties exist. They are intended to play, among others, the role of being the semantic values of predicates. But tropes are not meant to automatically play this role. Only in a secondary way tropes account for the possibility of reference of our language. Tropes are entities

that account primarily for the resemblance among things and for their causal powers, independently of the existence of human languages. On this view, why accept the existence of properties? Analytic ontology describes the ontological role played by properties, but it does not determine whether properties exist. Arguments for the existence of properties are, instead, provided by examination of the ontological commitment of our best scientific theories. Campbell agrees with an argument of Putnam who, by means of Quine's rules for ontological commitment, argues that we are committed to the existence of properties because in empirical sciences we regularly quantify over properties (Putnam, 1969). Campbell holds that the fact that properties are essential to scientific theories provides the best reason in favour of their existence.

5.4.3 A REVISIONARY TROPE ONTOLOGY

However, it is important to clarify that even if Campbell asks for scientific applicability of trope theory as a confirmation of the theory, he argues for tropes for the most part from an a priori, or metaphysical, point of view. Ontological reasons play a key role in providing support to trope theory. This claim can appear quite obvious, but I think there is an interesting point to note here. When you read Williams and Stout's papers in support of tropes, you may notice a particular attention to stress the relevance of tropes in our perceptive experience and in evaluative claims about phenomenal aspects of things, as it was seen in section 5.3.4. The preponderance of arguments from perception in Stout is a point that the

literature has noticed long since[198]. I think that a similar point can be made for Williams. For example, Williams (1953) stresses the fact that what is primarily present to our senses are not macroscopic concrete objects but small facets of things, particular shapes and shades, degrees of brightness, hues, saturations, and flavours. Substances and universal properties are constructed out of these tropes that are immediately acquainted by us. Trope theory is strictly related to Williams's theory of perception, as in perception we are directly aware of mind-independent particular tokens of qualities:

> the mind's forte is the tuning, focusing, or spotlighting – in brief, the abstraction – which brings abstracta into relief against a void or nondescript background […]. The notion, however, gets its best use in the theory of knowledge. The "sensible species" of the Scholastics, the "ideas" of Locke and Berkeley, the ideas and impressions of Hume, the sense data of recent epistemology – once they are understood as tropes, and as neither things nor essences, a hundred riddles about them dissolve, and philistine attacks on theory of knowledge itself lose most of their point. (Williams 1953, p. 17)

Obviously Williams also brings metaphysical evidence sustaining tropes even if epistemological arguments play an important role in his argument. Schaffer (2001) agrees on stressing the fact that one rationale for assuming tropes is that tropes are immediate objects of perception. To be persuaded of the existence of tropes, it is sufficient to look at or gaze on or listen to or smell: our perceptive acts have particular properties as their immediate objects. On the contrary, Campbell (1990) presents tropes

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[198] See Seargent (1985), Van der Schaar (2013), and MacBride (2014). See above section 3.2.2 for discussion.

from another point of view. According to him, metaphysical reasons are preponderating and in the second part of the book he evaluates trope theory for its possibilities to fit within specific scientific theories.

Let me begin by describing Campbell's rationales for trope theory, with some brief remarks about a trait of trope characterization offered by Campbell, one that can easily show my point; and then turn to a more general discussion of Campbell's approach to tropes. I think discussing this specific example to be interesting because it offers a different characterization of tropes starting from the different analysis of the property of abstractness that, as I have already shown, is important above all in Williams's characterization of tropes.

Campbell (1990) begins to characterize tropes as "abstract particulars", as Williams (1966, p. 78) did, borrowing such an expression from Stout. It is argued that tropes are to be intended as abstract entities, for the reason that they get known by means of processes of selection and abstraction from the totality of our experience. This philosophical meaning of "abstract" is the sense at issue in the passage from Williams (1953, p. 15) where it is said that "abstract" is intended to mean «partial, incomplete, or fragmentary, [having] the traits of what is less than its including whole». Abstract properties, in fact, are minimal fragments of experience, selected aspects of an object that individuate a specific character of it.

However, a further characterization of "abstract" is added, one that, although in no way contrasting with Williams's use of the term, seems to commit Campbell to a different thesis regarding the alleged perceptive primacy of tropes. It is asserted that tropes, *in qua* abstract entities, are parts of complex objects considered as separate by means of acts of se-

lective attention. Complexes objects are, for example, ones we are famili-ar with and that we use in our everyday life. Campbell observes that such complex objects are our primary objects of perception and experience. Ordinary things, even if they are not fundamental (they do not count as "genuine substances" in Campbell's ontology), are notwithstanding privi-leged objects in our experience of the world. Knowledge of tropes is pos-sible by means of processes of abstraction on ordinary objects. In this sense, he is using the term "abstract" as referred to tropes in a different way than Williams and Stout.

In Williams, the characterization of tropes as abstract entities did not im-ply that tropes are perceivable only with a preliminary acquaintance with ordinary objects. Instead, perception is primarily an acquaintance of tropes; according to Stout, we are able to identify ordinary objects by means of a preliminary acquaintance of their properties (Stout, 1921). Knowledge of ordinary objects is mediated by acquaintance of properties, which are particular entities, namely tropes. "Abstract" as referred to tropes means, in Stout and Williams, that tropes are maximally specific aspects. In this sense, this characterization has to be intended as opposed to "concrete" as referred to ordinary things: ordinary objects are "con-crete" as they present fullness of characters, they have many characteris-tics.

Apart from the above-said considerations concerning abstractness, it is the very framework in which Campbell conceives of his tropes that is completely novel: tropes are thought to be the fundamental building blocks of our reality, as fundamental particles are in physics. Thus, a common aspects shared by tropes and fundamental particles is that they

are not objects of immediate perception. Fundamentality, and not privileged epistemic access, is what is important for tropes.

Campbell starts his analysis with some consideration about our "manifest image" – in Sellars's words – of the world (Campbell, 1976, p. 26). This is the experienced world full of solid objects in motion or at rest, coming into being, enduring and then passing away. This is the world that the ordinary man believes in, a world inhabited by familiar objects as chairs, tables, pictures, books, flowers, pens, cigarettes and similar solid things (Austin, 1962, p. 8). The framework in terms of which we ordinarily observe and explain our world has, as its inhabitants, enduring and macroscopic things. To this image corresponds, according to Campbell, a privileged semantic structure: our ordinary common names, for the most part, pick out concrete particulars.

This remark echoes a similar statement to be found in (Küng, 1967). In this book, Küng considered, among the reasons that lead to a large neglecting of tropes in contemporary analytic philosophy, the semantic fact that we do not usually quantify over tropes. He observed that natural languages do not contain singular terms for tropes: if we want to name tropes in natural languages we have to form new complex referring expressions like "the red of the rose Mary is seeing". We do not have proper names for tropes. The absence of genuine names for tropes would result into leaving them out of the accounts of reference in language[199].

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[199] A similar point was already stated by Stout: «If the characters of particular things are themselves particular, why are they so frequently assumed to be universals? The main reason is that we cannot name them or think of them without referring them to some general class or kind of character. In calling the shape of this orange "a shape" I am referring it to the gen-

Campbell's revisionary ontology describes a world where familiar objects, persons, colours and secondary qualities are reduced to more fundamental entities, namely tropes. In light of the above considerations, I think that it would not be an exaggeration to say that Campbell does not give tropes a sort of epistemological priority at all. As a matter of fact, epistemological reasons in support of tropes are neglected, while purely metaphysical arguments predominate.

5.4.4 TROPE INDEPENDENCE

In his article *The Metaphysics of Abstract Particulars*, Campbell gives to tropes the characteristics that tradition ascribed to substances. With an expression borrowed from Armstrong (1989, p. 30), tropes are described as "junior substances" (Campbell, 1981, p. 479): like traditional substances, tropes are ontologically self-sufficient, but, differently from objects, they are minimal aspects[200]. This move is even more significant if we consider that the philosophical tradition that admitted, under different names, the existence of particular properties, considered them to be

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eral class shapes; in saying that it is spherical I am referring it to the more special class, spherical shapes. But it is the general kind of character which is universal. The instance of it which is found in this particular orange is not universal but particular» (Stout, 1940, p. 119). Williams (1986, p. 3) too admitted the unwillingness of our ordinary language to talk about tropes, notwithstanding the primacy of tropes in our perceptive reports.

[200] For such characterization of the independence of substances see, for instance, (Simons, 1998, p. 236): «ontological primacy of substances arises chiefly from their independence, or ability to subsist alone».

dependent entities and not as the basic, fundamental constituents of any possible world[201].

Take for example Husserl's particular properties, which he called "moments": moments are distinguished from independent parts or pieces, existing as essentially dependent entities[202]. On the contrary, Campbell's tropes are not grounded on the existence of other tropes, objects, wholes or parts. Every trope has the possibility to exist autonomously, even if in our world most tropes do not exist independently, but only in compresence with other tropes or as parts of objects[203]. Consider a green leaf. The leaf is, in trope theory, a mere bundle of tropes, so it has all its constituent properties essentially: the bundle that coincides with the green leaf cannot fail to contain the trope *green*. This trope *green*, however, might have existed in compresence with other different tropes or as a solitary denizen of the world.

This version of bundle theory entails a sort of mereological essentialism[204], the view that any composite object is composed of (all and only) its parts in every possible world in which the object exists. Individual

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[201] In Aristotle and Scholasticism, abstract particulars are attributes inhering to substances, see (de Libera, 2002) that compares tropes non-transferability with the dependence on substrata of particular properties in the Middle Ages. In Locke, particular properties are properties of (supposed) substrata. For an account of Locke's theory of abstract particulars from a trope-friendly point of view, see Martin (1980).

[202] For a discussion of Husserlian moments, and of their differences with tropes, see the essays contained in (Smith, 1982). See also (Mulligan, 1995), (Mulligan & Smith, 1983) and (Moreland, 2001, pp. 102-113).

[203] It seems that Campbell introduces here a sort of argument from conceivability to metaphysical possibility. However, I will leave aside the issue of whether a form of knowledge from conceivability is possible. I refer to (Yablo, 1993) for a detailed discussion of this point.

[204] For an analysis of different versions of bundle theory, see (Van Cleve, 1985), (Casullo, 1988), (Hughes, 1999) and (Benovsky, 2008).

bundles do not survive to changes of their constituent parts, whereas the existence of tropes does not depend on the existence of a bundle and on its changing or disappearing. As such, identity and persistence conditions of bundles depend on the existence of their tropes, but not the contrary. Tropes so construed are metaphysically prior to concrete individuals, in the sense that they are the minimal entities metaphysically capable of independent existence. Campbell goes further, suggesting that any individual trope could exist isolated not only from concrete objects that have them as proper parts, but even from all other tropes[205]. Campbell (1981) offers examples of free-floating tropes, i.e. tropes that are not related to any object or substratum, as the blue of the sky and the rainbow. The blue of the sky is chosen as example because it is due to mere blue radiation diffuse throughout the ionosphere, without the need of a physical substratum. This tenet implies that there are not necessary connections between tropes. More so, he denies the very existence of relational tropes, because they imply a generic dependence from other tropes (Campbell 1990, p. 99). On the contrary, Williams expressly accepted relational tropes.

I would like to clarify a point here. I have said that tropes are in this model independent from concrete particulars. The problem is to set a clear meaning for this notion of existential independence – a rather puzzling notion – a meaning able to capture some concept of ontological priority. Campbell lacks such clarification in his works, but it seems that he

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[205] For a criticism to such strong characterization of trope independence from the point of view of a supporter of bundles of tropes, see (Keinänen, 2011).

assumes a distinction based on modal criteria[206]. A bundle is ontologically dependent on its tropes if and only if it is not possible that such bundle exists, but its tropes do not. The notion involved is one of rigid dependence according to the definition of (Lowe 1998): a bundle is dependent upon certain specific tropes, which are the tropes it actually has, and not others. On the contrary, even if tropes normally occur in compresence with other tropes to constitute bundles, to be part of (a specific or generic) object is not a necessary condition for tropes to exist. The relevant condition is that could exist a possible state of the world in which this trope exists independently from any object, even if this condition is not actual at this stage of the world.[207] If there is a true possibility that a trope would exist detached from the object of which is a proper part, then the trope enjoys existential independence.

Lowe[208] has raised the objection that, within this model of trope theory, tropes do not have fully determinate identity-conditions themselves, independently from objects or trope-bundles. Identity conditions consist in principles whereby entities of a given sort are distinguished and counted: they specify what counts as a given kind of entity. Yet, that is what tropes apparently cannot have. The point moved against trope theory is that identity conditions for tropes seem to be dependent on certain other entities, as objects having them. A large volume of literature on trope has

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[206] Correia (2005) dubs it "modal existentialist" approach to ontological dependence. For accounts of dependence in terms of modality and existence see (Johansson, 1989) chap. 9), (Simons, 1987), chap (Thomasson, 1999), chap. 2.

[207] See (Campbell, 1990, pp. 69-70) for such interpretation.

[208] See for example (Lowe, 1998, pp. 205-209) and ((Lowe, 2003, pp. 82-85).

been dedicated to discuss the issue of individuation, but I think that the difficulty is only an apparent one, as I will show in next section.

5.4.5 TROUBLES WITH INDIVIDUATION

Campbell has been the first to pay attention to the issue, the problem being following: what constitutes the "principle" of individuality for tropes? How could we establish that the green trope *a* and the green trope *b* are two different, individual tropes? A universal, i.e. Red, is instead distinguishable from another universal, i.e. Scarlet, by being a different quality, red and not scarlet or vermillion. Each determinate universal has his proper suchness that distinguishes it from other universals. But tropes cannot be distinguished by means of different qualitative suchness: they can be exactly similar with reference to their qualities but, nevertheless, numerically distinct. I will explain this difficulty with an example. If I look at two red books in my bookshelf, I can perceive the red of their covers. Imagine that the two books are exactly identical in their colour. We may be intuitively inclined to think that we are observing the same colour, namely the same universal property. But a trope proposer insists, against such intuition, that we are observing two distinct properties, two tropes of the same shade of red. The two red tropes look perfectly similar, but they are actually distinct properties. But what guarantees the distinction between the two individuals? I will discuss now the criteria for trope individuation as exposed in the literature. It has to be said that criteria for trope individuation have been raised for the most part in the

context of critical discussions of trope theory as exposed by Campbell (1981 and 1990).

Critics of trope theory have considered the impossibility to set some unambiguous criterion for trope individuation as one of the major flaws of the theory. I hold that the point is misconceived by trope critics. I will argue that trope theory can defend primitive trope individuation without being charged with inconsistency. In his (1981) article, Campbell was inclined to assume a spatiotemporal criterion for trope individuation[209]. The principle of spatiotemporal individuation states that α and β are distinct tropes if and only if they are either not exactly similar, are at different places or exist at a different time. As a consequence, exactly similar tropes, that are co-located, are ruled out. A difference in spatiotemporal location, among exactly similar properties, is what characterizes tropes as different from universal properties: whereas universals are promiscuous about space-time (the same universal can exist at indefinitely many places at once), each trope has his unique and proper location.

To illustrate the problem with spatiotemporal individuation I will recur to a situation proposed by Black (1952) in a famous paper. Imagine a symmetrical universe with only two denizens, two spheres having exactly the same properties. There actually exist two things that are the same. It is well known that Black's universe example is aimed to deny the necessity of the Principle of Identity of Indiscernibles. The two spheres are exactly indistinguishable by means of their intrinsic quality and, being the uni-

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[209] On this point, Schaffer (2001) agrees with Campbell. For alternative accounts of trope individuation, see above section 5.3.3.

verse symmetrical, even relational qualities are insufficient for the distinc-
tion.

We need to be more precise. The sort of ontology Black's universe chal-
lenges is the view that takes things to be bundles of universal properties.
A supporter of universal properties is not able to account for the exis-
tence of two distinct, perfectly similar objects: two bundles that share all
their properties, being properties universals, are the same bundle. If you
insist that universal properties are the building block of the world, you
are compelled to introduce in your ontology an item responsible for the
individuation of each bundle, something like a substratum or a bare par-
ticular. This is an unwelcome outcome, however, for the reason that the
admission of bare particulars seems to be quite problematic because of
their epistemic unavailability. But suppose that the two spheres are not
bundles of universals but bundles of tropes. It follows that all the proper-
ties which are constituents of one sphere are *not* constituents of the
other. We have therefore two bundles composed by exactly similar prop-
erties, where each property in sphere α is an individual, distinguished
from the exactly similar property in sphere β. What is responsible for the
difference between sphere α and sphere β? Sphere α and sphere β are dif-
ferent individuals, not because their constituent tropes are located in dif-
ferent places (spatiotemporal individuation), being the universe we have
assumed a symmetrical one: the two spheres are indistinguishable by
means of their reciprocal spatial relations and by intrinsic position (the
two spheres result to have the same spatial coordinates). It is therefore
demanded that trope proposers find some reason in order to account for
the existence of two different individuals. Perhaps Black's universe is not

an empty possibility. In fact, it seems that contemporary physics countenances the possibility of indiscernible particles with the same location: since different bosons can occupy the same quantum state, nothing precludes the possibility that many indiscernible bosons exist at the same place at the same time[210].

Moreover, that identity between two exactly similar tropes is defined by their spatiotemporal coincidence fails to give a correct account of change. If you think that spatiotemporal coincidence can be a criterion to make the same entity out of two exactly resembling tropes, consider a green balloon (that is a bundle of tropes): the green balloon, and the green of the rubber from which the balloon is made, have a perfectly similar shade of green, and they coincide spatially in any point of the surface. Then, according to spatiotemporal criterion of individuation, the green of the balloon and the green of the rubber cannot be distinguished, they are the same trope. But it seems that the green trope of the rubber can survive when the balloon is burst or transformed into a recycled new object, while the green trope of the balloon not[211].

Another objection points out that spatiotemporal individuation precludes an account of non-spatiotemporal entities (take for example numbers, sets, minds and abstract entities like musical notes) (Moreland 1985). In his (1990) book, Campbell takes this objection seriously and modifies his

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[210] On this point I refer to the arguments presented in (French & Redhead, 1988).

[211] There are a lot of objections to this argument, but I think that a philosopher like Stout, who individuates tropes as referent of our perceptual reports, would concede this point. In fact, I can observe and describe the green of the balloon but not the green of the rubber (for example, because I supposed erroneously that the balloon was made of plastic).

early view on the issue accordingly[212]. Even if this exclusion is not problematic from a naturalistic point of view (a naturalist can be willing to exclude from his ontology non-spatiotemporal entities or account for them in different terms), Campbell argues that such an exclusion has to be justified in speculative cosmology (the branch of ontology that provides the best general description of the world we live according to our best physics), and not derived from the conceptual analysis of the notion of particularity. Analytic ontology should allow for the possibility of non-spatiotemporal entities: it is, in fact, the theory of reality in its generality, quite independently of the actual configuration of this world. Moreover, substance theory itself is neutral about the admission of non-spatiotemporal entities. Therefore, if trope theory aims to be on a par with substance theory for its explanatory power, it is required to allow the pure possibility of non-spatiotemporal entities.

The idea that tropes are individuated by spatial coordinates suits well with the intuition of Williams, who embraces a form of materialistic naturalism. This account has, according to Williams (1953, p. 17), the advantage to provide an explanation of the "problem of concretion"[213]: the fact that material, concrete particulars emerge out of bundles of abstract

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[212] (Moreland, 2001) contains a long and carefully report of Campbell's changes of view on this point.

[213] The expression is borrowed from Goodman (Goodman, 1951 (1977)): «The problem of defining predicates pertaining to concrete individuals in a typical realistic system, of constructing unrepeatable concrete particulars from qualities, I call the problem of concretion». Explicit reference to Goodman (1951) *The Structure of Appearance* is made in (Williams, 1953a, pp. 8-11). I think that the reconstruction of the relations between Williams and Goodman would help to highlights some previously neglected aspects of Williams' trope theory. However, an account along these lines of Williams's philosophical evolution is one of the many aspects of the trope history that is left unaccounted for in the literature.

properties. Tropes are not immaterial, as universals or other allegedly abstract entities are, but entities located in space-time.

Moreland (1985) adds a further criticism against trope theory that assumes a spatiotemporal principle of individuation: Campbell (1981) would be unable to account for the simplicity of tropes, with the unwanted consequence that tropes result to be complex items, eventually reducible to their more basic constituents (its qualitative nature and its individuating aspect). The thrust of this criticism is that, once that a spatiotemporal principle of individuation is assumed, location is introduced in the trope as a further constituent, an individuator. But, on this hypothesis, tropes result to be complex entities, exactly as *states of affairs* (that are composed by a bare particular plus an instance of universal) are[214]. But since tropes were, by assumption, the basic and simple entities from which every other entity is constituted, this hypothesis makes nonsense of the basic assumption of trope theory. Moreland's argument changed Campbell's mind in favour of a primitivist account of individuation.

A similar objection to trope theory, based on the consideration of trope spatiotemporal individuation, has been expressed by (Hochberg, 2004), Mertz (1996), (Armstrong, 2005) too; but I think, on the contrary to Campbell, that this objection is not so destructive for trope theory. The fact that a trope has two aspects does not imply a complexity in the trope, where by "complexity" I mean having many constituents. Con-

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[214] See Daly (1994) for a careful presentation of this argument for the equivalence between tropes and states of affairs.

stituents are ontological parts, whereas as "aspect of similarity" I mean properties, possessed by the trope, that make it comparable to other tropes in degrees of similarity. A trope presents two aspects: qualitative "suchness" (the fact that a trope is a particular example of a quality) and "thisness", following the Williams's expression in "Universals and existents", that refers to its being an individual item. "Thisness" is a non-qualitative property of a trope responsible for its being an individual item, distinct from all other exactly similar tropes. These two aspects can be well distinguished without introducing an unwanted complexity in the trope's nature. It would useful to think of this distinction as a *distinction of reason*, a notion that has a long history in metaphysics. Distinction of reason, or logical distinction, is based on thought; it has not a real foundation on anything in the world. Therefore, a distinction of reason never implies a form of composition in the real object it is considering, but only in the descriptions we use to refer to this object. The two aspects of a trope result to be, according to this distinction, only conceptually distinct. There is not a real (in the world) complexity in the trope.

Schaffer has defended spatiotemporal individuation from attacks like these, and has argued for a better fitting of spatiotemporal individuation to the rationales for assuming trope theory (Schaffer, 2001). I consider successful his defence of spatiotemporal individuation, as he has offered reasons to prefer it to primitive individuation. I hereby limit myself to point out that, however, whether or not spatiotemporal individuation is to be preferred to primitive individuation, the problem that many critics of trope theory see in trope individuation is only apparent. Spatiotemporal individuation does not risk falling into the objection Campbell consid-

ered: tropes can be individuated by spatiotemporal location and remain simple (not complex) entities. Moreover, it has to be discussed whether spatiotemporal individuation forecloses the possibility of non-spatiotemporal entities. On one hand, a supporter of spatiotemporal individuation can assume a naturalist point of view, and argue that entities do not exist out of the boundary of space-time. This is a fully valid position, assumed, for example, by Armstrong's realism on universals. Schaffer assumes a tolerant form of naturalism, following Lewis (1986, p. 73): even if a naturalist would simply ban non-spatiotemporal entities from the domain of his theory, a tolerant naturalist can devote them a space, allowing naturalist analogues for these non-spatiotemporal entities. It can be replied that Armstrong's realism by itself does not imply naturalism: naturalism is taken as an independent assumption in Armstrong's theory, whereas in a trope theory where a spatiotemporal principle of individuation is adopted, naturalism come to be implied by the same definition of trope.

On the other hand, if we opt for primitive individuation, trope theory is however not subject to the objections Lowe raised in his (1998) book and that he considers a decisive argument against trope theories.

According to Lowe (1998, p. 205-9), a trope theorist attempting to determine the criteria of individuation of tropes, must face the following dilemma: either he has to admit that tropes are dependent for their individuation on the individual objects possessing the tropes, or he must assume that tropes are not dependent for individuation on individual substances. Both of these alternatives encounter difficulties. In the first option, tropes result to be dependent on individual substances for their in-

dividuation, and substances being nothing more than bundles of tropes, individual substances are circularly dependent on their constituent tropes. If he chooses the second option and supposes that tropes are not dependent for their individuation on the individual substances, any clear criterion for determining the conditions of individuation of tropes (and their identity and diversity) remains unavailable. But trope theory has not to face such a conundrum. Primitive individuation is a good option available to trope theory in order to escape individuation by objects or substrata. On what basis two exactly similar tropes are two distinct entities? The problem only arises for a realist about universals. Realism, in fact, is bound to assume the truth of the Principle of Identity of Indiscernibles: two exactly similar cases of red are the same entity, namely the universal red. Realism cannot allow the possibility of two distinct exactly similar reds, if not by the introduction of a substratum allowing individuation. But trope theory can assume that two exactly similar spots of red primitively are two distinct entities: that is exactly what trope theory asks us to allow, and to deny this possibility is simply to beg the question against trope theory.

5.4.6 A BRIDGE TO THE CONCLUSIONS

Due to the extended discussion on nominalism and realism led by Armstrong in the Seventies, tropes have become a major topic in ontological scenario. Armstrong has had a major role in this revival of particular properties, even if he has been a strenuous defender of universals for the most part of his career. I have shown that Armstrong's and Campbell's interest on particular properties is

due to their knowledge of Stout's theory. In this regard, John Anderson's mediation – today often forgotten – was pivotal. Anderson was a key figure for the renewed interest in metaphysical questions of Australian philosophers educated in the Forties and Fifties. In his lectures, he provided a lengthy discussion of Stout's Particularism, that influenced with his interpretation the further understanding of Stout's theory: this background offered a pathway for the reception of Williams' trope theory that received great attention and was developed and improved by Campbell. This marked the fortune of trope theory that entered as a main position in metaphysical debates, providing valid proposals in various areas of analytic philosophy.

However, in this development, trope theory has lost the phenomenological flavour that it has in Stout's and Williams's proposals, to assume a different slant. This remark serves to me as a bridge to the conclusions of this work. In the following chapter, I will give an overview of this development of trope theory from its remote origins to the more recent achievements, offering some comments and evaluations of its different stances and motivations.

Chapter Six

CONCLUSIONS

In the previous chapters I have offered an analysis of the background from which the most famous kinds of trope theory arose. Moving from the study of the first works on tropes by Stout and Williams, I have shown that arguments from perceptual habits and phenomenological inquiries have played a substantial role in the growth of trope theory. Subsequently, in the fifth chapter, I have pointed out that the approach by the first advocates of tropes has been discarded by most recent trope theorists, who instead preferred a completely different framework. Nowadays, trope theory is a distinguished model of ontological analysis, deserving a careful discussion by contemporary ontologists, and enjoying multiple attempts of application to different disciplinary fields[215.]

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[215] See above fn. 7 and 8.

Stout (1921) and Husserl (1970), for example, focused first and foremost on the primary importance of tropes for perception and epistemology. Williams (1953) and (1986) also devotes special attention to this aspect. For such authors, tropes are the basic objects that guarantee our epistemic access to our world. On the contrary, the main part of contemporary trope supporters considers tropes to be the ultimate building-blocks of physical reality, paying little attention to their role in phenomenological appearance. I have claimed that the analysis of these two radically different backgrounds, in their different motivations and opposite aims, may be of special interest for a better general understanding of trope theory, and for an evaluation of the validity and the problem-solving capacities of the theory.

What I would like to point out in these final remarks are two things. At first, I argue that these two different frameworks in which trope theories have been developed are not so strongly opposed, and that a sort of appeasement of the two views is possible. Secondarily, I argue that the rejection of the ancient motivations of trope theory made by newest trope theorists is perhaps not so auspicious for the success of the theory. In contemporary trope accounts, tropes are rather the ultimate building-blocks of reality, and, therefore, they should be identified with the most basic entities of nature. (Maurin, 2010) approaches the issue in terms of a distinction between revisionary and descriptive metaphysics, as defined by Strawson (1959, p. 9): contemporary trope theories aim to be revisionary, rather than account for appearance and our everyday experience of the world.

As opposed to descriptive metaphysics, the challenge of revisionary metaphysics is to rephrase our ordinary conceptual scheme in order to provide a better picture of the structure of the world. The validity of ontological categories is assumed to be independent from epistemological constraints and from ordinary conceptual schemes. The issue that revisionary metaphysicians have pointed out is that substantial philosophical questions cannot be answered in terms of how we ordinarily think or speak about our everyday experience of the world. Considered in these terms, the problem for what concerns trope theory is if there is a tension between these two ways of providing an ontological assay, or if these two assays can coexist and mutually integrate in behalf of trope theory.

This conclusive chapter will be organized as follows. The first section (8.1) will be devoted to an elaboration of the differences that have been pointed out between the two frameworks in which trope theories have been developed. In particular, I will discuss the opposition between a framework that admits abundant properties and another that admits only sparse, natural properties. In the second section (8.2), I will discuss those trope theories that admit only fundamental physical properties as basic entities. By contrast, the third section will sum up some voices of trope advocates that defend the relevance of tropes for a full understanding of our experience of the everyday world. Finally, in the last section (8.3), I will show that trope theory, in its generality, as a ontological framework comprehending various different models and variations, can present itself as an exhaustive analysis of all the various aspects of our experience, from the world of microphysics to the realm of phenomenal and com-

monsense appearance, of which an ontological theory have to give an account.

8.1 TWO CONCEPTIONS OF TROPES

We can put the difference between the two aforementioned frameworks in terms of a distinction between sparse and abundant conceptions of properties. Most contemporary trope theorists accept the distinction between sparse and abundant properties[216]. Lewis's (1983) famous distinction was conceived in the framework of a conception of properties as sets (properties are defined as sets of possible objects), but it can be easily applied in a different framework. Where properties are defined as sets of possible and actual objects, there exist a property for each set of objects, no matter how gerrymandered, discontinuous, redundant or not expressed in any natural language can it be. Within this framework, the distinction between abundant and sparse properties is introduced. Whereas abundant properties are those properties instantiated by whatever set of objects, sparse properties are a subset of properties that mark genuine similarities and the causal powers of things that instantiate them. Using a metaphor, sparse properties, "carve nature at the joints" and characterize things completely and without redundancy[217]. Armstrong argues that such properties are a small minority of properties, restricted to those needed

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[216] See for example (Campbell, 1990, p. 24), (Ehring, 2011, pp. 2-4), (Heil, 2002, p.142), (Morganti, 2009, p. 189).

[217] On this basis Armstrong denies that negatives and disjunctive exist properties. See (Armstrong 1978.II).

in order to explain natural phenomena[218]. Genuine properties are those identified by natural sciences, and fundamental physics above all. Whereas Armstrong does not give detail on what fundamental properties exist and defers to science the task of doing it[219], many recent works in trope ontology examine sciences more closely and try to implement tropes within the background of fundamental physics.

Starting from Campbell's 1990 insightful book, many trope supporters have tried to mend the rift between the hypothesis that tropes are the real constituents of reality and a substantial identification of tropes with entities discovered by natural sciences[220]. The point of all these authors regarding the use of physics for the individuation of basic tropes is that properties which we refer to in ordinary language and in everyday perceptive reports do not really explain the causal powers of things and why things have the characteristics that they have. They are, to borrow an ancient expression, "secondary properties". Colours, tastes, sounds, flavours and smells as the shape and colour of the moon, the flavour of the lollipop (Williams, 1953a) and other properties as the particular happiness of Jones (Stout, 1921) are examples of such properties.

A fitting example of this tendency is (Campbell, 1990) who, in the last chapter of his book, offers a reductionist account of the properties that

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[218] (Armstrong, 1978.I), (Armstrong, 1978.II), (Armstrong, 1997).

[219] The a-priori requirement that Armstrong poses for sparse properties is that they are exemplified by things that exist in space and time, but he thinks that in task of empirical enquiry to find out what properties really exist.

[220] Among others, relevant examples are (Simons, 1994), (Mormann, 1995), (von Wachter, 2000), (Simons, 2002), (Seibt, 2002), (Wayne, 2007) (Harré, 2008), (Morganti, 2009) and (Kuhlmann, 2010).

we ordinarily recognize in our account of everyday human interactions, lifelike mental states, sensations and perceptions. Mental, psychological and social properties are treated as complex tropes whit more basic constituents that supervene on a basis of fundamental physical tropes. An example of this reductionist strategy can be the following: when we look at a grass field, specific cone cells, tuned for a particular range of light frequencies, are activated. The fact that we label the colour as "green" is an epiphenomenon of the activation of this class of cone cells. In this sense, green is derivative on more basic electro-physical properties. This example offers to me the way to hint at other scientifically based arguments for the existence of tropes, presented in the literature, in terms of mental causations (Gozzano & Orilia, 2008). In fact, tropes are considered by many authors as the right sort of entities able to be causally relevant mental properties, helping to solve the problems of mental causation in a causally closed physical world (Ehring 1997, p. 155).

8.2 WHAT BASIC TROPES ARE LIKE. TROPES AND FUNDAMENTAL PHYSICS

Campbell argues that, after the preliminary setting of a theoretical framework for trope ontology (that he calls analytic ontology), ontology has the task to seek with which natural entities tropes can be better identified (Campbell, 1976). Speculative cosmology – this is the name of the second part of ontological enquiry – has to find, inquiring into natural sciences, entities that have the features required by analytic ontology for

genuine tropes. I would like to clarify now what is the role of a-priori inquiry – that Campbell calls analytic ontology. As I have explained previously (see section 5.4.1 above), analytic ontology seeks to elucidate what characteristics are required for genuine, fundamental tropes. A list of such characteristics is to be natural, to be simple, to have no conventional boundaries (it has to be clear and not-arbitrary where a trope begins and another one ends), to have clear criteria of identity, to be fundamental (Campbell, 1990, pp. 136-9), (Morganti, 2009, p. 198). The first requirement (to be natural) has to be understood according to the characteristics explained in the previous section: basic tropes are only those tropes that are causally relevant and explain why things interact as they do. As language is not always a good guide to ontology, and genuine tropes are not individuated as the ontological referents of meaningful predicates, speculative cosmology seeks in the domain described by empirical sciences entities that can be identified with basic tropes.

However, among the motivations that have led contemporary trope theorists to assume a reductive physicalist account of common-sense and manifest tropes, there is not only the wish for an ontology closer to the development of modern physics, but also problems internal to trope theory itself[221]. In fact, contemporary trope theorists think that the original

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[221] A similar criticism to Campbell's theory of trope fields is moved by (Moreland, 2001, pp. 66-67): «Campbell's field ontology is foundational to his trope nominalism precisely because his exposition of fields is meant as a response to serious criticisms that are both damaging to the entire trope ontology and used to justify a realist view of qualities. In light of this fact, Campbell's failure to justify his field ontology limits the acceptability of his view of tropes to those who agree with him about fields and, more importantly, leaves his analytic ontology resting on what amount to mere assertions in speculative cosmology». I agree with Moreland on this specific point, even if I do not approve the content of his

trope theory proposed by Williams is exposed to criticism since it admits manifest tropes. Accordingly, it has been argued by contemporary trope theorists – (Campbell, 1990, pp. 136-8) was the first to put emphasis on it – that fundamental tropes shaped on properties individuated by fundamental physics can escape such criticisms. The types of criticisms raised against early versions of trope theories are mostly directed to identity conditions for tropes and to the definition of the notion of trope simplicity.

Consider, at first, identity conditions for tropes. As (Lowe, 1995, p. 512) pointed out, objects have determinate identity conditions, and yet it does not appear that manifest tropes as colours, shapes, temperatures and flavours can have them. Consider, for instance, the brown trope of the desk which I am sitting at. Suppose that the desk is uniformly coloured, without interruptions or shades. It is impossible to give a precise and unambiguous answer to the question whether the brown trope of the top is the same of the bottom of the desk, or whether there is a unique brown trope extended over the entire desk surface. Lowe concludes that tropes such as colour tropes, having no definite boundaries, do not have determinate identity conditions. But Lowe goes even further, extending this conclusion to tropes in general.

Campbell acknowledges the difficulty, dubbing this problem "the boundary problem", but he thinks that only tropes like colours, temperatures, and other phenomenal qualities are subject to it (Campbell, 1990). His

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other criticisms to trope ontology, which I have referred to in multiple ways in chapter five.

proposal is to take as genuine tropes ("the elements of being") only those tropes that do not have indeterminate boundaries, either spatial or temporal but, instead, "deep and natural" lines (Campbell, 1990, p. 139). He adds therefore other requirements for basic tropes, in order to exclude manifest and common-sense tropes, as the requirement that tropes are ontologically simple, without parts, changeless and with clear-cut criteria of identity. (Campbell, 1990), (von Wachter, 2000) and (Wayne, 2007) propose then of identifying basic tropes with physical fields, that, as I have explained above, are extended continua. Being continua extended over all of space with different intensities in different points, physical fields do not suffer of boundary-problem. According to Von Watcher, Lowe's account is right in stating that basic entities have to be identified and carved in a non-arbitrary way. However, he argues that the problem subsists only if tropes are viewed as commonsense properties (von Wachter, 2000, p. 16).

In fact, basic tropes, being identified with physical fields, do not suffer of the difficulty of having definite boundaries. Physical fields are unbounded, therefore it is arbitrary how they are divided, so the boundary-problem disappear if we consider them as the very genuine tropes. Morganti (2009) also answers to Lowe's objections, but proposes that basic tropes are properties of fundamental particles[222]. Different claims apart, both Morganti and von Watcher think that commonsense properties are

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[222] Morganti criticizes von Watcher's idea that at the very basis of reality there are fields and proposes an alternative account according to which fields are more complex entities with respect to the instantaneous field intensities. In other words, fields are not simple, but complex entities, therefore they are not well suited for being basic tropes.

not the right candidates for being basic tropes and that many problems that seem to affect trope theory can be dissolved if we look only to really basic and fundamental tropes. In order to identify real basic and fundamental tropes, Morganti and von Watcher agree than we need a "scientific approach" to tropes: «what tropes actually exist must be established with the help of natural science» (Morganti 2009, p. 191).

8.3 FOR WHAT PERCEPTUAL ARGUMENTS FOR TROPES WERE MADE

Among traditional arguments given in support of the idea that the world is a world of tropes, those from perception and experience have been playing a central role in the discussion. Williams often bases his arguments for tropes on what we can call "descriptive examples" from the framework shared by the ordinary way we think, perceive and talk about the world. In particular, Williams's arguments were, for the most part, based on considerations of our perceptual reports (Williams 1953, p. 7). However, Williams was a strong empiricist and a naturalist philosopher[223] and he shared the idea that fundamental properties are sparse[224], but such awareness went alongside with considerations about the strong relevance of tropes for our phenomenological account of the world. Also Stout (Stout, 1940, p. 119) argues that, in speaking about our experiences, in

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[223] Williams's collected papers, titled "Principles of empirical realism" contain various contributions on topics like naturalism, empiricism and materialism regarding the mind. See (Williams, 1966).

[224] The idea was clearly expressed in (Williams, 1966b). See also the essays collected in (Williams, 1966).

order to make them shareable and to communicate them to other persons, we use general words, but what we see in our experience is particular. As Wolterstorff remarks, whereas I can use the same word, i.e. "green" to refer to the colour of the leaf of the tree in the corner of my garden and to the colour of my neighbour's car, when I say "Look at this green" I intentionally refer to this special, particular and unrepeatable shade of green which I am looking at right now (Wolterstorff, 1970a, p. 139).

Wolterstorff strengthens his argument by considering another example. Consider a sentence as "I noticed the circularity of the tire". Suppose that the *circularity of the tire* refers to the general property Circularity. So, the circularity of my tire is the same circularity of my steering wheel. But it seems implausible that, when I am looking at my steering wheel, what I am taking note of is the circularity of all other cases of circularity in the world, even if I can refer to them by using the same word. What this argument aims to emphasize is that, for sentences expressing perceptual reports, truthmakers have to be particular properties to make sense of them. Other early trope theorists as Meinong, Bolzano, Husserl [225] and Stout are on the same page. As Schnieder (2006, p. 131) argues, the common point to all these authors was the awareness that «particularised attributes play an irreducible role in everyday thought and speech». At this point, we need to consider in greater detail the roles that such philosophers have attributed to tropes in perception. In this section, I will

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[225] For more about tropes in philosophers active in German-speaking countries between 19th and 20th centuries refer to the essays collected in (Smith, 1982). See also (Schnieder, 2006) and (Mulligan, 1995).

list the roles of particular properties in perception and briefly sum up the arguments sustaining that we should admit particular properties into our ontology.

1. Perceiving of changing states:

The argument is presented, among others, by Husserl (Husserl, 1900/1901 (2001), p. 269)[226] and Lowe (1996, p. 205): when I see a leaf changing in colour from green to yellow, what I perceive to cease to exist is that particular shade of green, not the universal Green, that is supposed to exist unchanging. The particular colour of an object appears to be extended in a determined portion of space and time and to have its own intensity; it comes to existence with the existence of the object or appears as a modification of a previous colour of the object, and it can fade or totally disappear, substituted by another colour. On the contrary, the universal cannot undergo all these modifications. The point of the argument is that all these characteristics cannot be ascribed to this same colour as universal: the universal, in fact, seems to exist in an immutable form, regardless of changes in space and time.[227].

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[226] «Assertions significant and true for the instance are false and even nonsensical for the Species. The colouring has its place and its time, it is spread out and has its intensity, it arises and vanishes. Applied to the colour as Species these predicates yield complete nonsense» (Husserl, 1900/1901 (2001), p. 269). "Species" is the translation of Husserl's preferred term for universal, whereas "moments" is his term for property instances or particular properties.

[227] These different conditions of existence of properties in their own right and of properties as instantiated by objects in space-time are, traditionally, one of the cornerstones of the argument on behalf of particularist theories, see (Mertz, 1996), chap. 1 and (Strawson, 1959, p. 168).

Wolterstorff (1970) offers another argument in support of this idea, arguing that general terms (that are meant to refer to universals) are not able to describe changing states, whereas trope-referring terms do so. A good example of this point is that, despite I can use the same general names to describe different experiences, these perceived experiences can show slight differences, or can gradually change during the time or undergo transformations[228]. A similar point is stressed by Mulligan (1999), who observes that changes in position and perspective do not always correlate with changes in the sense of our perceptual reports: this, for example, is the case with demonstratives, because they can retain a constant sense both for the speaker and the hearer even though the perception on which they are based varies.

2. Selective perception

Selective perception distinguishes and individuates aspects from entire things. Let me quote an interesting passage from Wolterstorff (1970, p. 128-9): «We also frequently take note of or pay attention to or consider the colours of coloured things, the shapes of shaped things, the loudness of loud things, those things which people are doing with their hands, and so on. In these latter cases, what we do is single out for attention some facet of a multifaceted thing. We abstract it from the other facets of the thing». This passage aims at showing that perceiving, looking, tasting, listening to something means to become aware of particular features of things. To give just one example, by tasting a pie, one notes a singular

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[228] (Schnieder, 2006, pp. 136-141) presents similar arguments that can be found in Bolzano.

aspect of the cake: its particular sweetness. The point is that the sweetness of this cake is, according to a common intuition, a particular entity, a trope. In this respect, we could claim that, whether things are complex entities, showing a variety of features, tropes are, instead, abstract. In fact, the epistemic operation of individuating singular aspects in complex things is related by many authors to the ontological distinction between abstract and concrete thing, according a sense of these terms that I have explained in chapter 1.

3. Particular aspects are what primarily affect perceptual attention

(Williams, 1953a, pp. 15-17) draws attention to the fact that the apparent primacy of middle-sized objects is only a function of our practical motivations. But concrete middle-sized objects of everyday life as tables, trees and cups are not what is primarily "present to the senses". He argues that what we primarily see when looking at the moon are its shape, its colour, its brightness «and not at all its whole concrete bulk». What is caught by sight, in fact, are these qualities, and people can perceive them without have knowledge that the moon is a solid object.

Williams's argument raises another interesting point, which regards the ontology of common sense. Consider again the example of the moon: people have ever been interested in moon's appearance, in her brightness, in her apparent variations in colour from pink to blue, in her somehow gigantic size, in her perceptual change of size on the horizon; they have spoken for centuries of the moon focusing on her perceptual properties, and were these that were important for them. This is due even to the fact

that perceptual properties are what can be object of desire, emotion, and feelings, as when a child wants a candy a certain flavour and endurance (Williams 1953, p. 16), you desire that special person for his unique beauty, or this flower for its lovely scent. These remarks are to the effect that the world salient for common sense is different from that studied by microphysics. Authors interested in naive physics[229] as (Petitot & Smith, 1996) have argued that the everyday world of perceptual properties cannot be reduced, opting instead for a form of emergentism: this is justified by the fact that phenomenal reality shows qualitative structures that are perceptually salient and distinct from the structures or organizational features which are proper to the level of microphysics.

4. We hardly have perception of universals

Another point trope supporters argue on is that it is extremely counterintuitive to maintain that the properties we represent perceptually are universals (Mulligan, 1999). When we are looking at a red rose, we do not see a particular rose as instantiating the universal Red (that would result in a state of affairs) or the universal Red. We just see a particular, not things exemplifying universals. It has to be said that some authors have defended the idea that we have a sort of perceptual acquaintance of uni-

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[229] For "naïve physics" (Hayes, 1985) or intuitive physics (McCloskey, 1983) we mean the commonsense beliefs that human beings hold about the way the world is. Naïve physics deals with human perception of basic physical phenomena and tries to give a scientifically-based account of it. Intuitive understanding all humans have about the physical world is often a simplification or a misunderstanding of phenomena explained by laws of classical mechanics.

versals[230]. However, I think that those who criticize that account of intellectualizing perception, by noting that it loses naturalness of perception (Mulligan, Simons and Smith 1984) have a point. In fact, universals, being general entities, play a role in conceptualization, but it is implausible that they can have a role at the first, immediate level of perception.

Several evidences from neuropsychology and neuroscience suggest a distinction between perception and conceptualization as two different and subsequent phases of knowledge[231]. In fact, the processing of sensory information that occurs in the human brain can be taken as an example of how general concepts are built from particular sensory percepts or observations. For instance, it is well known that the first stages of sensory-specific processing consist in the elaboration of elementary, low-level features in early sensory regions. Early visual areas, the first brain regions that receive visual information, are composed by neurons that respond maximally to specific orientations, spatial frequencies or colours: it is evident that no universal attributes of perceived input can be found at this level (Hubel, 1962); (Wandell, et al., 2007). In other words, at this level sensory attributes are processed as they are seen: linked to the visual object they are part of. Since no categorization occurs at all, a generic black cannot be individuated here: we will find instead the particular shade of black of the table I am sitting at. However, in later stages of processing the emergence of visual categories becomes more prominent. We will

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[230] The idea seems to originate in Russell (1912), where he allows for the possibility that among sense- data there are universals. See also Bergmann (1967) for a similar statement.
[231] Thanks to dr. Andrea Leo who provided information for this paragraph in a recent conversation.

therefore find regions specific for objects, faces, tools and so on, being therefore able to identify specific perceived objects as part of a restricted number of coarse categories (Malach, et al., 1995); (Kanwisher, et al., 1997); (Epstein & Kanwisher, 1998). So, the processing that occurs in our brain seems oriented towards the transformation of specific, particular sensory input to universal concepts that are organized into broad categories (Warrington & McCarthy, 1987)[232].

8.4 THE ALPHABET OF BEING

Arguments from perceptions are set in a non-revisionary framework, as Maurin puts it off. That means that they provide evidence from our everyday experience of the world we live in. However, Maurin thinks that trope supporters cannot rely on such evidences in a revisionary framework. And, from the fact that the main part of contemporary trope supporters is represented by revisionary metaphysicians, it seems plausible to conclude that such arguments play no role in recent debates on tropes.

Nevertheless, a deeper glance into contemporary literature on tropes shows that, in order to preserve intuitiveness of trope theory, even contemporary trope theorists recur to examples that come from the ordinary way in which we experience the world. It can suffice to read into Camp-

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[232] Such a view is corroborated by many evidences which covered a large time span: neuropsychologists have performed insightful observations of individuals that show naming deficits for specific categories of objects, such as living things or foods while maintain the ability to correctly describe the same objects they were not able to name as well as to recognize other classes of perceived input (Warrington & Shallice, 1984); (Lambon Ralph, et al., 1998).

bell's works on the subject, and you can find examples of tropes as the blue of the sky and the rainbow (Campbell 1981), examples that Campbell uses to make intuitive sense of the idea that tropes can exist independently, without being supported from other entities[233]. What I have found with my investigation of the origins and developments of trope theory is that many of the traditional reasons to adopt tropes in ontology are still alive in contemporary trope theories. Even if the largest part of contemporary trope supporters are most interested in connecting trope ontology with the newest result of scientific enquiries, and this is obviously a good manner to find applications for this ancient theory, it seem that trope supporters cannot avoid to recur to traditional motivations to justify tropes. This happens because contemporary tropes accounts, in being so reliant upon scientific discussions, can hardly support our common intuitions. In ontological explanations, there is often trade-off between comprehensiveness and theoretical strength on a side, simplicity and intuitive appeal on the other.

I think that a merit of Williams's trope theory – and one of the reason of its success – was its intuitive plausibility for everyday thought (that realism, for example, does not enjoy), coupled with the intent to find the

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[233] (MacDonald 1998, pp. 333-4) gives the following examples of tropes: the white of the particular sugar cube sitting on my saucer, its length, its breadth, its depth, its squareness, its surfaces, its size, its position; other examples by (Mulligan, et al., 1984, p. 290) are instead the pace of Vienna, a skidding, patches of pedestrian bustle, an abrupt braking, a traffic accident, the carelessness of a pedestrian, the gesticulations of the lorry driver, the greyness of his face, the prompt arrival of the ambulance, its shrill whistle, the cleanliness of its interior, the lifting of the accident victim into the ambulance.

fundamental elements of being. So, how can trope theory be applicable to our best sciences and maintain intuitive appeal as well?

What is assumed by the aforementioned trope theorists is a reductionism regarding all other levels of reality that stand upon fundamental physics. On this regard it is interesting what Schaffer points out about reductionism and sparse properties. Discussing Lewis's and Armstrong's theories of properties, (Schaffer, 2004) contrasted two different possible interpretations of how natural properties can be conceived. The question he poses is whether sparse properties have only to be drawn from the fundamental level of nature, especially fundamental physics. He then proposes a distinction between a fundamental and a scientific conception of sparse properties: a fundamental conception of sparse properties insists on the requirement of minimality, i.e. sparse properties have to provide a minimal ontological base. On the contrary, in a scientific conception of sparse properties, we found sparse properties at all the levels of nature, and in every scientific discipline involved in our understanding of the world, ranging from micro-physics to psychology. Schaffer's idea is, to sum up, that, whether the fundamental conception of sparse properties depends on the contingent (and unverifiable) assumption that there is a bottom level of nature, the scientific conception does not have to stick on a similar controversial assumption[234]. To assume that no minimal base is individuated can have consequences for a balance between the two approaches to tropes that I have discussed. Take for example Williams: even if he thinks that tropes are ultimately the basic building blocks of

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[234] We can therefore integrate a scientific conception of sparse properties and the so-called hypothesis of gunk.

reality, he prefers to stress other roles for his tropes, for example those related to the explanation of similarities.

Returning to the conclusions drawn by Schaffer in the paper I have discussed before, Williams's project of ontological assay does not require an assumption of minimality, being minimality defined as the minimal basis. Tropes are the elements of being, in Williams's words, but they are not individuated at a bottom level of reality. From Williams's text it seems plausible to infer that he considers the process by which even more fine-grained tropes are individuated as a potentially inexhaustible operation. It is not clear whether Williams individuates atoms, namely entities which have no proper parts or if instead, tropes are infinitely divisible into parts which are increasingly more fine-grained and presenting minimal levels of complexity[235], as it seems more likely from his description of the process by through these parts are individuated. Williams's tropes are metaphysically prior to concrete individuals in the sense that they are the minimal entities metaphysically capable of independent existence. Tropes are basic in this sense, but there is not a hierarchical structure of dependencies among tropes. That does not matter if tropes are individuated in psychology or fundamental physics or sociology or other disciplines.

Taken for granted that a *desiratum* by almost all trope supporters is that tropes are sparse, i.e. we should not admit redundant, non-natural tropes or those being the mere reference of arbitrary predicates, genuine tropes can be individuated in all the domains of scientific enquiry of reality. So,

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[235] Categorial simplicity is taken as a basic trait of tropes. For a strong defence of this assumption see Maurin 2002, chap.2.

Stoutian tropes individuated in psychological analysis of perception are genuine tropes as much as Morganti's properties of basic particles and Von Watcher's properties of fundamental physical fields. Assuming this framework, where fundamentality is substituted by scientific primacy, all properties which we refer to in our various scientific descriptions of the world are allowed. This restores the original point of view of Williams, the contemporary father of tropes: tropes are the elements of being, where being has to be taken in the most general and comprehensive way.

I think that these observations can shed a new light on the understanding of trope theory in his development from Stout and Williams to recent contributions. What I have shown in this work is that trope theories are motivated by different aims, and that tropes have been called to play various different roles and to explain a very wide range of phenomena: to explain predication, as a ground of objective similarities, as building blocks out of which objects are made, as fundamental entities on which all other entities depend. At the very end, trope theory shows to be a framework able to account for all these roles.

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